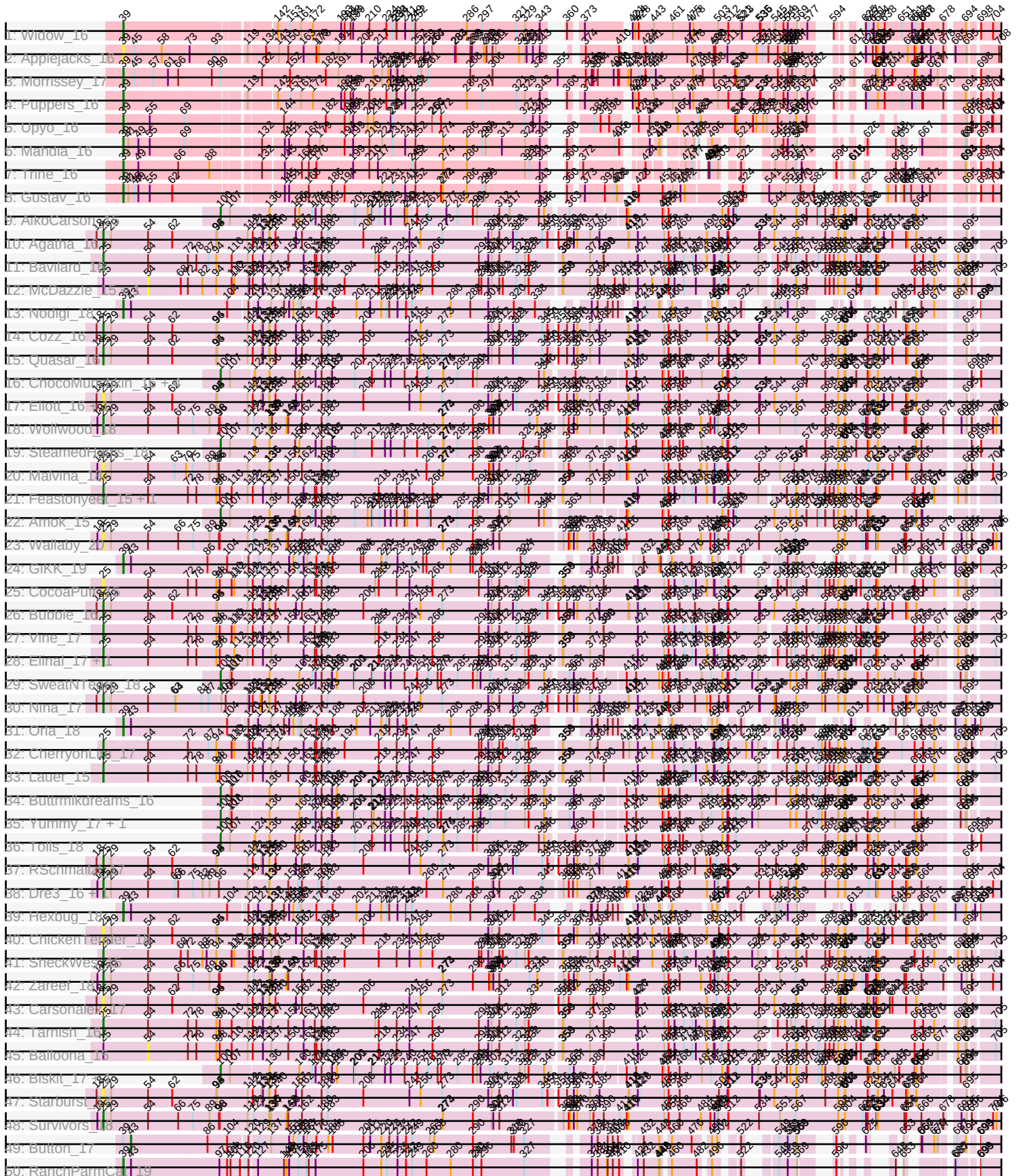


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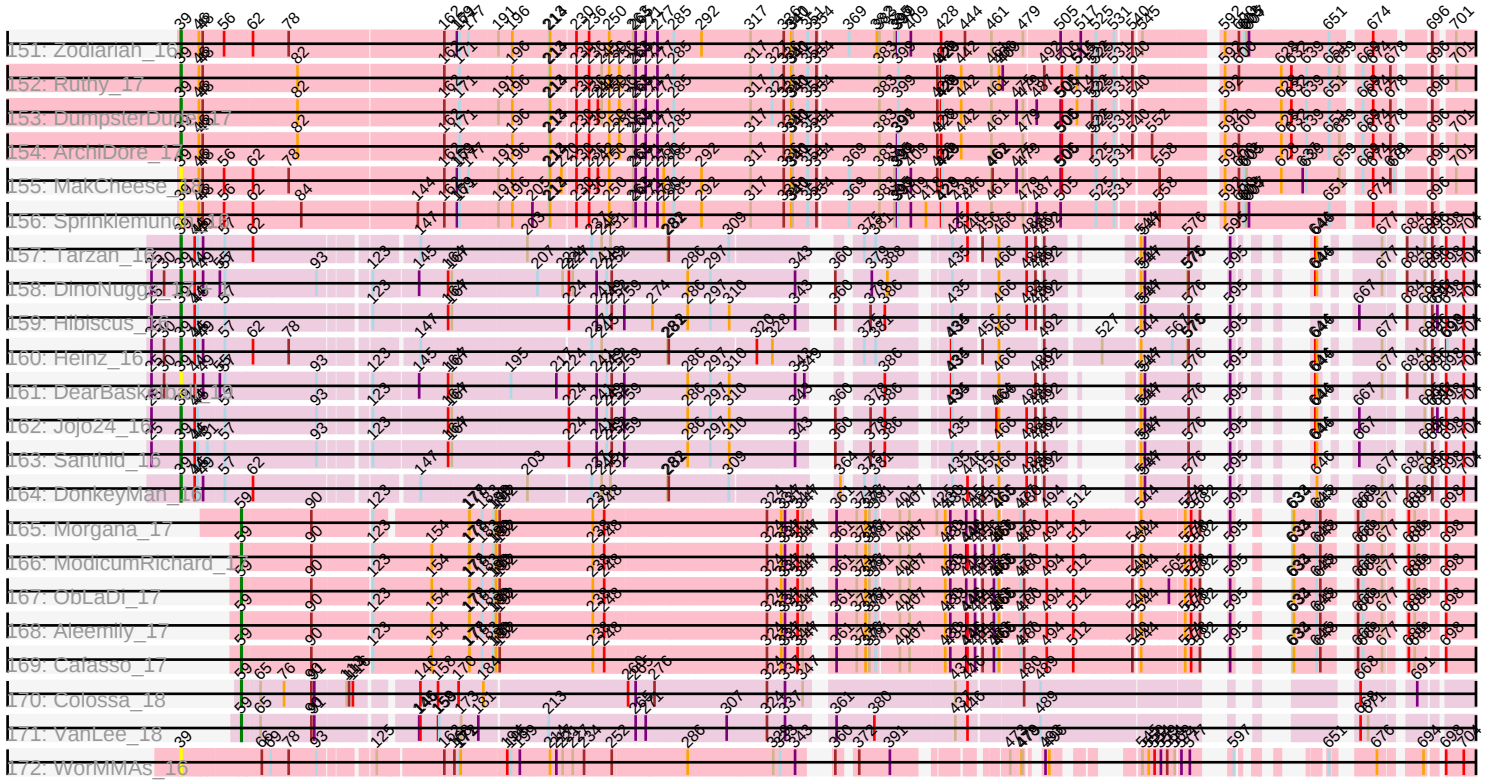
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	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2
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Zoomed Pham 330481

r01: GulaPie	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r02: Zim	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r03: Felt	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r04: KanaSantoka_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r05: Juki	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r06: Lys	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r07: Uzi	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r08: Mel	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r09: Arc	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r10: Zay	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r11: Faj	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r12: Mabi	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r13: Bowser	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r14: BackstagePass_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r15: Eyes_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r16: GEazy_17 + 2	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r17: BBQVain	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r18: Kiko_18	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r19: TaronasasRx_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r20: Schnabel	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r21: ZAYM_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r22: Jecs_18	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r23: DirtyBot	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r24: Opie_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r25: Bunker_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r26: Hedwig_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r27: Muich	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r28: Francois	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r29: Chop_20 + 3	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r30: NancyRae	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r31: DelRio_21	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r32: Pimento_21	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r33: Buck_20	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r34: BotCity	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r35: Buoski	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r36: Maishan	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r37: Perwin	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r38: Lutun	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r39: Cheese	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r40: Leroy_17	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r41: Getaion	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r42: Phaulon	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r43: Horus_18	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r44: ShawBrad	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r45: Frickyean	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r46: Kamaru	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r47: Pmstory	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r48: Whitney	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r49: Spooky	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690
r50: Squidov	382	59	66	101	120	183	206	216	249	794	333	353	377	457	533	597	616	634	690

Zoomed Pham 330481



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 330481 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330481 has 213 members, 28 are drafts.

Phages represented in each track:

- Track 1 : Widow_16
- Track 2 : Applejacks_16
- Track 3 : Morrissey_17
- Track 4 : Puppies_16
- Track 5 : Upyo_16
- Track 6 : Mahdia_16
- Track 7 : Trine_16
- Track 8 : Gustav_16
- Track 9 : AikoCarson_15
- Track 10 : Agatha_16
- Track 11 : Babilard_16
- Track 12 : McDazzle_15, ElJefes_15
- Track 13 : Nodigi_18
- Track 14 : Cozz_16
- Track 15 : Quasar_16
- Track 16 : ChocoMunchkin_16, AndPeggy_15, Yarn_15, CanesSauce_16, CaramelLatte_16
- Track 17 : Elliott_16, PsychoKiller_16
- Track 18 : Wolfwood_18
- Track 19 : SteamedHams_18
- Track 20 : Malvina_18
- Track 21 : Feastonyet_15, BigChungus_15
- Track 22 : Amok_15
- Track 23 : Wallaby_20
- Track 24 : GiKK_19
- Track 25 : CocoaPuff_15
- Track 26 : Bubble_16
- Track 27 : Vine_17
- Track 28 : Elinal_17, KayGee_16
- Track 29 : SweatNTears_18
- Track 30 : Nina_17
- Track 31 : Orla_18
- Track 32 : CherryonLim_17
- Track 33 : Lauer_15
- Track 34 : Buttermilkdreams_16
- Track 35 : Yummy_17, Horseradish_17
- Track 36 : Tolls_18

- Track 37 : RSchmailzl_17
- Track 38 : Dre3_16, Gibbous_16
- Track 39 : Hexbug_18
- Track 40 : ChickenTender_18
- Track 41 : SheckWes_15
- Track 42 : Zareef_18
- Track 43 : Carsonalex_17
- Track 44 : Tarnish_16
- Track 45 : Balloona_15
- Track 46 : Biskit_17, SketchMex_15
- Track 47 : Starburst_17
- Track 48 : Survivors_18
- Track 49 : Button_17
- Track 50 : RanchParmCat_19
- Track 51 : GoldHunter_16
- Track 52 : SummitAcademy_15
- Track 53 : PotPie_16
- Track 54 : MunkgeeRoachy_16
- Track 55 : HippoPololi_18
- Track 56 : MAnor_16
- Track 57 : Cleo_16
- Track 58 : Typhonomachy_16
- Track 59 : Nibbles_18
- Track 60 : Jamzy_19
- Track 61 : Sopespian_16
- Track 62 : Troje_16
- Track 63 : RADical_17
- Track 64 : RedBaron_18
- Track 65 : Pons_16
- Track 66 : Yucky_16
- Track 67 : Socotra_17, Axym_16
- Track 68 : BillDoor_18
- Track 69 : MaVan_18
- Track 70 : Mayweather_17
- Track 71 : MScarn_18
- Track 72 : Emalyn_15
- Track 73 : GTE2_14
- Track 74 : Margaret_19
- Track 75 : Fribs8_17
- Track 76 : Burnsey_16
- Track 77 : Azira_18
- Track 78 : Blondies_17
- Track 79 : PhrostedPhlake_18
- Track 80 : Wocket_18
- Track 81 : Malachai_18, Begonia_18
- Track 82 : Murp_17
- Track 83 : MintFen_17, BlingBling_17, Melba_17, Barco_17
- Track 84 : CaptainKirk2_17, Delian_17, UmaThurman_17
- Track 85 : Pipp_17
- Track 86 : Wisp_16
- Track 87 : Gambino_19, Blueberry_19, Azula_19, MissRona_19
- Track 88 : Jalammah_19
- Track 89 : Frokostdame_17

- Track 90 : PCoral7_17
- Track 91 : Petra_19
- Track 92 : ZiggyZoo_16, Obliviate_16
- Track 93 : Samba_17
- Track 94 : PrincePatrick_17
- Track 95 : CarolAnn_17, Soilmate_17
- Track 96 : Walrus_18
- Track 97 : Blino_17
- Track 98 : William_17
- Track 99 : CheeseSpider_20
- Track 100 : Hitter_17
- Track 101 : Guacamole_17, JasperJr_17
- Track 102 : Zilla_17
- Track 103 : Fenry_16
- Track 104 : KappaFarmDelta_17
- Track 105 : JuJu_17
- Track 106 : Lysidious_18
- Track 107 : Utz_17
- Track 108 : Mellie_16
- Track 109 : Archis_18
- Track 110 : Zarbodnamra_17
- Track 111 : Fairfaxidum_17
- Track 112 : Toast_17
- Track 113 : Bowser_17
- Track 114 : BackstagePass_17
- Track 115 : Eyes_17
- Track 116 : GEazy_17, HannahD_17, NaLuna_17
- Track 117 : BBQValindra_17
- Track 118 : Kiko_18
- Track 119 : TaronosaurusRx_17
- Track 120 : Schnabeltier_17, MagicMan_17
- Track 121 : ZAYM_17
- Track 122 : Jecs_18
- Track 123 : DirtyBoi_18
- Track 124 : Opie_17
- Track 125 : Bunker_17
- Track 126 : Hedwig_18
- Track 127 : Mulch_20, Nadeem_20, WheatThin_20, BetterKatz_20, Brylie_20, Parada_20
- Track 128 : Francois_20
- Track 129 : Chop_20, Ayotoya_20, Hamood_20, GrandSlam_20
- Track 130 : NancyRae_20
- Track 131 : DelRio_21
- Track 132 : Pimento_21
- Track 133 : Bock_20
- Track 134 : BotCity_18, Asapag_18, BENtherdunthat_18
- Track 135 : Budski_18
- Track 136 : Malisha_19
- Track 137 : Periwinkle_20
- Track 138 : Lutum_18, Kenna_17
- Track 139 : CheeseTouch_18
- Track 140 : Leroy_18
- Track 141 : Getalong_19

- Track 142 : Phabuloso_18, LitninMcQueen_18
- Track 143 : Horus_18
- Track 144 : ShawBrad_18
- Track 145 : Frickyeh_18
- Track 146 : Kamaru_18, Holliday_18
- Track 147 : Phistory_19
- Track 148 : Whitney_19
- Track 149 : Spooky_18
- Track 150 : Squiddly_20
- Track 151 : Zodiariah_16
- Track 152 : Ruthy_17
- Track 153 : DumpsterDude_17
- Track 154 : ArchiDore_17
- Track 155 : MakCheese_18
- Track 156 : Sprinklemunch_16
- Track 157 : Tarzan_16
- Track 158 : DinoNuggs_17, Reyja_17
- Track 159 : Hibiscus_16
- Track 160 : Heinz_16
- Track 161 : DearBasketball_19
- Track 162 : Jojo24_16
- Track 163 : Santhid_16
- Track 164 : DonkeyMan_16
- Track 165 : Morgana_17
- Track 166 : ModicumRichard_17
- Track 167 : ObLaDi_17
- Track 168 : Aleemily_17
- Track 169 : Cafasso_17
- Track 170 : Colossa_18
- Track 171 : VanLee_18
- Track 172 : WorMMAs_16

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 25, it was called in 41 of the 185 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Agatha_16, Axym_16, Azira_18, Bavidard_16, BigChungus_15, Bubble_16, Burnsey_16, Carsonalex_17, CherryonLim_17, ChickenTender_18, Cleo_16, CocoaPuff_15, Cozz_16, Dre3_16, Elinal_17, Elliott_16, Feastonyeet_15, Fribs8_17, Gibbous_16, GoldHunter_16, HippoPololi_18, KayGee_16, Lauer_15, MAnor_16, MaVan_18, Malvina_18, Mayweather_17, MunkgeeRoachy_16, Nibbles_18, Nina_17, Pons_16, PotPie_16, PsychoKiller_16, Quasar_16, RADical_17, RSchmailzl_17, RedBaron_18, SheckWes_15, Socotra_17, Sopespian_16, Starburst_17, SummitAcademy_15, Survivors_18, Tarnish_16, Typhonomachy_16, Vine_17, Wallaby_20, Wolfwood_18, Yucky_16, Zareef_18,

Genes that have the "Most Annotated" start but do not call it:

- BBQValindra_17, BackstagePass_17, Balloona_15, Bowser_17, Bunker_17, DearBasketball_19, DinoNuggs_17, ElJefes_15, Eyes_17, GEazy_17, HannahD_17, Heinz_16, Hibiscus_16, Jecs_18, Jojo24_16, MagicMan_17, McDazzle_15, NaLuna_17, Opie_17, Reyja_17, Santhid_16, Schnabeltier_17,

Genes that do not have the "Most Annotated" start:

- AikoCarson_15, Aleemily_17, Amok_15, AndPeggy_15, Applejacks_16, ArchiDore_17, Archis_18, Asapag_18, Ayotoya_20, Azula_19, BENtherdunthat_18, Barco_17, Begonia_18, BetterKatz_20, BillDoor_18, Biskit_17, BlingBling_17, Blino_17, Blondies_17, Blueberry_19, Bock_20, BotCity_18, Brylie_20, Budski_18, Button_17, Buttrmilkdreams_16, Cafasso_17, CanesSauce_16, CaptainKirk2_17, CaramelLatte_16, CarolAnn_17, CheeseSpider_20, CheeseTouch_18, ChocoMunchkin_16, Chop_20, Colossa_18, DelRio_21, Delian_17, DirtyBoi_18, DonkeyMan_16, DumpsterDude_17, Emalyn_15, Fairfaxidum_17, Fenry_16, Francois_20, Frickyeh_18, Frokostdame_17, GTE2_14, Gambino_19, Getalong_19, GiKK_19, GrandSlam_20, Guacamole_17, Gustav_16, Hamood_20, Hedwig_18, Hexbug_18, Hitter_17, Holliday_18, Horseradish_17, Horus_18, Jalammah_19, Jamzy_19, JasperJr_17, JuJu_17, Kamaru_18, KappaFarmDelta_17, Kenna_17, Kiko_18, Leroy_18, LitninMcQueen_18, Lutum_18, Lysidious_18, MScarn_18, Mahdia_16, MakCheese_18, Malachai_18, Malisha_19, Margaret_19, Melba_17, Mellie_16, MintFen_17, MissRona_19, ModicumRichard_17, Morgana_17, Morrissey_17, Mulch_20, Murp_17, Nadeem_20, NancyRae_20, Nodigi_18, ObLaDi_17, Obliviate_16, Orla_18, PCoral7_17, Parada_20, Periwinkle_20, Petra_19, Phabuloso_18, Phistory_19, PhrostedPhlake_18, Pimento_21, Pipp_17, PrincePatrick_17, Puppies_16, RanchParmCat_19, Ruthy_17, Samba_17, ShawBrad_18, SketchMex_15, Soilmate_17, Spooky_18, Sprinklemunch_16, Squiddly_20, SteamedHams_18, SweatNTears_18, TaronosaurusRx_17, Tarzan_16, Toast_17, Tolls_18, Trine_16, Troje_16, UmaThurman_17, Upyo_16, Utz_17, VanLee_18, Walrus_18, WheatThin_20, Whitney_19, Widow_16, William_17, Wisp_16, Wocket_18, WorMMAs_16, Yarn_15, Yummy_17, ZAYM_17, Zarbodnamra_17, ZiggyZoo_16, Zilla_17, Zodiariah_16,

Summary by start number:

Start 2:

- Found in 1 of 213 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pipp_17 (CV),

Start 3:

- Found in 5 of 213 (2.3%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Toast_17 (CV),

Start 4:

- Found in 46 of 213 (21.6%) of genes in pham
- Manual Annotations of this start: 39 of 185
- Called 87.0% of time when present
- Phage (with cluster) where this start called: Archis_18 (CV), Azula_19 (CV), Barco_17 (CV), Begonia_18 (CV), BlingBling_17 (CV), Blino_17 (CV), Blueberry_19 (CV), CaptainKirk2_17 (CV), CarolAnn_17 (CV), Delian_17 (CV), Fairfaxidum_17

(CV), Fenry_16 (CV), Gambino_19 (CV), Guacamole_17 (CV), Hitter_17 (CV), Jalammah_19 (CV), JasperJr_17 (CV), JuJu_17 (CV), KappaFarmDelta_17 (CV), Lysidious_18 (CV), Malachai_18 (CV), Melba_17 (CV), Mellie_16 (CV), MintFen_17 (CV), MissRona_19 (CV), Murp_17 (CV), Obliviate_16 (CV), PCoral7_17 (CV), PhrostedPhlake_18 (CV), PrincePatrick_17 (CV), Samba_17 (CV), Soilmate_17 (CV), UmaThurman_17 (CV), Utz_17 (CV), William_17 (CV), Wisp_16 (CV), Wocket_18 (CV), Zarbodnamra_17 (CV), ZiggyZoo_16 (CV), Zilla_17 (CV),

Start 6:

- Found in 37 of 213 (17.4%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Frokostdame_17 (CV),

Start 7:

- Found in 37 of 213 (17.4%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Walrus_18 (CV),

Start 9:

- Found in 41 of 213 (19.2%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 4.9% of time when present
- Phage (with cluster) where this start called: CheeseSpider_20 (CV), Petra_19 (CV),

Start 15:

- Found in 1 of 213 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phistory_19 (DN1),

Start 16:

- Found in 1 of 213 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Periwinkle_20 (DN1),

Start 17:

- Found in 18 of 213 (8.5%) of genes in pham
- Manual Annotations of this start: 14 of 185
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Asapag_18 (DN1), BENtherdunthat_18 (DN1), BotCity_18 (DN), CheeseTouch_18 (DN1), Holliday_18 (DN1), Kamaru_18 (DN1), Kenna_17 (DN1), Leroy_18 (DN1), LitninMcQueen_18 (DN1), Lutum_18 (DN1), Malisha_19 (DN), Phabuloso_18 (DN1), Spooky_18 (DN2), Squiddly_20 (DN2),

Start 18:

- Found in 21 of 213 (9.9%) of genes in pham
- Manual Annotations of this start: 2 of 185
- Called 9.5% of time when present
- Phage (with cluster) where this start called: Getalong_19 (DN1), Whitney_19 (DN1),

Start 21:

- Found in 17 of 213 (8.0%) of genes in pham
- Manual Annotations of this start: 14 of 185
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BBQValindra_17 (DB), BackstagePass_17 (DB), Bowser_17 (DB), Bunker_17 (DB), DirtyBoi_18 (DB), Eyes_17 (DB), GEazy_17 (DB), HannahD_17 (DB), Hedwig_18 (DB), Jecs_18 (DB), Kiko_18 (DB), MagicMan_17 (DB), NaLuna_17 (DB), Opie_17 (DB), Schnabeltier_17 (DB), TaronosaurusRx_17 (DB), ZAYM_17 (DB),

Start 25:

- Found in 72 of 213 (33.8%) of genes in pham
- Manual Annotations of this start: 41 of 185
- Called 69.4% of time when present
- Phage (with cluster) where this start called: Agatha_16 (CT), Axym_16 (CT), Azira_18 (CT), Bavidard_16 (CT), BigChungus_15 (CT), Bubble_16 (CT), Burnsey_16 (CT), Carsonalex_17 (CT), CherryonLim_17 (CT), ChickenTender_18 (CT), Cleo_16 (CT), CocoaPuff_15 (CT), Cozz_16 (CT), Dre3_16 (CT), Elinal_17 (CT), Elliott_16 (CT), Feastonyet_15 (CT), Fribs8_17 (CT), Gibbous_16 (CT), GoldHunter_16 (CT), HippoPololi_18 (CT), KayGee_16 (CT), Lauer_15 (CT), MAnor_16 (CT), MaVan_18 (CT), Malvina_18 (CT), Mayweather_17 (CT), MunkgeeRoachy_16 (CT), Nibbles_18 (CT), Nina_17 (CT), Pons_16 (CT), PotPie_16 (CT), PsychoKiller_16 (CT), Quasar_16 (CT), RADical_17 (CT), RSchmailzl_17 (CT), RedBaron_18 (CT), SheckWes_15 (CT), Socotra_17 (CT), Sopespian_16 (CT), Starburst_17 (CT), SummitAcademy_15 (CT), Survivors_18 (CT), Tarnish_16 (CT), Typhonmarchy_16 (CT), Vine_17 (CT), Wallaby_20 (CT), Wolfwood_18 (CT), Yucky_16 (CT), Zareef_18 (CT),

Start 28:

- Found in 24 of 213 (11.3%) of genes in pham
- Manual Annotations of this start: 2 of 185
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Frickyeh_18 (DN1), Horus_18 (DN1), ShawBrad_18 (DN1),

Start 39:

- Found in 93 of 213 (43.7%) of genes in pham
- Manual Annotations of this start: 25 of 185
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Applejacks_16 (CD), ArchiDore_17 (DW), DearBasketball_19 (DY), DinoNuggs_17 (DY), DonkeyMan_16 (DY), DumpsterDude_17 (DW), GiKK_19 (CT), Gustav_16 (CD), Heinz_16 (DY), Hexbug_18 (CT), Hibiscus_16 (DY), Jamzy_19 (CT), Jojo24_16 (DY), Mahdia_16 (CD), MakCheese_18 (DW), Margaret_19 (CT), Morrissey_17 (CD), Nodigi_18 (CT), Orla_18 (CT), Puppies_16 (CD), RanchParmCat_19 (CT), Reyja_17 (DY), Ruthy_17 (DW), Santhid_16 (DY), Sprinklemunch_16 (DW), Tarzan_16 (DY), Trine_16 (CD), Upyo_16 (CD), Widow_16 (CD), WorMMAs_16 (UNK), Zodiariah_16 (DW),

Start 40:

- Found in 18 of 213 (8.5%) of genes in pham
- Manual Annotations of this start: 15 of 185
- Called 83.3% of time when present

- Phage (with cluster) where this start called: Ayotoya_20 (DI), BetterKatz_20 (DI), Bock_20 (DI), Brylie_20 (DI), Chop_20 (DI), DelRio_21 (DI), Francois_20 (DI), GrandSlam_20 (DI), Hamood_20 (DI), Mulch_20 (DI), Nadeem_20 (DI), NancyRae_20 (DI), Parada_20 (DI), Pimento_21 (DI), WheatThin_20 (DI),

Start 43:

- Found in 8 of 213 (3.8%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Button_17 (CT),

Start 50:

- Found in 20 of 213 (9.4%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Budski_18 (DN),

Start 54:

- Found in 54 of 213 (25.4%) of genes in pham
- No Manual Annotations of this start.
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Balloona_15 (CT), ElJefes_15 (CT), McDazzle_15 (CT),

Start 59:

- Found in 34 of 213 (16.0%) of genes in pham
- Manual Annotations of this start: 7 of 185
- Called 20.6% of time when present
- Phage (with cluster) where this start called: Aleemily_17 (DZ), Cafasso_17 (DZ), Colossa_18 (KA), ModicumRichard_17 (DZ), Morgana_17 (DZ), ObLaDi_17 (DZ), VanLee_18 (KA),

Start 100:

- Found in 21 of 213 (9.9%) of genes in pham
- Manual Annotations of this start: 16 of 185
- Called 90.5% of time when present
- Phage (with cluster) where this start called: AikoCarson_15 (CT), Amok_15 (CT), AndPeggy_15 (CT), BillDoor_18 (CT), Biskit_17 (CT), Buttrmlkdreams_16 (CT), CanesSauce_16 (CT), CaramelLatte_16 (CT), ChocoMunchkin_16 (CT), Emalyn_15 (CT), Horseradish_17 (CT), MScarn_18 (CT), SketchMex_15 (CT), SteamedHams_18 (CT), SweatNTears_18 (CT), Tolls_18 (CT), Troje_16 (CT), Yarn_15 (CT), Yummy_17 (CT),

Start 107:

- Found in 20 of 213 (9.4%) of genes in pham
- Manual Annotations of this start: 1 of 185
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Blondies_17 (CT),

Start 136:

- Found in 56 of 213 (26.3%) of genes in pham
- No Manual Annotations of this start.
- Called 1.8% of time when present

- Phage (with cluster) where this start called: GTE2_14 (CT),

Summary by clusters:

There are 13 clusters represented in this pham: DN, KA, DI, DN2, DB, CD, DN1, DY, DW, DZ, UNK, CV, CT,

Info for manual annotations of cluster CD:

- Start number 39 was manually annotated 7 times for cluster CD.

Info for manual annotations of cluster CT:

- Start number 25 was manually annotated 41 times for cluster CT.
- Start number 39 was manually annotated 7 times for cluster CT.
- Start number 43 was manually annotated 1 time for cluster CT.
- Start number 100 was manually annotated 16 times for cluster CT.
- Start number 107 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster CV:

- Start number 2 was manually annotated 1 time for cluster CV.
- Start number 3 was manually annotated 1 time for cluster CV.
- Start number 4 was manually annotated 39 times for cluster CV.
- Start number 6 was manually annotated 1 time for cluster CV.
- Start number 7 was manually annotated 1 time for cluster CV.
- Start number 9 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster DB:

- Start number 21 was manually annotated 14 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 40 was manually annotated 15 times for cluster DI.

Info for manual annotations of cluster DN:

- Start number 17 was manually annotated 2 times for cluster DN.
- Start number 50 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 15 was manually annotated 1 time for cluster DN1.
- Start number 16 was manually annotated 1 time for cluster DN1.
- Start number 17 was manually annotated 10 times for cluster DN1.
- Start number 18 was manually annotated 2 times for cluster DN1.
- Start number 28 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 17 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DW:

- Start number 39 was manually annotated 4 times for cluster DW.

Info for manual annotations of cluster DY:

- Start number 39 was manually annotated 7 times for cluster DY.

Info for manual annotations of cluster DZ:

- Start number 59 was manually annotated 5 times for cluster DZ.

Info for manual annotations of cluster KA:

•Start number 59 was manually annotated 2 times for cluster KA.

Gene Information:

Gene: Agatha_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Agatha_16:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247, 10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377, 11258), (385, 11291), (418, 11393), (419, 11396), (427, 11420), (455, 11513), (458, 11528), (468, 11567), (490, 11663), (504, 11705), (511, 11735), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (588, 12077), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (721, 12698), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1066, 14345), (1075, 14375), (1077, 14384), (1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: AikoCarson_15 Start: 9357, Stop: 14072, Start Num: 100

Candidate Starts for AikoCarson_15:

(Start: 100 @9357 has 16 MA's), (Start: 107 @9384 has 1 MA's), (136, 9513), (156, 9600), (160, 9615), (171, 9660), (175, 9672), (180, 9690), (185, 9717), (201, 9789), (208, 9831), (212, 9846), (213, 9849), (219, 9873), (223, 9891), (229, 9909), (240, 9954), (244, 9963), (254, 9990), (261, 10023), (277, 10083), (285, 10122), (290, 10161), (293, 10176), (312, 10245), (317, 10272), (342, 10368), (346, 10386), (363, 10449), (416, 10617), (418, 10623), (452, 10737), (455, 10743), (458, 10758), (508, 10947), (512, 10968), (517, 10986), (519, 10995), (544, 11130), (568, 11205), (576, 11241), (584, 11280), (585, 11283), (588, 11307), (594, 11337), (598, 11352), (604, 11376), (618, 11415), (626, 11454), (628, 11460), (664, 11619), (713, 11868), (714, 11871), (718, 11904), (720, 11925), (737, 11994), (738, 12000), (759, 12099), (766, 12144), (782, 12231), (818, 12366), (855, 12558), (868, 12627), (871, 12651), (899, 12792), (938, 13005), (945, 13026), (953, 13083), (1018, 13386), (1027, 13443), (1032, 13461), (1044, 13527), (1057, 13599), (1066, 13650), (1074, 13674), (1075, 13680), (1077, 13689), (1083, 13719), (1098, 13785), (1104, 13833), (1116, 13893), (1140, 13983), (1155, 14043),

Gene: Aleemily_17 Start: 10958, Stop: 15649, Start Num: 59

Candidate Starts for Aleemily_17:

(Start: 59 @10958 has 7 MA's), (90, 11117), (123, 11240), (154, 11375), (177, 11462), (178, 11465), (183, 11492), (189, 11519), (190, 11525), (192, 11528), (238, 11747), (248, 11774), (324, 12149), (334, 12182), (337, 12191), (344, 12221), (347, 12233), (361, 12269), (371, 12314), (376, 12335), (377, 12344), (381, 12359), (401, 12407), (407, 12428), (430, 12503), (433, 12515), (445, 12548), (446, 12551), (451, 12569), (456, 12575), (463, 12602), (465, 12611), (466, 12614), (477, 12656), (480, 12665), (494, 12713), (512, 12776), (540, 12914), (544, 12923), (574, 13010), (578, 13022), (582, 13043), (595, 13049), (633, 13076), (634, 13079), (645, 13127), (648, 13136), (666, 13178), (669, 13190), (677, 13232), (686, 13253), (689, 13265), (698, 13307), (719, 13436), (742, 13535), (755, 13583), (762, 13619), (780, 13703), (781, 13706), (782, 13712), (794, 13784), (822, 13889),

(823, 13895), (832, 13943), (840, 13979), (843, 14003), (880, 14198), (881, 14210), (932, 14435), (982, 14714), (991, 14792), (1047, 15098), (1054, 15143), (1074, 15221), (1075, 15227), (1078, 15239), (1087, 15284), (1088, 15287), (1121, 15461), (1159, 15620),

Gene: Amok_15 Start: 9357, Stop: 14069, Start Num: 100

Candidate Starts for Amok_15:

(Start: 100 @9357 has 16 MA's), (Start: 107 @9384 has 1 MA's), (136, 9513), (156, 9600), (160, 9615), (171, 9660), (175, 9672), (180, 9690), (185, 9717), (201, 9789), (208, 9831), (212, 9846), (213, 9849), (219, 9873), (223, 9891), (229, 9909), (234, 9930), (240, 9954), (244, 9963), (254, 9990), (261, 10023), (264, 10032), (285, 10122), (290, 10161), (293, 10176), (312, 10245), (317, 10272), (342, 10368), (346, 10386), (363, 10449), (416, 10617), (418, 10623), (452, 10737), (455, 10743), (458, 10758), (508, 10947), (512, 10968), (517, 10986), (519, 10995), (544, 11130), (562, 11184), (568, 11205), (576, 11241), (584, 11280), (585, 11283), (588, 11307), (594, 11337), (598, 11352), (604, 11376), (618, 11415), (626, 11454), (628, 11460), (656, 11586), (663, 11616), (664, 11619), (666, 11637), (667, 11640), (713, 11868), (714, 11871), (718, 11904), (720, 11925), (737, 11994), (738, 12000), (782, 12231), (818, 12366), (855, 12558), (868, 12627), (871, 12651), (899, 12792), (938, 13005), (945, 13026), (953, 13080), (1018, 13383), (1027, 13440), (1032, 13458), (1044, 13524), (1057, 13596), (1066, 13647), (1075, 13677), (1077, 13686), (1083, 13716), (1098, 13782), (1104, 13830), (1116, 13890), (1140, 13980), (1155, 14040),

Gene: AndPeggy_15 Start: 9645, Stop: 14432, Start Num: 100

Candidate Starts for AndPeggy_15:

(Start: 100 @9645 has 16 MA's), (Start: 107 @9672 has 1 MA's), (124, 9750), (136, 9801), (156, 9888), (160, 9903), (175, 9960), (180, 9978), (185, 10005), (187, 10008), (201, 10077), (212, 10134), (223, 10179), (229, 10197), (240, 10242), (254, 10278), (261, 10311), (274, 10359), (275, 10362), (285, 10410), (290, 10449), (293, 10464), (342, 10656), (346, 10674), (368, 10758), (416, 10905), (426, 10932), (452, 11025), (455, 11031), (458, 11046), (468, 11085), (470, 11097), (485, 11163), (508, 11235), (511, 11253), (512, 11256), (519, 11283), (576, 11529), (588, 11595), (598, 11640), (603, 11661), (604, 11664), (605, 11667), (618, 11703), (626, 11742), (628, 11748), (634, 11775), (663, 11904), (664, 11907), (666, 11925), (696, 12048), (698, 12063), (718, 12192), (720, 12213), (729, 12255), (737, 12282), (738, 12288), (764, 12420), (766, 12432), (782, 12519), (791, 12561), (804, 12597), (830, 12723), (842, 12762), (862, 12891), (872, 12948), (881, 12990), (899, 13083), (908, 13158), (920, 13221), (938, 13302), (945, 13323), (972, 13500), (973, 13506), (1014, 13725), (1027, 13803), (1032, 13821), (1034, 13827), (1044, 13887), (1046, 13905), (1053, 13938), (1066, 14010), (1077, 14049), (1083, 14079), (1098, 14145), (1104, 14193), (1116, 14253), (1140, 14343), (1155, 14403),

Gene: Applejacks_16 Start: 9709, Stop: 14226, Start Num: 39

Candidate Starts for Applejacks_16:

(Start: 39 @9709 has 25 MA's), (45, 9748), (58, 9835), (73, 9922), (93, 10012), (119, 10093), (134, 10147), (143, 10189), (150, 10222), (163, 10273), (176, 10318), (178, 10327), (191, 10393), (205, 10474), (217, 10528), (252, 10660), (259, 10690), (266, 10720), (267, 10723), (283, 10798), (284, 10801), (288, 10846), (289, 10852), (298, 10894), (300, 10903), (306, 10924), (311, 10936), (322, 11014), (329, 11035), (331, 11041), (337, 11062), (343, 11086), (374, 11140), (410, 11254), (434, 11293), (441, 11311), (474, 11425), (478, 11446), (498, 11518), (500, 11524), (511, 11566), (532, 11665), (537, 11686), (540, 11707), (548, 11734), (555, 11755), (556, 11758), (560, 11770), (561, 11773), (564, 11782), (567, 11794), (617, 11899), (625, 11908), (630, 11929), (632, 11941), (634, 11947), (636, 11965), (637, 11968), (658, 12052), (662, 12073), (664, 12079), (666, 12097), (667, 12100), (673, 12130), (678, 12166), (685, 12181), (695, 12214), (708, 12298), (711, 12322), (721, 12388), (722, 12394), (727, 12415), (730, 12439), (738, 12460), (775, 12598), (782, 12628), (786, 12649), (825, 12832), (855, 12973), (900, 13207), (918, 13297), (925, 13339), (936, 13384), (951, 13432), (1021, 13552), (1036, 13618), (1039, 13639), (1043, 13660), (1044, 13666), (1066, 13792), (1073, 13813), (1074, 13816), (1083, 13858), (1098, 13924), (1099, 13942), (1100, 13945), (1104,

13978), (1124, 14056), (1130, 14077), (1144, 14128),

Gene: ArchiDore_17 Start: 10209, Stop: 15176, Start Num: 39

Candidate Starts for ArchiDore_17:

(Start: 39 @10209 has 25 MA's), (46, 10248), (48, 10257), (82, 10476), (162, 10812), (171, 10848), (196, 10968), (213, 11052), (214, 11055), (230, 11109), (236, 11139), (250, 11187), (256, 11211), (263, 11244), (265, 11250), (271, 11274), (277, 11301), (285, 11340), (317, 11514), (336, 11592), (340, 11610), (341, 11613), (351, 11649), (354, 11670), (383, 11805), (397, 11847), (399, 11850), (426, 11937), (428, 11946), (442, 11994), (461, 12066), (479, 12141), (505, 12222), (506, 12225), (522, 12297), (525, 12306), (531, 12348), (540, 12381), (552, 12411), (592, 12543), (600, 12576), (628, 12675), (632, 12696), (639, 12732), (651, 12786), (659, 12810), (669, 12840), (674, 12864), (678, 12900), (696, 12960), (701, 12996), (712, 13062), (727, 13158), (740, 13221), (771, 13389), (778, 13425), (796, 13506), (817, 13566), (823, 13611), (858, 13812), (889, 13965), (899, 14007), (912, 14076), (917, 14103), (1010, 14397), (1076, 14742), (1094, 14835), (1095, 14841), (1103, 14886), (1110, 14931), (1113, 14952), (1122, 14991), (1127, 15012), (1154, 15126), (1162, 15165),

Gene: Archis_18 Start: 10485, Stop: 16007, Start Num: 4

Candidate Starts for Archis_18:

(Start: 4 @10485 has 39 MA's), (Start: 6 @10500 has 1 MA's), (Start: 7 @10506 has 1 MA's), (Start: 9 @10536 has 1 MA's), (10, 10545), (11, 10548), (13, 10590), (Start: 39 @10701 has 25 MA's), (42, 10722), (Start: 59 @10842 has 7 MA's), (66, 10884), (79, 10950), (82, 10968), (87, 10989), (88, 10992), (92, 11010), (101, 11034), (120, 11118), (122, 11124), (133, 11160), (135, 11175), (137, 11184), (178, 11352), (183, 11379), (206, 11496), (249, 11667), (256, 11697), (294, 11901), (305, 11946), (312, 11973), (314, 11985), (333, 12075), (345, 12120), (353, 12147), (359, 12177), (377, 12264), (378, 12267), (387, 12306), (415, 12390), (427, 12426), (439, 12468), (452, 12513), (455, 12519), (457, 12531), (458, 12534), (471, 12588), (480, 12627), (484, 12648), (485, 12651), (490, 12669), (493, 12678), (499, 12696), (506, 12717), (508, 12723), (512, 12744), (519, 12771), (533, 12849), (597, 13038), (606, 13062), (615, 13074), (616, 13077), (630, 13092), (633, 13107), (634, 13110), (644, 13161), (663, 13242), (664, 13245), (670, 13278), (676, 13308), (678, 13332), (743, 13665), (754, 13713), (762, 13758), (763, 13761), (765, 13776), (772, 13821), (774, 13830), (775, 13839), (786, 13890), (809, 13962), (816, 13980), (820, 14001), (837, 14100), (838, 14103), (844, 14136), (853, 14202), (857, 14220), (860, 14235), (867, 14268), (874, 14319), (885, 14370), (892, 14418), (925, 14613), (926, 14616), (942, 14688), (943, 14691), (952, 14757), (953, 14760), (955, 14778), (961, 14838), (971, 14895), (974, 14913), (983, 14994), (984, 14997), (987, 15012), (1015, 15171), (1025, 15225), (1033, 15291), (1042, 15345), (1043, 15357), (1044, 15363), (1050, 15393), (1066, 15486), (1074, 15510), (1078, 15528), (1083, 15552), (1085, 15558), (1088, 15579), (1098, 15618), (1125, 15759), (1144, 15822), (1147, 15840), (1161, 15897), (1165, 15990),

Gene: Asapag_18 Start: 9881, Stop: 15508, Start Num: 17

Candidate Starts for Asapag_18:

(Start: 17 @9881 has 14 MA's), (Start: 28 @9926 has 2 MA's), (32, 9947), (37, 9968), (46, 10013), (Start: 50 @10028 has 1 MA's), (60, 10112), (68, 10154), (69, 10166), (82, 10229), (85, 10244), (88, 10253), (92, 10271), (94, 10277), (110, 10325), (140, 10460), (177, 10610), (183, 10640), (256, 10964), (279, 11060), (294, 11168), (304, 11210), (305, 11213), (307, 11219), (312, 11240), (326, 11321), (345, 11387), (353, 11414), (356, 11426), (359, 11444), (360, 11456), (367, 11480), (370, 11492), (377, 11531), (378, 11534), (380, 11543), (387, 11573), (422, 11678), (427, 11693), (435, 11723), (439, 11735), (452, 11780), (455, 11786), (458, 11801), (465, 11831), (470, 11852), (471, 11855), (485, 11918), (493, 11945), (494, 11948), (495, 11951), (497, 11957), (505, 11981), (506, 11984), (508, 11990), (510, 11996), (512, 12011), (517, 12029), (526, 12074), (542, 12158), (543, 12164), (551, 12191), (576, 12284), (579, 12293), (588, 12350), (589, 12362), (599, 12398), (600, 12404), (615, 12446), (618, 12458), (626, 12497), (628, 12503), (629, 12506), (632, 12524), (633, 12527), (634, 12530), (638, 12554), (656, 12629), (665, 12668), (669, 12692), (676, 12725), (694, 12836), (697, 12869), (704, 12932), (709, 12968), (715, 12998), (727, 13076), (728, 13079), (729,

13088), (734, 13112), (752, 13193), (754, 13199), (762, 13244), (763, 13247), (765, 13262), (772, 13307), (774, 13316), (775, 13325), (776, 13328), (804, 13433), (818, 13481), (819, 13484), (820, 13487), (837, 13586), (838, 13589), (841, 13601), (860, 13718), (867, 13751), (874, 13802), (882, 13832), (891, 13892), (905, 13973), (908, 13994), (916, 14027), (929, 14099), (933, 14108), (953, 14222), (958, 14252), (960, 14261), (962, 14300), (963, 14303), (970, 14333), (971, 14354), (996, 14552), (1012, 14615), (1013, 14621), (1022, 14672), (1048, 14858), (1063, 14945), (1071, 14972), (1072, 14975), (1089, 15050), (1093, 15074), (1101, 15113), (1106, 15149), (1111, 15170), (1131, 15257), (1142, 15299), (1150, 15332), (1153, 15344), (1163, 15422), (1166, 15488),

Gene: Axym_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Axym_16:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247, 10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377, 11258), (385, 11291), (418, 11393), (419, 11396), (427, 11420), (455, 11513), (458, 11528), (468, 11567), (480, 11621), (490, 11663), (494, 11675), (504, 11705), (511, 11735), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (586, 12065), (588, 12077), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (721, 12698), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1058, 14300), (1066, 14345), (1075, 14375), (1077, 14384), (1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: Ayotoya_20 Start: 11819, Stop: 17074, Start Num: 40

Candidate Starts for Ayotoya_20:

(35, 11795), (38, 11807), (Start: 39 @11810 has 25 MA's), (Start: 40 @11819 has 15 MA's), (46, 11852), (47, 11855), (69, 12017), (74, 12038), (78, 12059), (84, 12089), (137, 12308), (144, 12353), (169, 12446), (171, 12452), (191, 12539), (196, 12572), (213, 12656), (226, 12701), (230, 12713), (233, 12728), (236, 12743), (252, 12797), (270, 12875), (280, 12920), (285, 12944), (302, 13052), (314, 13094), (320, 13133), (336, 13196), (340, 13214), (354, 13274), (383, 13409), (417, 13517), (420, 13529), (428, 13550), (451, 13631), (462, 13673), (467, 13691), (474, 13721), (479, 13745), (494, 13793), (500, 13811), (505, 13826), (506, 13829), (525, 13910), (540, 13985), (554, 14021), (592, 14147), (597, 14168), (603, 14192), (607, 14204), (628, 14279), (632, 14300), (669, 14444), (676, 14477), (678, 14504), (680, 14510), (696, 14564), (701, 14600), (710, 14657), (716, 14687), (722, 14738), (733, 14795), (753, 14885), (758, 14912), (759, 14915), (771, 14993), (773, 15002), (836, 15281), (858, 15410), (899, 15620), (910, 15713), (936, 15845), (941, 15866), (961, 15974), (978, 16073), (986, 16157), (1089, 16703), (1095, 16736), (1103, 16781), (1113, 16847), (1134, 16937), (1152, 17012), (1160, 17057),

Gene: Azira_18 Start: 10619, Stop: 15748, Start Num: 25

Candidate Starts for Azira_18:

(19, 10598), (Start: 25 @10619 has 41 MA's), (29, 10646), (54, 10775), (66, 10871), (75, 10922), (89, 10979), (96, 11012), (98, 11015), (119, 11102), (123, 11114), (135, 11162), (136, 11165), (137, 11171), (148, 11225), (150, 11231), (162, 11279), (180, 11345), (183, 11366), (273, 11759), (274, 11762), (290, 11864), (305, 11930), (307, 11936), (312, 11957), (359, 12161), (362, 12179), (364, 12185), (367, 12197), (370, 12209), (377, 12248), (380, 12260), (390, 12296), (411, 12353), (416, 12377), (418, 12383), (455, 12503), (458, 12518), (468, 12557), (484, 12632), (494, 12665), (499, 12680), (501, 12686), (503, 12692), (512, 12728), (534, 12836), (551, 12908), (567, 12962), (588, 13067), (598, 13112), (604, 13136), (621, 13196), (625, 13208), (626, 13214), (632, 13241), (633, 13244), (634, 13247), (654, 13340), (656, 13346), (666, 13397), (678, 13466), (691, 13499), (695,

13514), (696, 13520), (704, 13577), (706, 13589), (713, 13628), (714, 13631), (717, 13652), (718, 13664), (720, 13685), (721, 13688), (729, 13727), (730, 13739), (737, 13754), (765, 13895), (782, 13991), (801, 14057), (806, 14078), (808, 14084), (855, 14321), (861, 14351), (868, 14390), (892, 14525), (899, 14555), (902, 14576), (931, 14735), (938, 14768), (986, 14981), (994, 14999), (999, 15005), (1032, 15134), (1044, 15200), (1053, 15251), (1066, 15323), (1077, 15362), (1083, 15392), (1090, 15425), (1098, 15458), (1109, 15530), (1125, 15602), (1138, 15656), (1141, 15662), (1155, 15719),

Gene: Azula_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for Azula_19:

(Start: 4 @10619 has 39 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (Start: 39 @10835 has 25 MA's), (42, 10856), (Start: 59 @10976 has 7 MA's), (66, 11018), (79, 11084), (82, 11102), (87, 11123), (88, 11126), (92, 11144), (101, 11168), (120, 11252), (133, 11294), (135, 11309), (137, 11318), (178, 11486), (183, 11513), (206, 11630), (249, 11801), (256, 11831), (294, 12035), (305, 12080), (312, 12107), (314, 12119), (316, 12131), (333, 12209), (345, 12254), (353, 12281), (359, 12311), (377, 12398), (378, 12401), (387, 12440), (411, 12503), (413, 12512), (427, 12560), (439, 12602), (452, 12647), (455, 12653), (458, 12668), (471, 12722), (480, 12761), (484, 12782), (485, 12785), (490, 12803), (499, 12830), (506, 12851), (508, 12857), (512, 12878), (517, 12896), (519, 12905), (593, 13178), (616, 13232), (633, 13262), (634, 13265), (644, 13316), (663, 13397), (664, 13400), (670, 13433), (676, 13463), (678, 13487), (697, 13553), (743, 13820), (754, 13868), (760, 13901), (762, 13913), (763, 13916), (772, 13976), (774, 13985), (775, 13994), (786, 14045), (809, 14117), (816, 14135), (820, 14156), (837, 14255), (838, 14258), (844, 14291), (853, 14357), (857, 14375), (860, 14390), (867, 14423), (874, 14474), (885, 14525), (898, 14594), (925, 14768), (926, 14771), (942, 14843), (943, 14846), (952, 14912), (953, 14915), (955, 14933), (961, 14993), (971, 15050), (974, 15068), (983, 15149), (984, 15152), (987, 15167), (1015, 15338), (1025, 15392), (1038, 15464), (1040, 15473), (1045, 15509), (1060, 15569), (1063, 15587), (1069, 15605), (1081, 15650), (1087, 15683), (1110, 15794), (1125, 15863), (1144, 15926), (1147, 15944), (1165, 16094),

Gene: BBQValindra_17 Start: 10583, Stop: 15709, Start Num: 21

Candidate Starts for BBQValindra_17:

(Start: 21 @10583 has 14 MA's), (Start: 25 @10592 has 41 MA's), (69, 10865), (71, 10874), (77, 10904), (92, 10970), (134, 11126), (137, 11144), (174, 11297), (183, 11339), (201, 11426), (247, 11618), (274, 11735), (282, 11774), (294, 11858), (296, 11867), (301, 11891), (304, 11900), (307, 11909), (314, 11942), (316, 11954), (320, 11978), (331, 12023), (333, 12032), (343, 12068), (353, 12104), (356, 12116), (359, 12134), (367, 12170), (400, 12293), (413, 12335), (419, 12359), (452, 12470), (453, 12473), (455, 12476), (458, 12491), (471, 12545), (480, 12584), (503, 12665), (508, 12680), (512, 12701), (516, 12716), (519, 12728), (526, 12764), (532, 12800), (579, 12962), (611, 13019), (622, 13031), (624, 13034), (634, 13067), (635, 13073), (636, 13085), (654, 13160), (656, 13166), (658, 13172), (662, 13193), (663, 13196), (664, 13199), (676, 13262), (679, 13298), (684, 13313), (691, 13337), (694, 13352), (695, 13355), (702, 13415), (718, 13514), (725, 13556), (743, 13634), (758, 13703), (761, 13721), (780, 13829), (781, 13832), (782, 13838), (785, 13856), (786, 13859), (792, 13880), (797, 13898), (799, 13901), (801, 13910), (822, 14015), (826, 14045), (831, 14063), (832, 14069), (846, 14129), (855, 14189), (866, 14237), (871, 14267), (886, 14315), (888, 14327), (901, 14387), (909, 14444), (915, 14462), (922, 14507), (927, 14534), (932, 14552), (938, 14582), (940, 14591), (948, 14630), (949, 14636), (950, 14645), (973, 14804), (979, 14846), (1006, 15038), (1008, 15041), (1023, 15098), (1024, 15107), (1026, 15119), (1028, 15140), (1074, 15353), (1082, 15392), (1098, 15461), (1105, 15515), (1142, 15668), (1147, 15692),

Gene: BENtherdunthat_18 Start: 9881, Stop: 15508, Start Num: 17

Candidate Starts for BENtherdunthat_18:

(Start: 17 @9881 has 14 MA's), (Start: 28 @9926 has 2 MA's), (32, 9947), (37, 9968), (46, 10013), (Start: 50 @10028 has 1 MA's), (60, 10112), (68, 10154), (69, 10166), (82, 10229), (85, 10244), (88,

10253), (92, 10271), (94, 10277), (110, 10325), (140, 10460), (177, 10610), (183, 10640), (256, 10964), (279, 11060), (294, 11168), (304, 11210), (305, 11213), (307, 11219), (312, 11240), (326, 11321), (345, 11387), (353, 11414), (356, 11426), (359, 11444), (360, 11456), (367, 11480), (370, 11492), (377, 11531), (378, 11534), (380, 11543), (387, 11573), (422, 11678), (427, 11693), (435, 11723), (439, 11735), (452, 11780), (455, 11786), (458, 11801), (465, 11831), (470, 11852), (471, 11855), (485, 11918), (493, 11945), (494, 11948), (495, 11951), (497, 11957), (505, 11981), (506, 11984), (508, 11990), (510, 11996), (512, 12011), (517, 12029), (526, 12074), (542, 12158), (543, 12164), (551, 12191), (576, 12284), (579, 12293), (588, 12350), (589, 12362), (599, 12398), (600, 12404), (615, 12446), (618, 12458), (626, 12497), (628, 12503), (629, 12506), (632, 12524), (633, 12527), (634, 12530), (638, 12554), (656, 12629), (665, 12668), (669, 12692), (676, 12725), (694, 12836), (697, 12869), (704, 12932), (709, 12968), (715, 12998), (727, 13076), (728, 13079), (729, 13088), (734, 13112), (752, 13193), (754, 13199), (762, 13244), (763, 13247), (765, 13262), (772, 13307), (774, 13316), (775, 13325), (776, 13328), (804, 13433), (818, 13481), (819, 13484), (820, 13487), (837, 13586), (838, 13589), (841, 13601), (860, 13718), (867, 13751), (874, 13802), (882, 13832), (891, 13892), (905, 13973), (908, 13994), (916, 14027), (929, 14099), (933, 14108), (953, 14222), (958, 14252), (960, 14261), (962, 14300), (963, 14303), (970, 14333), (971, 14354), (996, 14552), (1012, 14615), (1013, 14621), (1022, 14672), (1048, 14858), (1063, 14945), (1071, 14972), (1072, 14975), (1089, 15050), (1093, 15074), (1101, 15113), (1106, 15149), (1111, 15170), (1131, 15257), (1142, 15299), (1150, 15332), (1153, 15344), (1163, 15422), (1166, 15488),

Gene: BackstagePass_17 Start: 10561, Stop: 15849, Start Num: 21

Candidate Starts for BackstagePass_17:

(Start: 21 @10561 has 14 MA's), (Start: 25 @10570 has 41 MA's), (69, 10843), (71, 10852), (77, 10882), (91, 10945), (95, 10957), (101, 10972), (109, 10999), (128, 11083), (134, 11104), (139, 11131), (141, 11143), (174, 11275), (183, 11317), (194, 11371), (201, 11404), (249, 11605), (268, 11683), (294, 11836), (301, 11869), (304, 11878), (307, 11887), (314, 11920), (316, 11932), (320, 11956), (331, 12001), (345, 12055), (352, 12079), (353, 12082), (356, 12094), (359, 12112), (367, 12148), (400, 12271), (413, 12313), (452, 12448), (455, 12454), (458, 12469), (479, 12559), (480, 12562), (485, 12586), (493, 12613), (504, 12646), (508, 12658), (512, 12679), (519, 12706), (532, 12778), (580, 12949), (581, 12952), (583, 12964), (585, 12973), (601, 13057), (618, 13102), (634, 13174), (636, 13192), (644, 13225), (648, 13237), (656, 13273), (664, 13306), (673, 13357), (679, 13405), (691, 13444), (694, 13459), (695, 13462), (696, 13468), (700, 13513), (718, 13621), (725, 13663), (743, 13741), (749, 13765), (758, 13810), (780, 13933), (781, 13936), (786, 13963), (792, 13984), (797, 14002), (799, 14005), (801, 14014), (822, 14119), (832, 14173), (876, 14398), (883, 14434), (901, 14524), (906, 14566), (922, 14647), (927, 14674), (932, 14692), (940, 14731), (948, 14770), (949, 14776), (950, 14785), (973, 14944), (979, 14986), (1006, 15178), (1008, 15181), (1024, 15247), (1026, 15259), (1028, 15280), (1029, 15283), (1074, 15493), (1082, 15532), (1098, 15601), (1105, 15655), (1142, 15808),

Gene: Balloona_15 Start: 9534, Stop: 14471, Start Num: 54

Candidate Starts for Balloona_15:

(Start: 25 @9378 has 41 MA's), (54, 9534), (72, 9663), (78, 9693), (94, 9762), (98, 9774), (110, 9810), (119, 9861), (122, 9870), (133, 9906), (137, 9930), (150, 9990), (163, 10044), (174, 10083), (176, 10089), (180, 10104), (183, 10125), (218, 10296), (234, 10359), (247, 10404), (266, 10485), (294, 10644), (301, 10677), (305, 10689), (312, 10716), (321, 10773), (329, 10803), (332, 10815), (358, 10917), (359, 10920), (377, 11007), (390, 11055), (427, 11169), (455, 11262), (458, 11277), (463, 11298), (471, 11331), (477, 11361), (481, 11373), (490, 11412), (498, 11436), (499, 11439), (507, 11463), (512, 11487), (533, 11592), (558, 11670), (567, 11700), (568, 11703), (576, 11739), (585, 11781), (588, 11805), (590, 11820), (594, 11835), (598, 11850), (604, 11874), (618, 11913), (620, 11928), (621, 11934), (632, 11979), (634, 11985), (662, 12111), (668, 12141), (677, 12192), (688, 12228), (694, 12249), (695, 12252), (705, 12324), (714, 12369), (718, 12402), (720, 12423), (730, 12477), (751, 12552), (766, 12636), (782, 12723), (829, 12909), (855, 13041), (861, 13071), (886, 13209), (898, 13260), (902, 13290), (931, 13455), (938, 13485), (981, 13665), (988, 13716), (999,

13743), (1003, 13764), (1032, 13860), (1040, 13908), (1044, 13926), (1066, 14049), (1074, 14073), (1077, 14088), (1083, 14118), (1088, 14145), (1090, 14151), (1098, 14184), (1108, 14253), (1109, 14256), (1116, 14292), (1140, 14382),

Gene: Barco_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for Barco_17:

(Start: 4 @10274 has 39 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (Start: 39 @10490 has 25 MA's), (42, 10511), (Start: 59 @10631 has 7 MA's), (66, 10673), (79, 10739), (82, 10757), (87, 10778), (88, 10781), (92, 10799), (101, 10823), (120, 10907), (121, 10910), (133, 10949), (135, 10964), (137, 10973), (178, 11141), (183, 11168), (206, 11285), (249, 11456), (256, 11486), (294, 11690), (305, 11735), (312, 11762), (314, 11774), (333, 11864), (345, 11909), (353, 11936), (359, 11966), (377, 12053), (378, 12056), (387, 12095), (415, 12179), (427, 12215), (439, 12257), (452, 12302), (455, 12308), (457, 12320), (458, 12323), (471, 12377), (480, 12416), (484, 12437), (485, 12440), (490, 12458), (493, 12467), (499, 12485), (506, 12506), (508, 12512), (512, 12533), (519, 12560), (533, 12638), (597, 12827), (606, 12851), (615, 12863), (616, 12866), (630, 12881), (633, 12896), (634, 12899), (644, 12950), (663, 13031), (664, 13034), (670, 13067), (676, 13097), (678, 13121), (743, 13454), (754, 13502), (762, 13547), (763, 13550), (765, 13565), (772, 13610), (774, 13619), (775, 13628), (786, 13679), (809, 13751), (816, 13769), (820, 13790), (837, 13889), (838, 13892), (844, 13925), (853, 13991), (857, 14009), (860, 14024), (867, 14057), (874, 14108), (885, 14159), (892, 14207), (925, 14402), (926, 14405), (942, 14477), (943, 14480), (952, 14546), (953, 14549), (955, 14567), (961, 14627), (971, 14684), (974, 14702), (983, 14783), (984, 14786), (987, 14801), (1025, 15014), (1033, 15080), (1042, 15134), (1043, 15146), (1044, 15152), (1066, 15275), (1074, 15299), (1078, 15317), (1083, 15341), (1085, 15347), (1088, 15368), (1098, 15407), (1125, 15548), (1129, 15560), (1144, 15611), (1147, 15629), (1165, 15779),

Gene: Bavilard_16 Start: 10158, Stop: 15257, Start Num: 25

Candidate Starts for Bavilard_16:

(Start: 25 @10158 has 41 MA's), (54, 10314), (72, 10443), (78, 10473), (87, 10515), (94, 10542), (110, 10590), (119, 10641), (122, 10650), (133, 10686), (137, 10710), (150, 10770), (163, 10824), (174, 10863), (176, 10869), (180, 10884), (183, 10905), (215, 11064), (218, 11076), (234, 11139), (247, 11184), (266, 11265), (294, 11424), (301, 11457), (305, 11469), (312, 11496), (321, 11553), (329, 11583), (332, 11595), (358, 11697), (359, 11700), (377, 11787), (389, 11832), (390, 11835), (427, 11949), (455, 12042), (458, 12057), (463, 12078), (471, 12111), (477, 12141), (481, 12153), (490, 12192), (498, 12216), (499, 12219), (507, 12243), (512, 12267), (533, 12372), (548, 12420), (558, 12450), (563, 12465), (567, 12480), (576, 12519), (585, 12561), (588, 12585), (590, 12600), (594, 12615), (598, 12630), (604, 12654), (618, 12693), (620, 12708), (621, 12714), (627, 12735), (632, 12759), (634, 12765), (662, 12891), (668, 12921), (675, 12957), (676, 12960), (688, 13008), (694, 13029), (695, 13032), (705, 13104), (714, 13149), (718, 13182), (720, 13203), (730, 13257), (751, 13332), (766, 13416), (782, 13503), (829, 13689), (855, 13821), (861, 13851), (886, 13989), (898, 14040), (902, 14070), (919, 14175), (931, 14226), (938, 14256), (981, 14436), (988, 14487), (999, 14529), (1003, 14550), (1032, 14646), (1044, 14712), (1066, 14835), (1074, 14859), (1077, 14874), (1083, 14904), (1088, 14931), (1090, 14937), (1098, 14970), (1108, 15039), (1109, 15042), (1116, 15078), (1140, 15168),

Gene: Begonia_18 Start: 10785, Stop: 16274, Start Num: 4

Candidate Starts for Begonia_18:

(Start: 4 @10785 has 39 MA's), (8, 10824), (Start: 9 @10836 has 1 MA's), (10, 10845), (11, 10848), (13, 10890), (Start: 39 @11001 has 25 MA's), (42, 11022), (Start: 59 @11142 has 7 MA's), (66, 11184), (79, 11250), (82, 11268), (85, 11283), (87, 11289), (88, 11292), (92, 11310), (101, 11334), (120, 11418), (133, 11460), (135, 11475), (137, 11484), (178, 11652), (183, 11679), (198, 11754), (206, 11796), (216, 11844), (249, 11967), (256, 11997), (294, 12201), (305, 12246), (312, 12273), (314, 12285), (333, 12375), (345, 12420), (353, 12447), (359, 12477), (377, 12564), (387, 12606),

(427, 12726), (439, 12768), (452, 12813), (455, 12819), (457, 12831), (458, 12834), (471, 12888), (480, 12927), (484, 12948), (485, 12951), (490, 12969), (499, 12996), (508, 13023), (512, 13044), (519, 13071), (532, 13143), (593, 13344), (597, 13359), (606, 13383), (616, 13398), (633, 13428), (634, 13431), (644, 13482), (663, 13563), (664, 13566), (670, 13599), (676, 13629), (678, 13653), (697, 13719), (743, 13986), (754, 14034), (762, 14079), (763, 14082), (765, 14097), (772, 14142), (774, 14151), (775, 14160), (786, 14211), (809, 14283), (816, 14301), (820, 14322), (837, 14421), (838, 14424), (844, 14457), (853, 14523), (857, 14541), (860, 14556), (867, 14589), (874, 14640), (885, 14691), (925, 14934), (926, 14937), (943, 15012), (952, 15078), (953, 15081), (955, 15099), (961, 15159), (983, 15315), (984, 15318), (987, 15333), (1025, 15552), (1036, 15609), (1038, 15624), (1045, 15672), (1056, 15717), (1086, 15837), (1087, 15846), (1096, 15885), (1110, 15957), (1125, 16026), (1129, 16038), (1144, 16089), (1147, 16107), (1161, 16164), (1165, 16257),

Gene: BetterKatz_20 Start: 11757, Stop: 16547, Start Num: 40

Candidate Starts for BetterKatz_20:

(38, 11745), (Start: 39 @11748 has 25 MA's), (Start: 40 @11757 has 15 MA's), (46, 11790), (56, 11850), (82, 12018), (144, 12291), (157, 12333), (178, 12414), (196, 12480), (232, 12606), (250, 12639), (269, 12684), (285, 12744), (287, 12777), (325, 12918), (330, 12927), (365, 13059), (374, 13104), (413, 13215), (428, 13266), (445, 13323), (463, 13365), (466, 13371), (497, 13485), (498, 13488), (525, 13593), (540, 13668), (545, 13680), (554, 13704), (607, 13887), (628, 13962), (632, 13983), (639, 14019), (669, 14127), (676, 14160), (678, 14187), (680, 14193), (685, 14205), (696, 14247), (701, 14283), (710, 14340), (716, 14370), (727, 14445), (733, 14478), (753, 14568), (759, 14598), (771, 14676), (773, 14685), (796, 14793), (836, 14964), (858, 15093), (884, 15231), (936, 15540), (941, 15561), (961, 15669), (1004, 15765), (1067, 16077), (1068, 16080), (1095, 16209), (1103, 16254), (1113, 16320), (1122, 16359), (1134, 16410), (1152, 16485), (1160, 16530),

Gene: BigChungus_15 Start: 9403, Stop: 14511, Start Num: 25

Candidate Starts for BigChungus_15:

(Start: 25 @9403 has 41 MA's), (54, 9559), (72, 9688), (78, 9718), (94, 9787), (98, 9799), (110, 9835), (119, 9886), (122, 9895), (133, 9931), (137, 9955), (150, 10015), (163, 10069), (174, 10108), (176, 10114), (180, 10129), (183, 10150), (218, 10321), (234, 10384), (247, 10429), (266, 10510), (294, 10669), (301, 10702), (305, 10714), (312, 10741), (321, 10798), (329, 10828), (332, 10840), (358, 10942), (359, 10945), (377, 11032), (390, 11080), (427, 11194), (455, 11287), (458, 11302), (463, 11323), (471, 11356), (477, 11386), (481, 11398), (490, 11437), (498, 11461), (499, 11464), (507, 11488), (512, 11512), (533, 11617), (558, 11695), (567, 11725), (568, 11728), (576, 11764), (585, 11806), (588, 11830), (590, 11845), (594, 11860), (598, 11875), (604, 11899), (618, 11938), (620, 11953), (621, 11959), (632, 12004), (634, 12010), (662, 12136), (668, 12166), (675, 12202), (676, 12205), (688, 12253), (694, 12274), (695, 12277), (705, 12349), (714, 12394), (718, 12427), (720, 12448), (730, 12502), (751, 12577), (766, 12661), (782, 12748), (855, 13066), (861, 13096), (886, 13234), (898, 13285), (902, 13315), (931, 13480), (938, 13510), (981, 13690), (988, 13741), (999, 13783), (1003, 13804), (1032, 13900), (1040, 13948), (1044, 13966), (1066, 14089), (1074, 14113), (1077, 14128), (1083, 14158), (1088, 14185), (1090, 14191), (1098, 14224), (1108, 14293), (1109, 14296), (1116, 14332), (1140, 14422),

Gene: BillDoor_18 Start: 9610, Stop: 14400, Start Num: 100

Candidate Starts for BillDoor_18:

(Start: 100 @9610 has 16 MA's), (Start: 107 @9637 has 1 MA's), (124, 9715), (136, 9766), (156, 9853), (160, 9868), (175, 9925), (180, 9943), (185, 9970), (187, 9973), (201, 10042), (212, 10099), (223, 10144), (229, 10162), (240, 10207), (254, 10243), (261, 10276), (274, 10324), (275, 10327), (285, 10375), (290, 10414), (293, 10429), (342, 10621), (346, 10639), (368, 10723), (416, 10870), (426, 10897), (452, 10990), (455, 10996), (458, 11011), (468, 11050), (470, 11062), (485, 11128), (508, 11200), (511, 11218), (512, 11221), (519, 11248), (544, 11383), (568, 11458), (576, 11494), (588, 11560), (598, 11605), (603, 11626), (604, 11629), (605, 11632), (618, 11668), (626, 11707), (628, 11713), (634, 11740), (663, 11869), (664, 11872), (666, 11890), (696, 12013), (698, 12028), (718,

12157), (720, 12178), (729, 12220), (737, 12247), (738, 12253), (764, 12385), (766, 12397), (782, 12484), (791, 12526), (804, 12562), (830, 12688), (842, 12727), (862, 12856), (872, 12913), (881, 12958), (899, 13051), (908, 13126), (920, 13189), (938, 13270), (945, 13291), (972, 13468), (973, 13474), (1014, 13693), (1027, 13771), (1032, 13789), (1034, 13795), (1044, 13855), (1046, 13873), (1053, 13906), (1066, 13978), (1077, 14017), (1083, 14047), (1098, 14113), (1104, 14161), (1116, 14221), (1140, 14311), (1155, 14371),

Gene: Biskit_17 Start: 9616, Stop: 14415, Start Num: 100

Candidate Starts for Biskit_17:

(Start: 100 @9616 has 16 MA's), (Start: 107 @9643 has 1 MA's), (136, 9772), (160, 9874), (171, 9919), (175, 9931), (180, 9949), (185, 9976), (187, 9979), (190, 9994), (200, 10045), (201, 10048), (212, 10105), (213, 10108), (223, 10150), (229, 10168), (240, 10213), (254, 10249), (261, 10282), (270, 10315), (272, 10327), (285, 10381), (290, 10420), (293, 10435), (295, 10444), (303, 10471), (315, 10522), (323, 10564), (329, 10582), (332, 10591), (346, 10645), (363, 10708), (367, 10723), (380, 10786), (416, 10876), (426, 10903), (452, 10996), (455, 11002), (458, 11017), (468, 11056), (485, 11134), (495, 11167), (508, 11206), (511, 11224), (512, 11227), (519, 11254), (529, 11311), (533, 11332), (546, 11395), (558, 11431), (562, 11443), (568, 11464), (576, 11500), (585, 11542), (586, 11554), (588, 11566), (598, 11611), (599, 11614), (603, 11632), (604, 11635), (605, 11638), (626, 11713), (628, 11719), (634, 11746), (647, 11806), (650, 11821), (662, 11872), (663, 11875), (664, 11878), (666, 11896), (690, 11995), (694, 12010), (695, 12013), (718, 12163), (720, 12184), (729, 12226), (737, 12253), (738, 12259), (764, 12391), (766, 12403), (782, 12490), (791, 12532), (804, 12568), (821, 12643), (830, 12694), (842, 12733), (852, 12811), (862, 12862), (872, 12919), (899, 13057), (908, 13132), (938, 13276), (945, 13297), (972, 13474), (973, 13480), (1032, 13804), (1034, 13810), (1044, 13870), (1046, 13888), (1053, 13921), (1066, 13993), (1077, 14032), (1083, 14062), (1098, 14128), (1104, 14176), (1116, 14236), (1140, 14326), (1155, 14386),

Gene: BlingBling_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for BlingBling_17:

(Start: 4 @10274 has 39 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (Start: 39 @10490 has 25 MA's), (42, 10511), (Start: 59 @10631 has 7 MA's), (66, 10673), (79, 10739), (82, 10757), (87, 10778), (88, 10781), (92, 10799), (101, 10823), (120, 10907), (121, 10910), (133, 10949), (135, 10964), (137, 10973), (178, 11141), (183, 11168), (206, 11285), (249, 11456), (256, 11486), (294, 11690), (305, 11735), (312, 11762), (314, 11774), (333, 11864), (345, 11909), (353, 11936), (359, 11966), (377, 12053), (378, 12056), (387, 12095), (415, 12179), (427, 12215), (439, 12257), (452, 12302), (455, 12308), (457, 12320), (458, 12323), (471, 12377), (480, 12416), (484, 12437), (485, 12440), (490, 12458), (493, 12467), (499, 12485), (506, 12506), (508, 12512), (512, 12533), (519, 12560), (533, 12638), (597, 12827), (606, 12851), (615, 12863), (616, 12866), (630, 12881), (633, 12896), (634, 12899), (644, 12950), (663, 13031), (664, 13034), (670, 13067), (676, 13097), (678, 13121), (743, 13454), (754, 13502), (762, 13547), (763, 13550), (765, 13565), (772, 13610), (774, 13619), (775, 13628), (786, 13679), (809, 13751), (816, 13769), (820, 13790), (837, 13889), (838, 13892), (844, 13925), (853, 13991), (857, 14009), (860, 14024), (867, 14057), (874, 14108), (885, 14159), (892, 14207), (925, 14402), (926, 14405), (942, 14477), (943, 14480), (952, 14546), (953, 14549), (955, 14567), (961, 14627), (971, 14684), (974, 14702), (983, 14783), (984, 14786), (987, 14801), (1025, 15014), (1033, 15080), (1042, 15134), (1043, 15146), (1044, 15152), (1066, 15275), (1074, 15299), (1078, 15317), (1083, 15341), (1085, 15347), (1088, 15368), (1098, 15407), (1125, 15548), (1129, 15560), (1144, 15611), (1147, 15629), (1165, 15779),

Gene: Blino_17 Start: 10173, Stop: 15764, Start Num: 4

Candidate Starts for Blino_17:

(Start: 4 @10173 has 39 MA's), (Start: 6 @10188 has 1 MA's), (Start: 9 @10224 has 1 MA's), (10, 10233), (11, 10236), (13, 10278), (Start: 39 @10389 has 25 MA's), (42, 10410), (Start: 59 @10530 has 7 MA's), (79, 10638), (82, 10656), (87, 10677), (88, 10680), (92, 10698), (122, 10812), (133, 10848),

(135, 10863), (137, 10872), (178, 11040), (183, 11067), (206, 11184), (249, 11355), (256, 11385), (294, 11589), (305, 11634), (345, 11808), (353, 11835), (359, 11865), (377, 11952), (378, 11955), (387, 11994), (411, 12057), (427, 12114), (439, 12156), (452, 12201), (455, 12207), (457, 12219), (458, 12222), (471, 12276), (480, 12315), (484, 12336), (485, 12339), (490, 12357), (499, 12384), (506, 12405), (508, 12411), (512, 12432), (519, 12459), (528, 12507), (533, 12537), (579, 12693), (583, 12717), (585, 12726), (587, 12747), (608, 12828), (633, 12924), (634, 12927), (635, 12933), (643, 12975), (644, 12978), (649, 12999), (663, 13059), (664, 13062), (670, 13095), (676, 13125), (697, 13215), (743, 13482), (754, 13530), (762, 13575), (763, 13578), (765, 13593), (772, 13638), (774, 13647), (775, 13656), (786, 13707), (809, 13779), (816, 13797), (820, 13818), (837, 13917), (838, 13920), (844, 13953), (853, 14019), (857, 14037), (860, 14052), (867, 14085), (874, 14136), (885, 14187), (892, 14235), (925, 14430), (926, 14433), (942, 14505), (943, 14508), (952, 14574), (953, 14577), (955, 14595), (961, 14655), (974, 14730), (984, 14814), (987, 14829), (1025, 15042), (1036, 15099), (1038, 15114), (1045, 15162), (1056, 15207), (1086, 15327), (1087, 15336), (1096, 15375), (1110, 15447), (1125, 15516), (1144, 15579), (1147, 15597), (1161, 15654), (1165, 15747),

Gene: Blondies_17 Start: 9629, Stop: 14398, Start Num: 107

Candidate Starts for Blondies_17:

(Start: 100 @9602 has 16 MA's), (Start: 107 @9629 has 1 MA's), (110, 9635), (136, 9758), (160, 9860), (171, 9905), (175, 9917), (180, 9935), (185, 9962), (187, 9965), (190, 9980), (200, 10031), (201, 10034), (212, 10091), (213, 10094), (214, 10097), (223, 10136), (229, 10154), (240, 10199), (254, 10235), (261, 10268), (270, 10301), (272, 10313), (285, 10367), (290, 10406), (293, 10421), (295, 10430), (303, 10457), (315, 10508), (329, 10568), (332, 10577), (346, 10631), (363, 10694), (367, 10709), (380, 10772), (416, 10862), (426, 10889), (452, 10982), (455, 10988), (458, 11003), (468, 11042), (485, 11120), (495, 11153), (508, 11192), (511, 11210), (512, 11213), (519, 11240), (529, 11297), (533, 11318), (546, 11381), (562, 11429), (568, 11450), (576, 11486), (585, 11528), (588, 11552), (598, 11597), (599, 11600), (603, 11618), (604, 11621), (605, 11624), (626, 11699), (628, 11705), (634, 11732), (647, 11792), (662, 11858), (663, 11861), (664, 11864), (666, 11882), (690, 11981), (694, 11996), (695, 11999), (718, 12149), (720, 12170), (729, 12212), (737, 12239), (738, 12245), (764, 12377), (766, 12389), (782, 12476), (791, 12518), (804, 12554), (821, 12629), (830, 12680), (842, 12719), (862, 12848), (872, 12905), (899, 13043), (908, 13118), (938, 13262), (945, 13283), (972, 13457), (973, 13463), (1032, 13787), (1034, 13793), (1044, 13853), (1046, 13871), (1053, 13904), (1066, 13976), (1077, 14015), (1083, 14045), (1098, 14111), (1104, 14159), (1116, 14219), (1140, 14309), (1155, 14369),

Gene: Blueberry_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for Blueberry_19:

(Start: 4 @10619 has 39 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (Start: 39 @10835 has 25 MA's), (42, 10856), (Start: 59 @10976 has 7 MA's), (66, 11018), (79, 11084), (82, 11102), (87, 11123), (88, 11126), (92, 11144), (101, 11168), (120, 11252), (133, 11294), (135, 11309), (137, 11318), (178, 11486), (183, 11513), (206, 11630), (249, 11801), (256, 11831), (294, 12035), (305, 12080), (312, 12107), (314, 12119), (316, 12131), (333, 12209), (345, 12254), (353, 12281), (359, 12311), (377, 12398), (378, 12401), (387, 12440), (411, 12503), (413, 12512), (427, 12560), (439, 12602), (452, 12647), (455, 12653), (458, 12668), (471, 12722), (480, 12761), (484, 12782), (485, 12785), (490, 12803), (499, 12830), (506, 12851), (508, 12857), (512, 12878), (517, 12896), (519, 12905), (593, 13178), (616, 13232), (633, 13262), (634, 13265), (644, 13316), (663, 13397), (664, 13400), (670, 13433), (676, 13463), (678, 13487), (697, 13553), (743, 13820), (754, 13868), (760, 13901), (762, 13913), (763, 13916), (772, 13976), (774, 13985), (775, 13994), (786, 14045), (809, 14117), (816, 14135), (820, 14156), (837, 14255), (838, 14258), (844, 14291), (853, 14357), (857, 14375), (860, 14390), (867, 14423), (874, 14474), (885, 14525), (898, 14594), (925, 14768), (926, 14771), (942, 14843), (943, 14846), (952, 14912), (953, 14915), (955, 14933), (961, 14993), (971, 15050), (974, 15068), (983, 15149), (984, 15152), (987, 15167), (1015, 15338), (1025, 15392), (1038, 15464), (1040, 15473), (1045, 15509), (1060, 15569), (1063, 15587), (1069, 15605), (1081, 15650), (1087, 15683),

(1110, 15794), (1125, 15863), (1144, 15926), (1147, 15944), (1165, 16094),

Gene: Bock_20 Start: 11507, Stop: 16297, Start Num: 40

Candidate Starts for Bock_20:

(38, 11495), (Start: 39 @11498 has 25 MA's), (Start: 40 @11507 has 15 MA's), (46, 11540), (56, 11600), (82, 11768), (144, 12041), (157, 12083), (178, 12164), (196, 12230), (232, 12356), (250, 12389), (269, 12434), (285, 12494), (287, 12527), (325, 12668), (330, 12677), (365, 12809), (374, 12854), (413, 12965), (428, 13016), (445, 13073), (463, 13115), (466, 13121), (497, 13235), (498, 13238), (525, 13343), (540, 13418), (545, 13430), (554, 13454), (592, 13580), (597, 13601), (607, 13637), (628, 13712), (632, 13733), (639, 13769), (669, 13877), (676, 13910), (678, 13937), (680, 13943), (685, 13955), (696, 13997), (701, 14033), (710, 14090), (716, 14120), (727, 14195), (733, 14228), (753, 14318), (759, 14348), (771, 14426), (773, 14435), (796, 14543), (836, 14714), (858, 14843), (884, 14981), (936, 15290), (941, 15311), (961, 15419), (1004, 15515), (1067, 15827), (1068, 15830), (1095, 15959), (1103, 16004), (1113, 16070), (1122, 16109), (1134, 16160), (1152, 16235), (1160, 16280),

Gene: BotCity_18 Start: 9879, Stop: 15506, Start Num: 17

Candidate Starts for BotCity_18:

(Start: 17 @9879 has 14 MA's), (Start: 28 @9924 has 2 MA's), (32, 9945), (37, 9966), (46, 10011), (Start: 50 @10026 has 1 MA's), (60, 10110), (68, 10152), (69, 10164), (82, 10227), (85, 10242), (88, 10251), (92, 10269), (94, 10275), (110, 10323), (140, 10458), (177, 10608), (183, 10638), (256, 10962), (279, 11058), (294, 11166), (304, 11208), (305, 11211), (307, 11217), (312, 11238), (326, 11319), (345, 11385), (353, 11412), (356, 11424), (359, 11442), (360, 11454), (367, 11478), (370, 11490), (377, 11529), (378, 11532), (380, 11541), (387, 11571), (422, 11676), (427, 11691), (435, 11721), (439, 11733), (452, 11778), (455, 11784), (458, 11799), (465, 11829), (470, 11850), (471, 11853), (485, 11916), (493, 11943), (494, 11946), (495, 11949), (497, 11955), (505, 11979), (506, 11982), (508, 11988), (510, 11994), (512, 12009), (517, 12027), (526, 12072), (542, 12156), (543, 12162), (551, 12189), (576, 12282), (579, 12291), (588, 12348), (589, 12360), (599, 12396), (600, 12402), (615, 12444), (618, 12456), (626, 12495), (628, 12501), (629, 12504), (632, 12522), (633, 12525), (634, 12528), (638, 12552), (656, 12627), (665, 12666), (669, 12690), (676, 12723), (694, 12834), (697, 12867), (704, 12930), (709, 12966), (715, 12996), (727, 13074), (728, 13077), (729, 13086), (734, 13110), (752, 13191), (754, 13197), (762, 13242), (763, 13245), (765, 13260), (772, 13305), (774, 13314), (775, 13323), (776, 13326), (804, 13431), (818, 13479), (819, 13482), (820, 13485), (837, 13584), (838, 13587), (841, 13599), (860, 13716), (867, 13749), (874, 13800), (882, 13830), (891, 13890), (905, 13971), (908, 13992), (916, 14025), (929, 14097), (933, 14106), (953, 14220), (958, 14250), (960, 14259), (962, 14298), (963, 14301), (970, 14331), (971, 14352), (996, 14550), (1012, 14613), (1013, 14619), (1022, 14670), (1048, 14856), (1063, 14943), (1071, 14970), (1072, 14973), (1089, 15048), (1093, 15072), (1101, 15111), (1106, 15147), (1111, 15168), (1131, 15255), (1142, 15297), (1150, 15330), (1153, 15342), (1163, 15420), (1166, 15486),

Gene: Bowser_17 Start: 10588, Stop: 15702, Start Num: 21

Candidate Starts for Bowser_17:

(Start: 21 @10588 has 14 MA's), (Start: 25 @10597 has 41 MA's), (69, 10870), (71, 10879), (77, 10909), (80, 10918), (92, 10975), (112, 11038), (128, 11110), (134, 11131), (137, 11149), (174, 11302), (183, 11344), (194, 11398), (248, 11626), (274, 11740), (282, 11779), (294, 11863), (301, 11896), (304, 11905), (307, 11914), (314, 11947), (316, 11959), (320, 11983), (331, 12028), (343, 12073), (353, 12109), (356, 12121), (359, 12139), (367, 12175), (400, 12298), (407, 12322), (413, 12340), (452, 12475), (455, 12481), (457, 12493), (458, 12496), (471, 12550), (480, 12589), (484, 12610), (485, 12613), (490, 12631), (493, 12640), (508, 12685), (512, 12706), (519, 12733), (533, 12811), (579, 12967), (611, 13024), (622, 13036), (624, 13039), (634, 13072), (636, 13090), (654, 13165), (656, 13171), (658, 13177), (662, 13198), (663, 13201), (664, 13204), (676, 13267), (679, 13303), (684, 13318), (691, 13342), (694, 13357), (695, 13360), (696, 13366), (700, 13411), (702, 13420), (718, 13519), (725, 13561), (744, 13645), (758, 13708), (761, 13726), (780, 13834), (782,

13843), (785, 13861), (786, 13864), (797, 13903), (799, 13906), (801, 13915), (826, 14050), (832, 14074), (855, 14194), (864, 14239), (871, 14272), (886, 14320), (888, 14332), (901, 14392), (922, 14512), (927, 14539), (932, 14557), (948, 14635), (949, 14641), (950, 14650), (967, 14770), (973, 14809), (979, 14851), (990, 14944), (1006, 15037), (1008, 15040), (1023, 15097), (1024, 15106), (1026, 15118), (1028, 15139), (1051, 15244), (1074, 15352), (1082, 15391), (1098, 15460), (1105, 15514), (1142, 15664),

Gene: Brylie_20 Start: 11504, Stop: 16288, Start Num: 40

Candidate Starts for Brylie_20:

(38, 11492), (Start: 39 @11495 has 25 MA's), (Start: 40 @11504 has 15 MA's), (46, 11537), (56, 11597), (82, 11765), (144, 12038), (157, 12080), (178, 12161), (196, 12227), (232, 12353), (250, 12386), (269, 12431), (285, 12491), (287, 12524), (325, 12665), (330, 12674), (365, 12806), (374, 12851), (413, 12962), (428, 13013), (445, 13070), (463, 13112), (466, 13118), (497, 13232), (498, 13235), (525, 13340), (540, 13415), (545, 13427), (554, 13451), (607, 13634), (628, 13709), (632, 13730), (639, 13766), (669, 13874), (676, 13907), (678, 13934), (680, 13940), (685, 13952), (696, 13994), (701, 14030), (710, 14087), (716, 14117), (727, 14192), (733, 14225), (753, 14315), (759, 14345), (771, 14423), (773, 14432), (796, 14540), (836, 14711), (858, 14840), (884, 14978), (936, 15287), (941, 15308), (961, 15416), (1004, 15506), (1067, 15818), (1068, 15821), (1095, 15950), (1103, 15995), (1113, 16061), (1122, 16100), (1134, 16151), (1152, 16226), (1160, 16271),

Gene: Bubble_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Bubble_16:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247, 10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377, 11258), (385, 11291), (418, 11393), (419, 11396), (427, 11420), (429, 11426), (455, 11513), (458, 11528), (468, 11567), (480, 11621), (504, 11705), (511, 11735), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (588, 12077), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1058, 14300), (1066, 14345), (1075, 14375), (1077, 14384), (1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: Budski_18 Start: 10015, Stop: 15501, Start Num: 50

Candidate Starts for Budski_18:

(Start: 17 @9868 has 14 MA's), (26, 9895), (Start: 28 @9913 has 2 MA's), (32, 9934), (37, 9955), (46, 10000), (Start: 50 @10015 has 1 MA's), (60, 10099), (68, 10141), (69, 10153), (82, 10216), (85, 10231), (88, 10240), (92, 10258), (94, 10264), (110, 10312), (140, 10447), (177, 10597), (183, 10627), (229, 10846), (249, 10921), (256, 10951), (294, 11155), (304, 11197), (305, 11200), (307, 11206), (312, 11227), (326, 11308), (345, 11374), (353, 11401), (356, 11413), (359, 11431), (360, 11443), (367, 11467), (370, 11479), (377, 11518), (378, 11521), (380, 11530), (387, 11560), (404, 11605), (422, 11665), (427, 11680), (435, 11710), (439, 11722), (452, 11767), (455, 11773), (458, 11788), (465, 11818), (470, 11839), (471, 11842), (485, 11905), (493, 11932), (494, 11935), (495, 11938), (497, 11944), (505, 11968), (506, 11971), (508, 11977), (510, 11983), (512, 11998), (517, 12016), (532, 12097), (542, 12145), (543, 12151), (551, 12178), (588, 12337), (589, 12349), (599, 12385), (618, 12445), (626, 12484), (628, 12490), (629, 12493), (633, 12514), (634, 12517), (656, 12616), (665, 12655), (669, 12679), (676, 12712), (683, 12757), (692, 12811), (700, 12898), (704, 12919), (709, 12955), (715, 12985), (727, 13063), (728, 13066), (729, 13075), (734, 13099), (752, 13180), (754, 13186), (762, 13231), (763, 13234), (765, 13249), (772, 13294), (774, 13303), (775, 13312),

(776, 13315), (804, 13420), (818, 13468), (820, 13474), (837, 13573), (838, 13576), (841, 13588), (860, 13705), (867, 13738), (874, 13789), (878, 13801), (882, 13819), (891, 13879), (905, 13960), (908, 13981), (916, 14014), (928, 14077), (933, 14095), (953, 14209), (958, 14239), (960, 14248), (962, 14287), (963, 14290), (970, 14320), (971, 14341), (989, 14494), (996, 14545), (1012, 14608), (1013, 14614), (1022, 14665), (1048, 14851), (1063, 14938), (1071, 14965), (1072, 14968), (1089, 15043), (1093, 15067), (1101, 15106), (1106, 15142), (1111, 15163), (1131, 15250), (1142, 15292), (1150, 15325), (1153, 15337), (1163, 15415), (1166, 15481),

Gene: Bunker_17 Start: 10580, Stop: 15829, Start Num: 21

Candidate Starts for Bunker_17:

(Start: 21 @10580 has 14 MA's), (Start: 25 @10589 has 41 MA's), (53, 10736), (69, 10862), (71, 10871), (84, 10934), (85, 10940), (87, 10946), (92, 10967), (101, 10991), (110, 11021), (112, 11030), (134, 11123), (136, 11135), (137, 11141), (174, 11294), (183, 11336), (194, 11390), (201, 11423), (249, 11624), (294, 11855), (301, 11888), (304, 11897), (307, 11906), (314, 11939), (316, 11951), (320, 11975), (331, 12020), (333, 12029), (353, 12101), (356, 12113), (359, 12131), (367, 12167), (400, 12290), (407, 12314), (442, 12431), (452, 12467), (455, 12473), (458, 12488), (471, 12542), (480, 12581), (484, 12602), (485, 12605), (490, 12623), (493, 12632), (508, 12677), (511, 12695), (512, 12698), (519, 12725), (533, 12803), (580, 12968), (583, 12983), (585, 12992), (601, 13076), (632, 13187), (634, 13193), (635, 13199), (644, 13244), (648, 13256), (656, 13292), (658, 13298), (662, 13319), (664, 13325), (665, 13331), (673, 13376), (676, 13388), (679, 13424), (691, 13463), (694, 13478), (695, 13481), (696, 13487), (700, 13532), (725, 13682), (743, 13760), (744, 13766), (758, 13832), (761, 13850), (780, 13958), (781, 13961), (785, 13985), (786, 13988), (797, 14027), (799, 14030), (801, 14039), (813, 14087), (826, 14174), (832, 14198), (846, 14258), (855, 14318), (871, 14396), (886, 14444), (888, 14456), (901, 14516), (922, 14633), (927, 14660), (948, 14756), (949, 14762), (950, 14771), (973, 14930), (979, 14972), (1024, 15230), (1026, 15242), (1028, 15263), (1029, 15266), (1035, 15284), (1074, 15476), (1082, 15515), (1105, 15638), (1142, 15788), (1147, 15812),

Gene: Burnsey_16 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for Burnsey_16:

(Start: 18 @9606 has 2 MA's), (Start: 25 @9630 has 41 MA's), (29, 9657), (54, 9786), (62, 9861), (94, 10014), (95, 10017), (119, 10113), (122, 10122), (131, 10152), (133, 10158), (135, 10173), (136, 10176), (140, 10197), (162, 10290), (180, 10356), (183, 10377), (206, 10494), (247, 10656), (256, 10695), (273, 10770), (301, 10929), (305, 10941), (312, 10968), (319, 11013), (321, 11025), (345, 11115), (350, 11133), (356, 11154), (360, 11184), (367, 11208), (370, 11220), (377, 11259), (385, 11292), (418, 11394), (419, 11397), (427, 11421), (455, 11514), (458, 11529), (468, 11568), (490, 11664), (503, 11703), (504, 11706), (512, 11739), (534, 11847), (535, 11850), (544, 11901), (568, 11976), (588, 12078), (598, 12123), (603, 12144), (604, 12147), (605, 12150), (626, 12225), (634, 12258), (637, 12279), (644, 12309), (656, 12357), (658, 12363), (664, 12390), (695, 12525), (714, 12642), (718, 12675), (720, 12696), (721, 12699), (737, 12765), (738, 12771), (741, 12786), (765, 12906), (766, 12915), (782, 12999), (855, 13320), (896, 13539), (902, 13575), (945, 13788), (986, 13980), (999, 14028), (1003, 14049), (1032, 14157), (1044, 14223), (1046, 14241), (1058, 14301), (1066, 14346), (1075, 14376), (1077, 14385), (1083, 14415), (1098, 14481), (1104, 14529), (1116, 14589), (1138, 14676), (1155, 14739),

Gene: Button_17 Start: 9644, Stop: 13834, Start Num: 43

Candidate Starts for Button_17:

(Start: 39 @9617 has 25 MA's), (Start: 43 @9644 has 1 MA's), (86, 9890), (104, 9953), (120, 10010), (129, 10037), (137, 10079), (151, 10142), (154, 10157), (159, 10175), (163, 10193), (167, 10205), (176, 10238), (184, 10280), (188, 10295), (206, 10400), (211, 10424), (220, 10463), (228, 10487), (235, 10514), (242, 10544), (249, 10565), (263, 10619), (268, 10634), (290, 10763), (318, 10895), (320, 10904), (327, 10940), (379, 11081), (384, 11102), (396, 11135), (402, 11153), (408, 11171), (432, 11216), (448, 11270), (460, 11291), (476, 11354), (496, 11402), (502, 11414), (522, 11453),

(549, 11507), (559, 11534), (561, 11540), (568, 11564), (569, 11567), (596, 11627), (625, 11660), (653, 11699), (666, 11717), (667, 11720), (676, 11762), (677, 11774), (687, 11807), (694, 11831), (698, 11855), (699, 11858), (717, 11972), (718, 11984), (722, 12014), (724, 12023), (725, 12029), (763, 12182), (779, 12242), (781, 12251), (782, 12257), (789, 12293), (827, 12425), (855, 12563), (860, 12587), (895, 12785), (896, 12788), (925, 12950), (930, 12974), (931, 12977), (959, 13079), (1020, 13184), (1036, 13256), (1040, 13280), (1043, 13292), (1046, 13316), (1050, 13328), (1065, 13412), (1066, 13418), (1078, 13460), (1083, 13481), (1090, 13514), (1098, 13547), (1100, 13568), (1104, 13595), (1116, 13655), (1124, 13682), (1125, 13691), (1130, 13703), (1158, 13805),

Gene: Buttrmlkdreams_16 Start: 9601, Stop: 14397, Start Num: 100

Candidate Starts for Buttrmlkdreams_16:

(Start: 100 @9601 has 16 MA's), (Start: 107 @9628 has 1 MA's), (110, 9634), (136, 9757), (160, 9859), (171, 9904), (175, 9916), (180, 9934), (185, 9961), (187, 9964), (190, 9979), (200, 10030), (201, 10033), (212, 10090), (213, 10093), (223, 10135), (229, 10153), (240, 10198), (254, 10234), (261, 10267), (270, 10300), (272, 10312), (285, 10366), (290, 10405), (293, 10420), (295, 10429), (303, 10456), (315, 10507), (329, 10567), (332, 10576), (346, 10630), (363, 10693), (367, 10708), (416, 10861), (426, 10888), (448, 10969), (452, 10981), (455, 10987), (458, 11002), (465, 11032), (468, 11041), (485, 11119), (495, 11152), (508, 11191), (511, 11209), (512, 11212), (519, 11239), (529, 11296), (533, 11317), (546, 11380), (562, 11428), (568, 11449), (576, 11485), (585, 11527), (588, 11551), (598, 11596), (599, 11599), (603, 11617), (604, 11620), (605, 11623), (626, 11698), (628, 11704), (634, 11731), (647, 11791), (662, 11857), (663, 11860), (664, 11863), (666, 11881), (690, 11980), (694, 11995), (695, 11998), (718, 12148), (720, 12169), (729, 12211), (737, 12238), (738, 12244), (766, 12388), (782, 12475), (791, 12517), (804, 12553), (821, 12628), (830, 12679), (842, 12718), (862, 12847), (872, 12904), (899, 13042), (908, 13117), (938, 13261), (945, 13282), (972, 13456), (973, 13462), (1032, 13786), (1034, 13792), (1044, 13852), (1053, 13903), (1066, 13975), (1077, 14014), (1083, 14044), (1098, 14110), (1104, 14158), (1116, 14218), (1140, 14308), (1155, 14368),

Gene: Cafasso_17 Start: 10946, Stop: 15646, Start Num: 59

Candidate Starts for Cafasso_17:

(Start: 59 @10946 has 7 MA's), (90, 11105), (123, 11228), (154, 11363), (177, 11450), (178, 11453), (183, 11480), (189, 11507), (190, 11513), (192, 11516), (238, 11735), (248, 11762), (324, 12137), (334, 12170), (337, 12179), (344, 12209), (347, 12221), (361, 12257), (371, 12302), (376, 12323), (377, 12332), (381, 12347), (401, 12395), (407, 12416), (430, 12491), (433, 12503), (445, 12536), (446, 12539), (451, 12557), (456, 12563), (463, 12590), (465, 12599), (466, 12602), (477, 12644), (480, 12653), (494, 12701), (512, 12764), (540, 12902), (544, 12911), (574, 12998), (578, 13010), (582, 13031), (595, 13037), (633, 13064), (634, 13067), (645, 13115), (648, 13124), (666, 13166), (669, 13178), (677, 13220), (686, 13241), (689, 13253), (698, 13295), (753, 13565), (755, 13571), (762, 13607), (781, 13694), (794, 13772), (811, 13820), (822, 13877), (823, 13883), (832, 13931), (840, 13967), (843, 13991), (865, 14114), (880, 14186), (887, 14225), (932, 14432), (982, 14711), (991, 14789), (1041, 15047), (1047, 15095), (1054, 15140), (1074, 15218), (1075, 15224), (1078, 15236), (1087, 15281), (1088, 15284), (1121, 15458), (1159, 15617),

Gene: CanesSauce_16 Start: 9646, Stop: 14433, Start Num: 100

Candidate Starts for CanesSauce_16:

(Start: 100 @9646 has 16 MA's), (Start: 107 @9673 has 1 MA's), (124, 9751), (136, 9802), (156, 9889), (160, 9904), (175, 9961), (180, 9979), (185, 10006), (187, 10009), (201, 10078), (212, 10135), (223, 10180), (229, 10198), (240, 10243), (254, 10279), (261, 10312), (274, 10360), (275, 10363), (285, 10411), (290, 10450), (293, 10465), (342, 10657), (346, 10675), (368, 10759), (416, 10906), (426, 10933), (452, 11026), (455, 11032), (458, 11047), (468, 11086), (470, 11098), (485, 11164), (508, 11236), (511, 11254), (512, 11257), (519, 11284), (576, 11530), (588, 11596), (598, 11641), (603, 11662), (604, 11665), (605, 11668), (618, 11704), (626, 11743), (628, 11749), (634, 11776), (663, 11905), (664, 11908), (666, 11926), (696, 12049), (698, 12064), (718, 12193), (720, 12214), (729,

12256), (737, 12283), (738, 12289), (764, 12421), (766, 12433), (782, 12520), (791, 12562), (804, 12598), (830, 12724), (842, 12763), (862, 12892), (872, 12949), (881, 12991), (899, 13084), (908, 13159), (920, 13222), (938, 13303), (945, 13324), (972, 13501), (973, 13507), (1014, 13726), (1027, 13804), (1032, 13822), (1034, 13828), (1044, 13888), (1046, 13906), (1053, 13939), (1066, 14011), (1077, 14050), (1083, 14080), (1098, 14146), (1104, 14194), (1116, 14254), (1140, 14344), (1155, 14404),

Gene: CaptainKirk2_17 Start: 10277, Stop: 15820, Start Num: 4

Candidate Starts for CaptainKirk2_17:

(Start: 4 @10277 has 39 MA's), (Start: 6 @10292 has 1 MA's), (Start: 7 @10298 has 1 MA's), (Start: 9 @10328 has 1 MA's), (10, 10337), (11, 10340), (13, 10382), (Start: 39 @10493 has 25 MA's), (42, 10514), (79, 10742), (82, 10760), (85, 10775), (87, 10781), (88, 10784), (92, 10802), (101, 10826), (120, 10910), (121, 10913), (133, 10952), (135, 10967), (137, 10976), (178, 11144), (183, 11171), (256, 11489), (294, 11693), (305, 11738), (307, 11744), (312, 11765), (314, 11777), (333, 11867), (345, 11912), (353, 11939), (359, 11969), (377, 12056), (378, 12059), (387, 12098), (427, 12218), (439, 12260), (452, 12305), (455, 12311), (458, 12326), (471, 12380), (480, 12419), (484, 12440), (485, 12443), (490, 12461), (493, 12470), (506, 12509), (508, 12515), (512, 12536), (519, 12563), (567, 12770), (593, 12836), (606, 12875), (616, 12890), (633, 12920), (634, 12923), (644, 12974), (663, 13055), (664, 13058), (670, 13091), (676, 13121), (678, 13145), (743, 13478), (754, 13526), (762, 13571), (763, 13574), (765, 13589), (772, 13634), (774, 13643), (775, 13652), (786, 13703), (809, 13775), (816, 13793), (820, 13814), (837, 13913), (838, 13916), (844, 13949), (853, 14015), (857, 14033), (860, 14048), (867, 14081), (874, 14132), (885, 14183), (892, 14231), (925, 14426), (926, 14429), (942, 14501), (943, 14504), (952, 14570), (953, 14573), (955, 14591), (961, 14651), (971, 14708), (974, 14726), (983, 14807), (984, 14810), (987, 14825), (1015, 14984), (1025, 15038), (1033, 15104), (1042, 15158), (1043, 15170), (1044, 15176), (1066, 15299), (1074, 15323), (1078, 15341), (1083, 15365), (1085, 15371), (1088, 15392), (1098, 15431), (1125, 15572), (1129, 15584), (1144, 15635), (1147, 15653), (1165, 15803),

Gene: CaramellLatte_16 Start: 9646, Stop: 14433, Start Num: 100

Candidate Starts for CaramellLatte_16:

(Start: 100 @9646 has 16 MA's), (Start: 107 @9673 has 1 MA's), (124, 9751), (136, 9802), (156, 9889), (160, 9904), (175, 9961), (180, 9979), (185, 10006), (187, 10009), (201, 10078), (212, 10135), (223, 10180), (229, 10198), (240, 10243), (254, 10279), (261, 10312), (274, 10360), (275, 10363), (285, 10411), (290, 10450), (293, 10465), (342, 10657), (346, 10675), (368, 10759), (416, 10906), (426, 10933), (452, 11026), (455, 11032), (458, 11047), (468, 11086), (470, 11098), (485, 11164), (508, 11236), (511, 11254), (512, 11257), (519, 11284), (576, 11530), (588, 11596), (598, 11641), (603, 11662), (604, 11665), (605, 11668), (618, 11704), (626, 11743), (628, 11749), (634, 11776), (663, 11905), (664, 11908), (666, 11926), (696, 12049), (698, 12064), (718, 12193), (720, 12214), (729, 12256), (737, 12283), (738, 12289), (764, 12421), (766, 12433), (782, 12520), (791, 12562), (804, 12598), (830, 12724), (842, 12763), (862, 12892), (872, 12949), (881, 12991), (899, 13084), (908, 13159), (920, 13222), (938, 13303), (945, 13324), (972, 13501), (973, 13507), (1014, 13726), (1027, 13804), (1032, 13822), (1034, 13828), (1044, 13888), (1046, 13906), (1053, 13939), (1066, 14011), (1077, 14050), (1083, 14080), (1098, 14146), (1104, 14194), (1116, 14254), (1140, 14344), (1155, 14404),

Gene: CarolAnn_17 Start: 10172, Stop: 15763, Start Num: 4

Candidate Starts for CarolAnn_17:

(Start: 4 @10172 has 39 MA's), (Start: 6 @10187 has 1 MA's), (Start: 9 @10223 has 1 MA's), (10, 10232), (11, 10235), (13, 10277), (Start: 39 @10388 has 25 MA's), (42, 10409), (Start: 59 @10529 has 7 MA's), (79, 10637), (82, 10655), (87, 10676), (88, 10679), (92, 10697), (122, 10811), (133, 10847), (135, 10862), (137, 10871), (178, 11039), (183, 11066), (206, 11183), (249, 11354), (256, 11384), (294, 11588), (305, 11633), (345, 11807), (353, 11834), (359, 11864), (363, 11885), (377, 11951), (378, 11954), (387, 11993), (411, 12056), (427, 12113), (439, 12155), (452, 12200), (455, 12206),

(457, 12218), (458, 12221), (471, 12275), (480, 12314), (484, 12335), (485, 12338), (490, 12356), (499, 12383), (506, 12404), (508, 12410), (512, 12431), (519, 12458), (528, 12506), (533, 12536), (579, 12692), (583, 12716), (585, 12725), (587, 12746), (608, 12827), (633, 12923), (634, 12926), (635, 12932), (643, 12974), (644, 12977), (649, 12998), (663, 13058), (664, 13061), (670, 13094), (676, 13124), (697, 13214), (743, 13481), (754, 13529), (762, 13574), (763, 13577), (765, 13592), (772, 13637), (774, 13646), (775, 13655), (786, 13706), (809, 13778), (816, 13796), (820, 13817), (837, 13916), (838, 13919), (844, 13952), (853, 14018), (857, 14036), (860, 14051), (867, 14084), (874, 14135), (885, 14186), (892, 14234), (925, 14429), (926, 14432), (942, 14504), (943, 14507), (952, 14573), (953, 14576), (955, 14594), (961, 14654), (974, 14729), (984, 14813), (987, 14828), (1025, 15041), (1036, 15098), (1038, 15113), (1045, 15161), (1056, 15206), (1086, 15326), (1087, 15335), (1096, 15374), (1110, 15446), (1125, 15515), (1144, 15578), (1147, 15596), (1161, 15653), (1165, 15746),

Gene: Carsonalex_17 Start: 9687, Stop: 14825, Start Num: 25

Candidate Starts for Carsonalex_17:

(Start: 18 @9663 has 2 MA's), (Start: 25 @9687 has 41 MA's), (29, 9714), (54, 9843), (62, 9918), (94, 10071), (95, 10074), (119, 10170), (122, 10179), (131, 10209), (133, 10215), (135, 10230), (136, 10233), (140, 10254), (157, 10326), (162, 10347), (180, 10413), (183, 10434), (206, 10551), (247, 10713), (256, 10752), (273, 10827), (312, 11025), (335, 11133), (356, 11211), (359, 11229), (362, 11247), (377, 11316), (380, 11328), (389, 11361), (426, 11472), (427, 11478), (455, 11571), (458, 11586), (490, 11721), (501, 11754), (512, 11796), (534, 11904), (544, 11958), (567, 12030), (568, 12033), (588, 12135), (598, 12180), (600, 12189), (603, 12201), (604, 12204), (605, 12207), (626, 12282), (627, 12285), (628, 12288), (631, 12300), (632, 12309), (634, 12315), (642, 12357), (644, 12366), (656, 12414), (664, 12447), (695, 12582), (714, 12699), (718, 12732), (720, 12753), (737, 12822), (738, 12828), (765, 12963), (766, 12972), (782, 13056), (855, 13377), (896, 13596), (902, 13632), (945, 13845), (986, 14037), (999, 14085), (1003, 14106), (1032, 14214), (1044, 14280), (1046, 14298), (1058, 14358), (1066, 14403), (1075, 14433), (1077, 14442), (1083, 14472), (1098, 14538), (1104, 14586), (1116, 14646), (1138, 14733), (1155, 14796),

Gene: CheeseSpider_20 Start: 10667, Stop: 16162, Start Num: 9

Candidate Starts for CheeseSpider_20:

(Start: 4 @10616 has 39 MA's), (5, 10628), (Start: 6 @10631 has 1 MA's), (Start: 9 @10667 has 1 MA's), (10, 10676), (11, 10679), (13, 10721), (Start: 39 @10832 has 25 MA's), (42, 10853), (79, 11081), (82, 11099), (87, 11120), (88, 11123), (92, 11141), (101, 11165), (120, 11249), (122, 11255), (133, 11291), (135, 11306), (137, 11315), (178, 11483), (183, 11510), (206, 11627), (249, 11798), (256, 11828), (294, 12032), (305, 12077), (312, 12104), (314, 12116), (333, 12206), (345, 12251), (353, 12278), (359, 12308), (377, 12395), (387, 12437), (390, 12443), (427, 12557), (439, 12599), (452, 12644), (455, 12650), (458, 12665), (471, 12719), (480, 12758), (484, 12779), (485, 12782), (490, 12800), (499, 12827), (508, 12854), (512, 12875), (519, 12902), (593, 13175), (606, 13214), (616, 13229), (633, 13259), (634, 13262), (644, 13313), (664, 13397), (670, 13430), (676, 13460), (678, 13484), (697, 13550), (727, 13739), (743, 13817), (754, 13865), (760, 13898), (762, 13910), (763, 13913), (765, 13928), (766, 13937), (772, 13973), (774, 13982), (775, 13991), (786, 14042), (809, 14114), (816, 14132), (820, 14153), (837, 14252), (838, 14255), (844, 14288), (853, 14354), (857, 14372), (860, 14387), (867, 14420), (874, 14471), (885, 14522), (925, 14765), (926, 14768), (934, 14801), (942, 14840), (943, 14843), (952, 14909), (953, 14912), (961, 14990), (971, 15047), (974, 15065), (983, 15146), (987, 15164), (1025, 15377), (1033, 15443), (1043, 15509), (1044, 15515), (1066, 15638), (1074, 15662), (1078, 15680), (1083, 15704), (1085, 15710), (1088, 15731), (1098, 15770), (1125, 15911), (1144, 15974), (1161, 16052),

Gene: CheeseTouch_18 Start: 9868, Stop: 15501, Start Num: 17

Candidate Starts for CheeseTouch_18:

(Start: 17 @9868 has 14 MA's), (Start: 28 @9913 has 2 MA's), (32, 9934), (37, 9955), (46, 10000), (Start: 50 @10015 has 1 MA's), (60, 10099), (68, 10141), (69, 10153), (82, 10216), (85, 10231), (88,

10240), (92, 10258), (94, 10264), (110, 10312), (140, 10447), (177, 10597), (183, 10627), (249, 10921), (256, 10951), (290, 11134), (294, 11155), (305, 11200), (307, 11206), (312, 11227), (326, 11308), (345, 11374), (353, 11401), (356, 11413), (359, 11431), (360, 11443), (367, 11467), (370, 11479), (377, 11518), (380, 11530), (387, 11560), (404, 11605), (422, 11665), (427, 11680), (435, 11710), (439, 11722), (452, 11767), (455, 11773), (457, 11785), (458, 11788), (463, 11809), (470, 11839), (471, 11842), (485, 11905), (493, 11932), (494, 11935), (495, 11938), (497, 11944), (505, 11968), (506, 11971), (508, 11977), (510, 11983), (512, 11998), (517, 12016), (532, 12097), (542, 12145), (543, 12151), (551, 12178), (588, 12337), (589, 12349), (599, 12385), (600, 12391), (615, 12433), (618, 12445), (626, 12484), (628, 12490), (629, 12493), (632, 12511), (633, 12514), (634, 12517), (638, 12541), (656, 12616), (665, 12655), (669, 12679), (676, 12712), (694, 12823), (697, 12856), (704, 12919), (709, 12955), (715, 12985), (727, 13063), (728, 13066), (729, 13075), (734, 13099), (754, 13186), (762, 13231), (763, 13234), (765, 13249), (772, 13294), (774, 13303), (775, 13312), (776, 13315), (804, 13420), (818, 13468), (820, 13474), (837, 13573), (838, 13576), (841, 13588), (860, 13705), (867, 13738), (874, 13789), (882, 13819), (891, 13879), (905, 13960), (908, 13981), (909, 13984), (916, 14014), (928, 14077), (929, 14086), (933, 14095), (953, 14209), (958, 14239), (962, 14287), (963, 14290), (970, 14320), (971, 14341), (996, 14539), (1012, 14602), (1013, 14608), (1022, 14659), (1048, 14851), (1063, 14938), (1071, 14965), (1072, 14968), (1089, 15043), (1093, 15067), (1101, 15106), (1106, 15142), (1111, 15163), (1131, 15250), (1142, 15292), (1150, 15325), (1153, 15337), (1163, 15415), (1166, 15481),

Gene: CherryonLim_17 Start: 10133, Stop: 15220, Start Num: 25

Candidate Starts for CherryonLim_17:

(Start: 25 @10133 has 41 MA's), (54, 10289), (72, 10418), (87, 10490), (94, 10517), (110, 10565), (112, 10574), (119, 10616), (121, 10622), (122, 10625), (133, 10661), (137, 10685), (143, 10712), (163, 10799), (174, 10838), (176, 10844), (180, 10859), (183, 10880), (194, 10934), (218, 11051), (234, 11114), (247, 11159), (266, 11240), (294, 11402), (296, 11411), (301, 11435), (305, 11447), (312, 11474), (314, 11486), (321, 11531), (329, 11561), (332, 11573), (358, 11675), (359, 11678), (377, 11765), (384, 11792), (414, 11882), (419, 11903), (427, 11927), (442, 11978), (455, 12020), (458, 12035), (459, 12044), (463, 12056), (471, 12089), (481, 12131), (497, 12191), (498, 12194), (499, 12197), (501, 12203), (507, 12221), (512, 12245), (526, 12308), (529, 12329), (533, 12350), (548, 12398), (558, 12428), (566, 12455), (567, 12458), (585, 12539), (586, 12551), (588, 12563), (590, 12578), (598, 12608), (603, 12629), (604, 12632), (621, 12692), (627, 12713), (632, 12737), (634, 12743), (651, 12827), (662, 12869), (668, 12899), (676, 12938), (688, 12986), (694, 13007), (695, 13010), (696, 13016), (705, 13082), (714, 13127), (718, 13160), (720, 13181), (730, 13235), (765, 13385), (766, 13394), (782, 13481), (825, 13658), (855, 13799), (861, 13829), (886, 13967), (902, 14048), (931, 14201), (938, 14231), (985, 14441), (986, 14450), (988, 14456), (999, 14492), (1032, 14609), (1034, 14615), (1040, 14657), (1044, 14675), (1066, 14798), (1074, 14822), (1077, 14837), (1083, 14867), (1088, 14894), (1090, 14900), (1098, 14933), (1108, 15002), (1109, 15005), (1116, 15041), (1136, 15113), (1140, 15131),

Gene: ChickenTender_18 Start: 9679, Stop: 14817, Start Num: 25

Candidate Starts for ChickenTender_18:

(Start: 25 @9679 has 41 MA's), (29, 9706), (54, 9835), (62, 9910), (94, 10063), (95, 10066), (119, 10162), (122, 10171), (131, 10201), (133, 10207), (135, 10222), (136, 10225), (140, 10246), (157, 10318), (162, 10339), (180, 10405), (183, 10426), (206, 10543), (247, 10705), (256, 10744), (301, 10978), (305, 10990), (312, 11017), (345, 11164), (356, 11203), (367, 11257), (370, 11269), (377, 11308), (385, 11341), (418, 11443), (419, 11446), (427, 11470), (442, 11521), (455, 11563), (458, 11578), (468, 11617), (490, 11713), (504, 11755), (512, 11788), (534, 11896), (544, 11950), (568, 12025), (588, 12127), (598, 12172), (604, 12196), (605, 12199), (621, 12256), (626, 12274), (634, 12307), (637, 12328), (644, 12358), (656, 12406), (658, 12412), (664, 12439), (695, 12574), (714, 12691), (718, 12724), (720, 12745), (737, 12814), (738, 12820), (766, 12964), (782, 13048), (855, 13369), (896, 13588), (899, 13603), (902, 13624), (940, 13825), (945, 13837), (999, 14077), (1003, 14098), (1032, 14206), (1044, 14272), (1046, 14290), (1066, 14395), (1074, 14419), (1075, 14425),

(1077, 14434), (1083, 14464), (1098, 14530), (1104, 14578), (1116, 14638), (1138, 14725), (1155, 14788),

Gene: ChocoMunchkin_16 Start: 9646, Stop: 14433, Start Num: 100

Candidate Starts for ChocoMunchkin_16:

(Start: 100 @9646 has 16 MA's), (Start: 107 @9673 has 1 MA's), (124, 9751), (136, 9802), (156, 9889), (160, 9904), (175, 9961), (180, 9979), (185, 10006), (187, 10009), (201, 10078), (212, 10135), (223, 10180), (229, 10198), (240, 10243), (254, 10279), (261, 10312), (274, 10360), (275, 10363), (285, 10411), (290, 10450), (293, 10465), (342, 10657), (346, 10675), (368, 10759), (416, 10906), (426, 10933), (452, 11026), (455, 11032), (458, 11047), (468, 11086), (470, 11098), (485, 11164), (508, 11236), (511, 11254), (512, 11257), (519, 11284), (576, 11530), (588, 11596), (598, 11641), (603, 11662), (604, 11665), (605, 11668), (618, 11704), (626, 11743), (628, 11749), (634, 11776), (663, 11905), (664, 11908), (666, 11926), (696, 12049), (698, 12064), (718, 12193), (720, 12214), (729, 12256), (737, 12283), (738, 12289), (764, 12421), (766, 12433), (782, 12520), (791, 12562), (804, 12598), (830, 12724), (842, 12763), (862, 12892), (872, 12949), (881, 12991), (899, 13084), (908, 13159), (920, 13222), (938, 13303), (945, 13324), (972, 13501), (973, 13507), (1014, 13726), (1027, 13804), (1032, 13822), (1034, 13828), (1044, 13888), (1046, 13906), (1053, 13939), (1066, 14011), (1077, 14050), (1083, 14080), (1098, 14146), (1104, 14194), (1116, 14254), (1140, 14344), (1155, 14404),

Gene: Chop_20 Start: 11567, Stop: 16822, Start Num: 40

Candidate Starts for Chop_20:

(35, 11543), (38, 11555), (Start: 39 @11558 has 25 MA's), (Start: 40 @11567 has 15 MA's), (46, 11600), (47, 11603), (69, 11765), (74, 11786), (78, 11807), (84, 11837), (137, 12056), (144, 12101), (169, 12194), (171, 12200), (191, 12287), (196, 12320), (213, 12404), (226, 12449), (230, 12461), (233, 12476), (236, 12491), (252, 12545), (270, 12623), (280, 12668), (285, 12692), (302, 12800), (314, 12842), (320, 12881), (336, 12944), (340, 12962), (354, 13022), (383, 13157), (417, 13265), (420, 13277), (428, 13298), (451, 13379), (462, 13421), (467, 13439), (474, 13469), (479, 13493), (494, 13541), (500, 13559), (505, 13574), (506, 13577), (525, 13658), (540, 13733), (554, 13769), (592, 13895), (597, 13916), (603, 13940), (607, 13952), (628, 14027), (632, 14048), (669, 14192), (676, 14225), (678, 14252), (680, 14258), (696, 14312), (701, 14348), (710, 14405), (716, 14435), (722, 14486), (733, 14543), (753, 14633), (758, 14660), (759, 14663), (771, 14741), (773, 14750), (836, 15029), (858, 15158), (899, 15368), (910, 15461), (936, 15593), (941, 15614), (961, 15722), (978, 15821), (986, 15905), (1089, 16451), (1095, 16484), (1103, 16529), (1113, 16595), (1134, 16685), (1152, 16760), (1160, 16805),

Gene: Cleo_16 Start: 9909, Stop: 15023, Start Num: 25

Candidate Starts for Cleo_16:

(19, 9888), (Start: 25 @9909 has 41 MA's), (29, 9936), (54, 10065), (63, 10149), (66, 10161), (75, 10212), (83, 10245), (89, 10269), (96, 10302), (119, 10392), (135, 10452), (136, 10455), (150, 10521), (159, 10557), (162, 10569), (177, 10626), (180, 10635), (183, 10656), (260, 10995), (274, 11052), (290, 11154), (305, 11220), (307, 11226), (312, 11247), (345, 11394), (359, 11451), (362, 11469), (366, 11484), (370, 11499), (377, 11538), (411, 11643), (416, 11667), (418, 11673), (451, 11784), (455, 11793), (458, 11808), (468, 11847), (490, 11943), (499, 11970), (501, 11976), (503, 11982), (511, 12015), (512, 12018), (534, 12126), (542, 12165), (551, 12198), (560, 12228), (561, 12231), (567, 12252), (568, 12255), (588, 12357), (598, 12402), (604, 12426), (605, 12429), (632, 12531), (633, 12534), (634, 12537), (644, 12588), (656, 12636), (658, 12642), (666, 12687), (695, 12804), (696, 12810), (704, 12867), (714, 12921), (717, 12942), (718, 12954), (720, 12975), (721, 12978), (737, 13044), (738, 13050), (765, 13185), (775, 13251), (782, 13278), (804, 13356), (855, 13596), (861, 13626), (892, 13800), (899, 13830), (902, 13851), (919, 13959), (927, 13995), (938, 14043), (999, 14280), (1027, 14391), (1032, 14409), (1044, 14475), (1053, 14526), (1066, 14598), (1075, 14628), (1077, 14637), (1078, 14640), (1083, 14667), (1088, 14694), (1098, 14733), (1104, 14781), (1116, 14841), (1125, 14877), (1138, 14931),

Gene: CocoaPuff_15 Start: 9378, Stop: 14465, Start Num: 25

Candidate Starts for CocoaPuff_15:

(Start: 25 @9378 has 41 MA's), (54, 9534), (72, 9663), (78, 9693), (94, 9762), (98, 9774), (110, 9810), (112, 9819), (119, 9861), (122, 9870), (133, 9906), (137, 9930), (150, 9990), (163, 10044), (174, 10083), (176, 10089), (180, 10104), (183, 10125), (215, 10284), (218, 10296), (234, 10359), (247, 10404), (266, 10485), (294, 10644), (301, 10677), (305, 10689), (312, 10716), (321, 10773), (329, 10803), (332, 10815), (358, 10917), (359, 10920), (377, 11007), (390, 11055), (427, 11169), (455, 11262), (458, 11277), (463, 11298), (471, 11331), (477, 11361), (481, 11373), (490, 11412), (498, 11436), (499, 11439), (507, 11463), (512, 11487), (533, 11592), (548, 11640), (558, 11670), (563, 11685), (567, 11700), (576, 11739), (585, 11781), (588, 11805), (590, 11820), (594, 11835), (598, 11850), (604, 11874), (618, 11913), (620, 11928), (621, 11934), (627, 11955), (632, 11979), (634, 11985), (662, 12111), (668, 12141), (676, 12180), (688, 12228), (694, 12249), (695, 12252), (705, 12324), (714, 12369), (718, 12402), (720, 12423), (730, 12477), (751, 12552), (766, 12636), (782, 12723), (855, 13041), (861, 13071), (886, 13209), (898, 13260), (902, 13290), (931, 13449), (938, 13479), (981, 13659), (988, 13710), (999, 13737), (1003, 13758), (1032, 13854), (1040, 13902), (1044, 13920), (1066, 14043), (1074, 14067), (1077, 14082), (1083, 14112), (1088, 14139), (1090, 14145), (1098, 14178), (1108, 14247), (1109, 14250), (1116, 14286), (1140, 14376),

Gene: Colossa_18 Start: 10917, Stop: 15554, Start Num: 59

Candidate Starts for Colossa_18:

(Start: 59 @10917 has 7 MA's), (65, 10950), (76, 11001), (90, 11061), (91, 11067), (113, 11130), (114, 11136), (116, 11145), (146, 11247), (158, 11283), (170, 11331), (184, 11388), (260, 11712), (265, 11730), (276, 11775), (324, 12039), (337, 12081), (347, 12123), (437, 12426), (446, 12447), (480, 12558), (489, 12591), (668, 13089), (691, 13182), (719, 13347), (725, 13383), (750, 13491), (753, 13509), (769, 13578), (774, 13614), (781, 13650), (786, 13677), (794, 13725), (832, 13899), (838, 13920), (840, 13935), (843, 13959), (845, 13962), (870, 14109), (881, 14169), (939, 14469), (944, 14487), (997, 14805), (1046, 15069), (1062, 15153), (1074, 15198), (1081, 15225), (1102, 15336), (1112, 15387), (1114, 15402), (1118, 15423), (1135, 15492), (1145, 15531), (1146, 15534),

Gene: Cozz_16 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for Cozz_16:

(Start: 18 @9606 has 2 MA's), (Start: 25 @9630 has 41 MA's), (29, 9657), (54, 9786), (62, 9861), (94, 10014), (95, 10017), (119, 10113), (122, 10122), (131, 10152), (133, 10158), (135, 10173), (136, 10176), (140, 10197), (157, 10269), (162, 10290), (180, 10356), (183, 10377), (206, 10494), (247, 10656), (256, 10695), (273, 10770), (301, 10929), (305, 10941), (312, 10968), (319, 11013), (321, 11025), (345, 11115), (350, 11133), (356, 11154), (360, 11184), (367, 11208), (370, 11220), (377, 11259), (385, 11292), (418, 11394), (419, 11397), (427, 11421), (455, 11514), (458, 11529), (468, 11568), (490, 11664), (503, 11703), (504, 11706), (512, 11739), (534, 11847), (535, 11850), (544, 11901), (568, 11976), (588, 12078), (598, 12123), (603, 12144), (604, 12147), (605, 12150), (626, 12225), (634, 12258), (637, 12279), (656, 12357), (658, 12363), (664, 12390), (695, 12525), (714, 12642), (718, 12675), (720, 12696), (737, 12765), (738, 12771), (741, 12786), (765, 12906), (766, 12915), (782, 12999), (855, 13320), (896, 13539), (902, 13575), (945, 13788), (986, 13980), (999, 14028), (1003, 14049), (1032, 14157), (1044, 14223), (1046, 14241), (1058, 14301), (1066, 14346), (1075, 14376), (1077, 14385), (1083, 14415), (1098, 14481), (1104, 14529), (1116, 14589), (1138, 14676), (1155, 14739),

Gene: DearBasketball_19 Start: 10112, Stop: 14347, Start Num: 39

Candidate Starts for DearBasketball_19:

(Start: 25 @10043 has 41 MA's), (30, 10073), (Start: 39 @10112 has 25 MA's), (44, 10139), (49, 10157), (55, 10190), (57, 10202), (93, 10409), (123, 10502), (145, 10601), (164, 10664), (167, 10673), (195, 10799), (217, 10904), (224, 10931), (241, 10997), (249, 11018), (252, 11030), (259, 11054), (286, 11201), (297, 11255), (310, 11300), (343, 11450), (349, 11471), (386, 11570), (434, 11675),

(435, 11678), (466, 11774), (486, 11855), (492, 11861), (544, 11942), (547, 11951), (576, 12044), (595, 12077), (644, 12137), (646, 12140), (677, 12230), (684, 12254), (695, 12290), (696, 12296), (698, 12311), (704, 12353), (713, 12404), (718, 12440), (727, 12491), (751, 12590), (777, 12692), (779, 12701), (789, 12752), (792, 12776), (798, 12803), (803, 12821), (805, 12830), (815, 12869), (825, 12938), (855, 13079), (886, 13247), (890, 13271), (894, 13295), (899, 13313), (935, 13502), (936, 13505), (940, 13523), (1044, 13793), (1064, 13901), (1066, 13913), (1083, 13979), (1088, 14006), (1098, 14045), (1123, 14174),

Gene: DelRio_21 Start: 12041, Stop: 17296, Start Num: 40

Candidate Starts for DelRio_21:

(35, 12017), (38, 12029), (Start: 39 @12032 has 25 MA's), (Start: 40 @12041 has 15 MA's), (46, 12074), (47, 12077), (69, 12239), (78, 12281), (84, 12311), (137, 12530), (169, 12668), (171, 12674), (191, 12761), (196, 12794), (202, 12824), (213, 12878), (226, 12923), (230, 12935), (233, 12950), (236, 12965), (252, 13019), (270, 13097), (280, 13142), (285, 13166), (302, 13274), (314, 13316), (320, 13355), (336, 13418), (340, 13436), (346, 13460), (351, 13475), (354, 13496), (383, 13631), (417, 13739), (420, 13751), (428, 13772), (451, 13853), (462, 13895), (467, 13913), (474, 13943), (479, 13967), (494, 14015), (505, 14048), (506, 14051), (525, 14132), (540, 14207), (554, 14243), (592, 14369), (597, 14390), (603, 14414), (607, 14426), (628, 14501), (632, 14522), (669, 14666), (676, 14699), (678, 14726), (680, 14732), (696, 14786), (701, 14822), (710, 14879), (716, 14909), (722, 14960), (733, 15017), (753, 15107), (758, 15134), (759, 15137), (771, 15215), (773, 15224), (836, 15503), (858, 15632), (899, 15842), (910, 15935), (936, 16067), (941, 16088), (961, 16196), (978, 16295), (1089, 16925), (1095, 16958), (1103, 17003), (1113, 17069), (1134, 17159), (1152, 17234), (1160, 17279),

Gene: Delian_17 Start: 10277, Stop: 15820, Start Num: 4

Candidate Starts for Delian_17:

(Start: 4 @10277 has 39 MA's), (Start: 6 @10292 has 1 MA's), (Start: 7 @10298 has 1 MA's), (Start: 9 @10328 has 1 MA's), (10, 10337), (11, 10340), (13, 10382), (Start: 39 @10493 has 25 MA's), (42, 10514), (79, 10742), (82, 10760), (85, 10775), (87, 10781), (88, 10784), (92, 10802), (101, 10826), (120, 10910), (121, 10913), (133, 10952), (135, 10967), (137, 10976), (178, 11144), (183, 11171), (256, 11489), (294, 11693), (305, 11738), (307, 11744), (312, 11765), (314, 11777), (333, 11867), (345, 11912), (353, 11939), (359, 11969), (377, 12056), (378, 12059), (387, 12098), (427, 12218), (439, 12260), (452, 12305), (455, 12311), (458, 12326), (471, 12380), (480, 12419), (484, 12440), (485, 12443), (490, 12461), (493, 12470), (506, 12509), (508, 12515), (512, 12536), (519, 12563), (567, 12770), (593, 12836), (606, 12875), (616, 12890), (633, 12920), (634, 12923), (644, 12974), (663, 13055), (664, 13058), (670, 13091), (676, 13121), (678, 13145), (743, 13478), (754, 13526), (762, 13571), (763, 13574), (765, 13589), (772, 13634), (774, 13643), (775, 13652), (786, 13703), (809, 13775), (816, 13793), (820, 13814), (837, 13913), (838, 13916), (844, 13949), (853, 14015), (857, 14033), (860, 14048), (867, 14081), (874, 14132), (885, 14183), (892, 14231), (925, 14426), (926, 14429), (942, 14501), (943, 14504), (952, 14570), (953, 14573), (955, 14591), (961, 14651), (971, 14708), (974, 14726), (983, 14807), (984, 14810), (987, 14825), (1015, 14984), (1025, 15038), (1033, 15104), (1042, 15158), (1043, 15170), (1044, 15176), (1066, 15299), (1074, 15323), (1078, 15341), (1083, 15365), (1085, 15371), (1088, 15392), (1098, 15431), (1125, 15572), (1129, 15584), (1144, 15635), (1147, 15653), (1165, 15803),

Gene: DinoNuggs_17 Start: 10078, Stop: 14313, Start Num: 39

Candidate Starts for DinoNuggs_17:

(Start: 25 @10009 has 41 MA's), (30, 10039), (Start: 39 @10078 has 25 MA's), (44, 10105), (49, 10123), (55, 10156), (57, 10168), (93, 10375), (123, 10468), (145, 10567), (164, 10630), (167, 10639), (207, 10825), (221, 10885), (224, 10897), (227, 10906), (241, 10963), (249, 10984), (252, 10996), (286, 11167), (297, 11221), (343, 11416), (360, 11446), (379, 11506), (388, 11542), (435, 11644), (466, 11740), (482, 11800), (486, 11821), (492, 11827), (544, 11908), (547, 11917), (575, 12007), (576, 12010), (595, 12043), (644, 12103), (646, 12106), (677, 12196), (684, 12220), (695, 12256),

(696, 12262), (698, 12277), (704, 12319), (713, 12370), (718, 12406), (727, 12457), (751, 12556), (777, 12658), (779, 12667), (789, 12718), (792, 12742), (798, 12769), (803, 12787), (805, 12796), (815, 12835), (825, 12904), (855, 13045), (886, 13213), (890, 13237), (894, 13261), (899, 13279), (935, 13468), (936, 13471), (940, 13489), (1044, 13759), (1066, 13879), (1083, 13945), (1098, 14011), (1123, 14140),

Gene: DirtyBoi_18 Start: 11005, Stop: 16017, Start Num: 21

Candidate Starts for DirtyBoi_18:

(Start: 21 @11005 has 14 MA's), (Start: 28 @11035 has 2 MA's), (32, 11056), (Start: 40 @11092 has 15 MA's), (71, 11296), (77, 11326), (95, 11401), (122, 11506), (137, 11566), (154, 11644), (155, 11647), (174, 11719), (183, 11761), (201, 11848), (294, 12277), (301, 12310), (307, 12328), (316, 12373), (320, 12397), (331, 12442), (333, 12451), (343, 12487), (345, 12496), (352, 12520), (356, 12535), (359, 12553), (377, 12640), (393, 12694), (400, 12712), (422, 12787), (431, 12817), (452, 12889), (455, 12895), (458, 12910), (471, 12964), (485, 13027), (490, 13045), (499, 13072), (503, 13084), (508, 13099), (512, 13120), (537, 13240), (542, 13267), (551, 13300), (563, 13339), (567, 13354), (579, 13402), (583, 13426), (587, 13456), (601, 13519), (618, 13564), (619, 13567), (634, 13636), (649, 13708), (654, 13729), (656, 13735), (658, 13741), (663, 13765), (664, 13768), (667, 13789), (673, 13819), (676, 13831), (679, 13867), (694, 13921), (695, 13924), (696, 13930), (700, 13975), (702, 13984), (725, 14125), (730, 14158), (743, 14203), (744, 14209), (747, 14221), (758, 14272), (775, 14356), (781, 14380), (785, 14404), (786, 14407), (801, 14458), (813, 14506), (826, 14593), (832, 14617), (835, 14629), (841, 14650), (846, 14677), (864, 14782), (871, 14815), (886, 14863), (888, 14875), (907, 14947), (913, 14956), (955, 15112), (968, 15142), (1002, 15334), (1028, 15454), (1029, 15457), (1059, 15601), (1074, 15664), (1105, 15826), (1107, 15838), (1120, 15895), (1139, 15970), (1142, 15976), (1148, 16006), (1149, 16009),

Gene: DonkeyMan_16 Start: 9948, Stop: 14102, Start Num: 39

Candidate Starts for DonkeyMan_16:

(Start: 39 @9948 has 25 MA's), (44, 9975), (45, 9981), (49, 9993), (57, 10035), (62, 10083), (147, 10419), (203, 10641), (237, 10773), (245, 10794), (251, 10812), (281, 10941), (282, 10944), (309, 11073), (364, 11253), (375, 11283), (381, 11307), (435, 11436), (446, 11472), (456, 11493), (466, 11532), (482, 11592), (486, 11613), (492, 11619), (544, 11700), (547, 11709), (576, 11802), (595, 11835), (646, 11898), (677, 11988), (684, 12012), (695, 12048), (696, 12054), (698, 12069), (704, 12111), (713, 12162), (718, 12198), (727, 12249), (751, 12348), (777, 12450), (779, 12459), (789, 12510), (792, 12534), (798, 12561), (803, 12579), (805, 12588), (815, 12627), (825, 12696), (855, 12837), (886, 13005), (890, 13029), (894, 13053), (899, 13071), (935, 13254), (936, 13257), (940, 13275), (1044, 13548), (1066, 13668), (1083, 13734), (1088, 13761), (1098, 13800), (1123, 13929),

Gene: Dre3_16 Start: 9856, Stop: 14970, Start Num: 25

Candidate Starts for Dre3_16:

(19, 9835), (Start: 25 @9856 has 41 MA's), (29, 9883), (54, 10012), (63, 10096), (66, 10108), (75, 10159), (83, 10192), (89, 10216), (96, 10249), (119, 10339), (135, 10399), (136, 10402), (150, 10468), (159, 10504), (162, 10516), (177, 10573), (180, 10582), (183, 10603), (260, 10942), (274, 10999), (290, 11101), (305, 11167), (307, 11173), (312, 11194), (345, 11341), (359, 11398), (362, 11416), (366, 11431), (370, 11446), (377, 11485), (411, 11590), (416, 11614), (418, 11620), (451, 11731), (455, 11740), (458, 11755), (468, 11794), (490, 11890), (499, 11917), (501, 11923), (503, 11929), (511, 11962), (512, 11965), (534, 12073), (542, 12112), (551, 12145), (560, 12175), (561, 12178), (567, 12199), (568, 12202), (588, 12304), (598, 12349), (604, 12373), (605, 12376), (627, 12454), (632, 12478), (633, 12481), (634, 12484), (644, 12535), (656, 12583), (658, 12589), (666, 12634), (695, 12751), (696, 12757), (704, 12814), (714, 12868), (717, 12889), (718, 12901), (720, 12922), (721, 12925), (737, 12991), (738, 12997), (765, 13132), (775, 13198), (782, 13225), (804, 13303), (855, 13543), (861, 13573), (892, 13747), (899, 13777), (902, 13798), (919, 13906), (938, 13990), (999, 14227), (1027, 14338), (1032, 14356), (1044, 14422), (1053, 14473), (1066, 14545), (1077, 14584), (1078, 14587), (1083, 14614), (1088, 14641), (1098, 14680), (1104, 14728), (1116, 14788),

(1125, 14824), (1138, 14878),

Gene: DumpsterDude_17 Start: 10190, Stop: 15148, Start Num: 39

Candidate Starts for DumpsterDude_17:

(Start: 39 @10190 has 25 MA's), (46, 10229), (48, 10238), (82, 10457), (162, 10793), (171, 10829), (191, 10916), (196, 10949), (213, 11033), (214, 11036), (230, 11090), (236, 11120), (242, 11141), (245, 11150), (250, 11168), (256, 11192), (263, 11225), (265, 11231), (271, 11255), (277, 11282), (285, 11321), (317, 11495), (327, 11546), (336, 11573), (340, 11591), (341, 11594), (351, 11630), (354, 11651), (383, 11786), (399, 11831), (426, 11918), (428, 11927), (429, 11930), (442, 11975), (461, 12047), (475, 12107), (479, 12122), (487, 12146), (505, 12203), (506, 12206), (514, 12242), (522, 12278), (525, 12287), (531, 12329), (540, 12362), (592, 12524), (628, 12656), (632, 12677), (639, 12713), (651, 12767), (669, 12821), (674, 12845), (678, 12881), (696, 12941), (712, 13043), (726, 13136), (727, 13139), (732, 13169), (737, 13184), (748, 13238), (753, 13262), (755, 13268), (758, 13289), (768, 13346), (771, 13370), (817, 13547), (845, 13694), (858, 13790), (877, 13880), (889, 13937), (917, 14075), (1010, 14369), (1030, 14477), (1076, 14714), (1094, 14807), (1095, 14813), (1103, 14858), (1110, 14903), (1113, 14924), (1122, 14963), (1127, 14984), (1154, 15098), (1160, 15131), (1162, 15137),

Gene: ElJefes_15 Start: 10009, Stop: 14943, Start Num: 54

Candidate Starts for ElJefes_15:

(Start: 25 @9853 has 41 MA's), (54, 10009), (68, 10114), (72, 10138), (82, 10189), (94, 10237), (110, 10285), (112, 10294), (119, 10336), (121, 10342), (122, 10345), (133, 10381), (137, 10405), (143, 10432), (163, 10519), (174, 10558), (176, 10564), (180, 10579), (183, 10600), (194, 10654), (218, 10771), (234, 10834), (247, 10879), (256, 10918), (266, 10960), (294, 11122), (296, 11131), (301, 11155), (305, 11167), (312, 11194), (314, 11206), (321, 11251), (329, 11281), (332, 11293), (358, 11395), (359, 11398), (377, 11485), (384, 11512), (404, 11572), (414, 11602), (419, 11623), (427, 11647), (442, 11698), (455, 11740), (458, 11755), (459, 11764), (463, 11776), (471, 11809), (481, 11851), (497, 11911), (498, 11914), (499, 11917), (507, 11941), (512, 11965), (533, 12070), (548, 12118), (567, 12178), (568, 12181), (576, 12217), (588, 12283), (590, 12298), (594, 12313), (598, 12328), (603, 12349), (604, 12352), (618, 12391), (620, 12406), (621, 12412), (627, 12433), (632, 12457), (634, 12463), (662, 12589), (668, 12619), (676, 12658), (688, 12706), (694, 12727), (695, 12730), (696, 12736), (705, 12802), (714, 12847), (718, 12880), (720, 12901), (730, 12955), (765, 13105), (766, 13114), (782, 13201), (825, 13378), (855, 13519), (861, 13549), (886, 13687), (902, 13768), (931, 13921), (938, 13951), (985, 14173), (986, 14182), (988, 14188), (999, 14215), (1032, 14332), (1034, 14338), (1040, 14380), (1044, 14398), (1066, 14521), (1074, 14545), (1077, 14560), (1083, 14590), (1088, 14617), (1090, 14623), (1098, 14656), (1108, 14725), (1109, 14728), (1116, 14764), (1136, 14836), (1140, 14854),

Gene: Elinal_17 Start: 9384, Stop: 14468, Start Num: 25

Candidate Starts for Elinal_17:

(Start: 25 @9384 has 41 MA's), (54, 9540), (72, 9669), (78, 9699), (94, 9768), (98, 9780), (112, 9825), (119, 9867), (122, 9876), (133, 9912), (137, 9936), (163, 10050), (174, 10089), (176, 10095), (177, 10101), (180, 10110), (183, 10131), (218, 10302), (234, 10365), (247, 10410), (266, 10491), (294, 10650), (301, 10683), (305, 10695), (312, 10722), (321, 10779), (329, 10809), (332, 10821), (358, 10923), (359, 10926), (377, 11013), (390, 11061), (427, 11175), (455, 11268), (458, 11283), (463, 11304), (471, 11337), (477, 11367), (481, 11379), (490, 11418), (498, 11442), (499, 11445), (507, 11469), (512, 11493), (533, 11598), (548, 11646), (558, 11676), (563, 11691), (567, 11706), (576, 11745), (585, 11787), (586, 11799), (588, 11811), (590, 11826), (594, 11841), (598, 11856), (604, 11880), (618, 11919), (620, 11934), (621, 11940), (627, 11961), (632, 11985), (634, 11991), (662, 12117), (668, 12147), (677, 12198), (688, 12234), (694, 12255), (695, 12258), (705, 12330), (714, 12375), (718, 12408), (720, 12429), (730, 12483), (751, 12558), (766, 12642), (782, 12729), (829, 12915), (855, 13047), (861, 13077), (886, 13215), (898, 13266), (902, 13296), (931, 13452), (938, 13482), (981, 13662), (988, 13713), (999, 13740), (1003, 13761), (1032, 13857), (1040, 13905), (1044,

13923), (1066, 14046), (1074, 14070), (1077, 14085), (1083, 14115), (1088, 14142), (1090, 14148), (1098, 14181), (1108, 14250), (1109, 14253), (1116, 14289), (1140, 14379),

Gene: Elliott_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Elliott_16:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247, 10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377, 11258), (385, 11291), (418, 11393), (419, 11396), (427, 11420), (455, 11513), (458, 11528), (468, 11567), (503, 11702), (504, 11705), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (588, 12077), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1066, 14345), (1075, 14375), (1077, 14384), (1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: Emalyn_15 Start: 9356, Stop: 14068, Start Num: 100

Candidate Starts for Emalyn_15:

(Start: 100 @9356 has 16 MA's), (136, 9512), (156, 9599), (160, 9614), (171, 9659), (175, 9671), (180, 9689), (185, 9716), (201, 9788), (208, 9830), (212, 9845), (213, 9848), (219, 9872), (223, 9890), (229, 9908), (234, 9929), (240, 9953), (244, 9962), (254, 9989), (261, 10022), (264, 10031), (285, 10121), (290, 10160), (293, 10175), (312, 10244), (317, 10271), (342, 10367), (346, 10385), (363, 10448), (416, 10616), (418, 10622), (452, 10736), (455, 10742), (458, 10757), (508, 10946), (512, 10967), (517, 10985), (519, 10994), (544, 11129), (568, 11204), (576, 11240), (584, 11279), (585, 11282), (588, 11306), (594, 11336), (598, 11351), (604, 11375), (618, 11414), (626, 11453), (628, 11459), (664, 11618), (713, 11867), (714, 11870), (718, 11903), (720, 11924), (737, 11993), (738, 11999), (782, 12230), (818, 12365), (855, 12557), (868, 12626), (871, 12650), (899, 12791), (938, 13004), (945, 13025), (953, 13079), (1018, 13382), (1027, 13439), (1032, 13457), (1044, 13523), (1057, 13595), (1066, 13646), (1074, 13670), (1075, 13676), (1077, 13685), (1083, 13715), (1098, 13781), (1104, 13829), (1116, 13889), (1140, 13979), (1155, 14039),

Gene: Eyes_17 Start: 10596, Stop: 15716, Start Num: 21

Candidate Starts for Eyes_17:

(Start: 21 @10596 has 14 MA's), (Start: 25 @10605 has 41 MA's), (64, 10848), (69, 10878), (71, 10887), (77, 10917), (85, 10956), (92, 10983), (134, 11139), (137, 11157), (174, 11310), (183, 11352), (194, 11406), (247, 11631), (248, 11634), (256, 11670), (274, 11748), (282, 11787), (294, 11871), (301, 11904), (304, 11913), (307, 11922), (314, 11955), (316, 11967), (320, 11991), (331, 12036), (333, 12045), (343, 12081), (353, 12117), (356, 12129), (359, 12147), (367, 12183), (369, 12192), (400, 12306), (413, 12348), (452, 12483), (453, 12486), (455, 12489), (458, 12504), (471, 12558), (480, 12597), (503, 12678), (508, 12693), (512, 12714), (526, 12777), (532, 12813), (579, 12975), (611, 13032), (622, 13044), (624, 13047), (634, 13080), (636, 13098), (654, 13173), (656, 13179), (658, 13185), (662, 13206), (663, 13209), (664, 13212), (676, 13275), (679, 13311), (684, 13326), (691, 13350), (694, 13365), (695, 13368), (696, 13374), (702, 13428), (718, 13527), (725, 13569), (743, 13647), (758, 13716), (761, 13734), (780, 13842), (781, 13845), (785, 13869), (786, 13872), (792, 13893), (799, 13914), (801, 13923), (826, 14058), (832, 14082), (846, 14142), (855, 14202), (864, 14247), (871, 14280), (886, 14328), (888, 14340), (901, 14400), (927, 14550), (932, 14568), (948, 14646), (949, 14652), (950, 14661), (954, 14688), (967, 14781), (973, 14820), (979, 14862), (998, 15015), (1006, 15048), (1008, 15051), (1023, 15108), (1024, 15117), (1026, 15129), (1028, 15150), (1035, 15171), (1074, 15363), (1082, 15402), (1098, 15471), (1105, 15525), (1142, 15678),

Gene: Fairfaxidum_17 Start: 10343, Stop: 15964, Start Num: 4

Candidate Starts for Fairfaxidum_17:

(Start: 3 @10307 has 1 MA's), (Start: 4 @10343 has 39 MA's), (Start: 7 @10364 has 1 MA's), (8, 10382), (11, 10406), (13, 10448), (36, 10547), (Start: 39 @10559 has 25 MA's), (42, 10580), (53, 10637), (60, 10709), (63, 10730), (68, 10751), (71, 10772), (72, 10775), (81, 10823), (82, 10826), (88, 10850), (92, 10868), (110, 10922), (122, 10982), (133, 11018), (134, 11024), (183, 11237), (222, 11423), (249, 11525), (253, 11540), (256, 11555), (269, 11612), (305, 11804), (331, 11924), (353, 12005), (359, 12035), (367, 12071), (377, 12122), (387, 12164), (427, 12284), (442, 12335), (452, 12371), (455, 12377), (458, 12392), (471, 12446), (480, 12485), (485, 12509), (490, 12527), (501, 12560), (506, 12575), (508, 12581), (511, 12599), (512, 12602), (519, 12629), (526, 12665), (585, 12896), (589, 12932), (590, 12935), (599, 12968), (627, 13070), (634, 13103), (648, 13166), (656, 13202), (664, 13238), (668, 13262), (673, 13289), (694, 13370), (704, 13436), (707, 13454), (723, 13559), (729, 13592), (743, 13658), (745, 13667), (754, 13706), (760, 13739), (762, 13751), (763, 13754), (765, 13769), (766, 13778), (772, 13814), (774, 13823), (775, 13832), (801, 13928), (818, 13988), (819, 13991), (820, 13994), (821, 14015), (838, 14096), (848, 14138), (860, 14225), (867, 14258), (868, 14267), (874, 14309), (898, 14423), (925, 14597), (942, 14672), (943, 14675), (947, 14705), (948, 14708), (951, 14732), (952, 14741), (953, 14744), (961, 14822), (971, 14879), (987, 14996), (993, 15047), (1025, 15185), (1033, 15251), (1043, 15317), (1044, 15323), (1046, 15341), (1064, 15434), (1066, 15446), (1080, 15494), (1083, 15512), (1085, 15518), (1088, 15539), (1098, 15578), (1125, 15719), (1144, 15782), (1161, 15857), (1165, 15950),

Gene: Feastonyeet_15 Start: 9403, Stop: 14511, Start Num: 25

Candidate Starts for Feastonyeet_15:

(Start: 25 @9403 has 41 MA's), (54, 9559), (72, 9688), (78, 9718), (94, 9787), (98, 9799), (110, 9835), (119, 9886), (122, 9895), (133, 9931), (137, 9955), (150, 10015), (163, 10069), (174, 10108), (176, 10114), (180, 10129), (183, 10150), (218, 10321), (234, 10384), (247, 10429), (266, 10510), (294, 10669), (301, 10702), (305, 10714), (312, 10741), (321, 10798), (329, 10828), (332, 10840), (358, 10942), (359, 10945), (377, 11032), (390, 11080), (427, 11194), (455, 11287), (458, 11302), (463, 11323), (471, 11356), (477, 11386), (481, 11398), (490, 11437), (498, 11461), (499, 11464), (507, 11488), (512, 11512), (533, 11617), (558, 11695), (567, 11725), (568, 11728), (576, 11764), (585, 11806), (588, 11830), (590, 11845), (594, 11860), (598, 11875), (604, 11899), (618, 11938), (620, 11953), (621, 11959), (632, 12004), (634, 12010), (662, 12136), (668, 12166), (675, 12202), (676, 12205), (688, 12253), (694, 12274), (695, 12277), (705, 12349), (714, 12394), (718, 12427), (720, 12448), (730, 12502), (751, 12577), (766, 12661), (782, 12748), (855, 13066), (861, 13096), (886, 13234), (898, 13285), (902, 13315), (931, 13480), (938, 13510), (981, 13690), (988, 13741), (999, 13783), (1003, 13804), (1032, 13900), (1040, 13948), (1044, 13966), (1066, 14089), (1074, 14113), (1077, 14128), (1083, 14158), (1088, 14185), (1090, 14191), (1098, 14224), (1108, 14293), (1109, 14296), (1116, 14332), (1140, 14422),

Gene: Fenry_16 Start: 10023, Stop: 15515, Start Num: 4

Candidate Starts for Fenry_16:

(Start: 4 @10023 has 39 MA's), (Start: 6 @10038 has 1 MA's), (Start: 7 @10044 has 1 MA's), (Start: 9 @10074 has 1 MA's), (10, 10083), (11, 10086), (13, 10128), (Start: 39 @10239 has 25 MA's), (42, 10260), (Start: 59 @10380 has 7 MA's), (79, 10488), (82, 10506), (85, 10521), (87, 10527), (88, 10530), (92, 10548), (101, 10572), (120, 10656), (122, 10662), (133, 10698), (135, 10713), (137, 10722), (178, 10890), (183, 10917), (229, 11130), (256, 11235), (294, 11439), (305, 11484), (312, 11511), (314, 11523), (333, 11613), (345, 11658), (353, 11685), (359, 11715), (377, 11802), (378, 11805), (387, 11844), (427, 11964), (439, 12006), (452, 12051), (455, 12057), (457, 12069), (458, 12072), (471, 12126), (480, 12165), (484, 12186), (485, 12189), (490, 12207), (506, 12255), (508, 12261), (512, 12282), (519, 12309), (532, 12381), (567, 12516), (595, 12588), (597, 12597), (601, 12609), (606, 12621), (616, 12636), (633, 12666), (634, 12669), (644, 12720), (663, 12801), (664, 12804), (670, 12837), (676, 12867), (678, 12891), (697, 12957), (731, 13173), (743, 13224), (754,

13272), (762, 13317), (763, 13320), (765, 13335), (772, 13380), (774, 13389), (775, 13398), (786, 13449), (809, 13521), (816, 13539), (820, 13560), (837, 13659), (838, 13662), (844, 13695), (853, 13761), (857, 13779), (860, 13794), (867, 13827), (874, 13878), (885, 13929), (925, 14172), (926, 14175), (942, 14247), (943, 14250), (952, 14316), (953, 14319), (955, 14337), (961, 14397), (983, 14553), (984, 14556), (987, 14571), (1015, 14742), (1025, 14796), (1036, 14853), (1038, 14868), (1045, 14916), (1056, 14961), (1086, 15081), (1087, 15090), (1096, 15129), (1110, 15201), (1125, 15270), (1129, 15282), (1144, 15333), (1147, 15351), (1165, 15501),

Gene: Francois_20 Start: 11521, Stop: 16311, Start Num: 40

Candidate Starts for Francois_20:

(11, 11356), (13, 11398), (14, 11410), (22, 11434), (31, 11473), (38, 11509), (Start: 39 @11512 has 25 MA's), (Start: 40 @11521 has 15 MA's), (46, 11554), (56, 11614), (82, 11782), (144, 12055), (157, 12097), (178, 12178), (196, 12244), (232, 12370), (250, 12403), (269, 12448), (285, 12508), (287, 12541), (325, 12682), (330, 12691), (365, 12823), (374, 12868), (413, 12979), (428, 13030), (445, 13087), (463, 13129), (466, 13135), (492, 13234), (497, 13249), (498, 13252), (525, 13357), (540, 13432), (545, 13444), (554, 13468), (592, 13594), (597, 13615), (603, 13639), (607, 13651), (628, 13726), (632, 13747), (639, 13783), (669, 13891), (676, 13924), (678, 13951), (680, 13957), (685, 13969), (696, 14011), (701, 14047), (710, 14104), (727, 14209), (733, 14242), (753, 14332), (758, 14359), (759, 14362), (771, 14440), (773, 14449), (796, 14557), (836, 14728), (858, 14857), (884, 14995), (936, 15304), (941, 15325), (961, 15433), (1011, 15544), (1067, 15841), (1068, 15844), (1095, 15973), (1103, 16018), (1113, 16084), (1122, 16123), (1134, 16174), (1152, 16249), (1160, 16294),

Gene: Fribs8_17 Start: 10424, Stop: 15559, Start Num: 25

Candidate Starts for Fribs8_17:

(Start: 25 @10424 has 41 MA's), (29, 10451), (54, 10580), (66, 10676), (75, 10727), (83, 10760), (89, 10784), (96, 10817), (119, 10907), (135, 10967), (136, 10970), (148, 11030), (150, 11036), (162, 11084), (180, 11150), (183, 11171), (192, 11207), (274, 11567), (290, 11669), (301, 11723), (302, 11726), (305, 11735), (307, 11741), (312, 11762), (345, 11909), (359, 11966), (362, 11984), (367, 12002), (370, 12014), (377, 12053), (390, 12101), (411, 12158), (416, 12182), (418, 12188), (451, 12299), (455, 12308), (458, 12323), (468, 12362), (484, 12437), (499, 12485), (501, 12491), (512, 12533), (534, 12641), (542, 12680), (551, 12713), (588, 12872), (598, 12917), (604, 12941), (627, 13022), (632, 13046), (633, 13049), (634, 13052), (636, 13070), (644, 13103), (654, 13145), (664, 13184), (673, 13235), (695, 13319), (696, 13325), (704, 13382), (706, 13394), (714, 13436), (717, 13457), (718, 13469), (720, 13490), (721, 13493), (737, 13559), (741, 13580), (765, 13700), (775, 13766), (782, 13793), (792, 13838), (801, 13859), (806, 13880), (855, 14123), (861, 14153), (868, 14192), (892, 14327), (899, 14357), (902, 14378), (938, 14570), (986, 14783), (992, 14801), (999, 14816), (1027, 14927), (1032, 14945), (1044, 15011), (1053, 15062), (1064, 15122), (1066, 15134), (1077, 15173), (1078, 15176), (1083, 15203), (1090, 15236), (1098, 15269), (1138, 15467), (1141, 15473), (1155, 15530),

Gene: Frickyeh_18 Start: 9926, Stop: 15508, Start Num: 28

Candidate Starts for Frickyeh_18:

(Start: 17 @9881 has 14 MA's), (Start: 28 @9926 has 2 MA's), (32, 9947), (37, 9968), (46, 10013), (Start: 50 @10028 has 1 MA's), (60, 10112), (68, 10154), (69, 10166), (82, 10229), (85, 10244), (88, 10253), (92, 10271), (94, 10277), (110, 10325), (140, 10460), (177, 10610), (183, 10640), (256, 10964), (279, 11060), (294, 11168), (305, 11213), (307, 11219), (312, 11240), (326, 11321), (345, 11387), (353, 11414), (356, 11426), (359, 11444), (360, 11456), (367, 11480), (370, 11492), (377, 11531), (378, 11534), (380, 11543), (387, 11573), (404, 11618), (422, 11678), (427, 11693), (435, 11723), (439, 11735), (452, 11780), (455, 11786), (458, 11801), (465, 11831), (470, 11852), (471, 11855), (485, 11918), (493, 11945), (494, 11948), (495, 11951), (497, 11957), (505, 11981), (506, 11984), (508, 11990), (510, 11996), (512, 12011), (517, 12029), (526, 12074), (542, 12158), (543, 12164), (551, 12191), (576, 12284), (579, 12293), (588, 12350), (589, 12362), (599, 12398), (600, 12404), (615, 12446), (618, 12458), (626, 12497), (628, 12503), (629, 12506), (632, 12524), (633,

12527), (634, 12530), (638, 12554), (656, 12629), (665, 12668), (669, 12692), (676, 12725), (694, 12836), (697, 12869), (704, 12932), (709, 12968), (715, 12998), (727, 13076), (728, 13079), (729, 13088), (734, 13112), (752, 13193), (754, 13199), (762, 13244), (763, 13247), (765, 13262), (772, 13307), (774, 13316), (775, 13325), (776, 13328), (804, 13433), (818, 13481), (819, 13484), (820, 13487), (837, 13586), (838, 13589), (841, 13601), (860, 13718), (867, 13751), (874, 13802), (882, 13832), (891, 13892), (905, 13973), (908, 13994), (916, 14027), (929, 14099), (933, 14108), (953, 14222), (958, 14252), (960, 14261), (962, 14300), (963, 14303), (970, 14333), (971, 14354), (996, 14552), (1012, 14615), (1013, 14621), (1022, 14672), (1048, 14858), (1063, 14945), (1071, 14972), (1072, 14975), (1089, 15050), (1093, 15074), (1101, 15113), (1106, 15149), (1111, 15170), (1131, 15257), (1142, 15299), (1150, 15332), (1153, 15344), (1163, 15422), (1166, 15488),

Gene: Frokostdame_17 Start: 10288, Stop: 15762, Start Num: 6

Candidate Starts for Frokostdame_17:

(Start: 4 @10273 has 39 MA's), (5, 10285), (Start: 6 @10288 has 1 MA's), (Start: 7 @10294 has 1 MA's), (Start: 9 @10324 has 1 MA's), (10, 10333), (13, 10378), (Start: 39 @10489 has 25 MA's), (42, 10510), (Start: 59 @10630 has 7 MA's), (66, 10672), (79, 10738), (82, 10756), (87, 10777), (88, 10780), (92, 10798), (101, 10822), (120, 10906), (133, 10948), (135, 10963), (137, 10972), (178, 11140), (183, 11167), (206, 11284), (218, 11338), (229, 11380), (256, 11485), (294, 11689), (305, 11734), (307, 11740), (312, 11761), (314, 11773), (333, 11863), (345, 11908), (353, 11935), (359, 11965), (377, 12052), (378, 12055), (387, 12094), (411, 12157), (413, 12166), (427, 12214), (439, 12256), (455, 12307), (458, 12322), (471, 12376), (480, 12415), (484, 12436), (485, 12439), (490, 12457), (499, 12484), (506, 12505), (508, 12511), (512, 12532), (517, 12550), (519, 12559), (593, 12832), (601, 12859), (606, 12871), (616, 12886), (633, 12916), (634, 12919), (644, 12970), (654, 13012), (663, 13051), (664, 13054), (670, 13087), (676, 13117), (678, 13141), (697, 13207), (743, 13474), (754, 13522), (760, 13555), (762, 13567), (763, 13570), (765, 13585), (772, 13630), (774, 13639), (775, 13648), (786, 13699), (809, 13771), (816, 13789), (820, 13810), (837, 13909), (838, 13912), (844, 13945), (853, 14011), (857, 14029), (860, 14044), (867, 14077), (874, 14128), (885, 14179), (925, 14422), (926, 14425), (942, 14497), (943, 14500), (952, 14566), (953, 14569), (955, 14587), (961, 14647), (971, 14704), (974, 14722), (983, 14803), (984, 14806), (987, 14821), (1015, 14992), (1025, 15046), (1038, 15118), (1040, 15127), (1045, 15163), (1060, 15223), (1063, 15241), (1069, 15259), (1081, 15304), (1087, 15337), (1110, 15448), (1125, 15517), (1144, 15580), (1147, 15598), (1165, 15748),

Gene: GEazy_17 Start: 10605, Stop: 15728, Start Num: 21

Candidate Starts for GEazy_17:

(Start: 21 @10605 has 14 MA's), (Start: 25 @10614 has 41 MA's), (69, 10887), (71, 10896), (77, 10926), (112, 11055), (137, 11166), (149, 11223), (183, 11361), (194, 11415), (201, 11448), (249, 11649), (256, 11679), (274, 11757), (279, 11775), (282, 11796), (294, 11880), (301, 11913), (304, 11922), (307, 11931), (314, 11964), (316, 11976), (320, 12000), (331, 12045), (333, 12054), (343, 12090), (345, 12099), (353, 12126), (356, 12138), (359, 12156), (367, 12192), (400, 12315), (413, 12357), (452, 12492), (453, 12495), (455, 12498), (458, 12513), (471, 12567), (480, 12606), (503, 12687), (508, 12702), (512, 12723), (516, 12738), (519, 12750), (526, 12786), (532, 12822), (579, 12984), (611, 13041), (622, 13053), (624, 13056), (634, 13089), (636, 13107), (654, 13182), (656, 13188), (658, 13194), (662, 13215), (663, 13218), (664, 13221), (676, 13284), (679, 13320), (684, 13335), (691, 13359), (694, 13374), (695, 13377), (702, 13437), (718, 13536), (725, 13578), (743, 13656), (758, 13725), (761, 13743), (780, 13851), (785, 13878), (786, 13881), (797, 13920), (799, 13923), (801, 13932), (813, 13980), (826, 14067), (832, 14091), (846, 14151), (855, 14211), (871, 14289), (886, 14337), (888, 14349), (901, 14409), (906, 14451), (922, 14532), (927, 14559), (932, 14577), (938, 14607), (948, 14655), (949, 14661), (950, 14670), (957, 14718), (967, 14790), (973, 14829), (979, 14871), (1006, 15057), (1008, 15060), (1023, 15117), (1024, 15126), (1026, 15138), (1028, 15159), (1074, 15372), (1082, 15411), (1098, 15480), (1105, 15534), (1120, 15606), (1142, 15687), (1147, 15711),

Gene: GTE2_14 Start: 9463, Stop: 14106, Start Num: 136

Candidate Starts for GTE2_14:

(Start: 100 @9307 has 16 MA's), (Start: 107 @9334 has 1 MA's), (124, 9412), (136, 9463), (156, 9550), (160, 9565), (175, 9622), (180, 9640), (185, 9667), (187, 9670), (201, 9739), (212, 9796), (223, 9841), (229, 9859), (240, 9904), (254, 9940), (261, 9973), (274, 10021), (275, 10024), (285, 10072), (290, 10111), (293, 10126), (342, 10318), (346, 10336), (368, 10420), (416, 10567), (426, 10594), (452, 10687), (455, 10693), (458, 10708), (468, 10747), (485, 10825), (508, 10897), (511, 10915), (512, 10918), (544, 11080), (568, 11155), (576, 11191), (588, 11257), (598, 11302), (603, 11323), (604, 11326), (605, 11329), (618, 11365), (626, 11404), (628, 11410), (632, 11431), (634, 11437), (647, 11497), (663, 11566), (664, 11569), (666, 11587), (696, 11710), (698, 11725), (718, 11854), (720, 11875), (728, 11908), (737, 11944), (738, 11950), (764, 12082), (766, 12094), (782, 12181), (821, 12334), (830, 12385), (842, 12424), (862, 12553), (872, 12610), (881, 12655), (899, 12748), (908, 12823), (920, 12886), (938, 12967), (945, 12988), (972, 13174), (973, 13180), (1014, 13399), (1027, 13477), (1032, 13495), (1034, 13501), (1044, 13561), (1046, 13579), (1053, 13612), (1066, 13684), (1077, 13723), (1083, 13753), (1098, 13819), (1104, 13867), (1116, 13927), (1140, 14017), (1155, 14077),

Gene: Gambino_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for Gambino_19:

(Start: 4 @10619 has 39 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (Start: 39 @10835 has 25 MA's), (42, 10856), (Start: 59 @10976 has 7 MA's), (66, 11018), (79, 11084), (82, 11102), (87, 11123), (88, 11126), (92, 11144), (101, 11168), (120, 11252), (133, 11294), (135, 11309), (137, 11318), (178, 11486), (183, 11513), (206, 11630), (249, 11801), (256, 11831), (294, 12035), (305, 12080), (312, 12107), (314, 12119), (316, 12131), (333, 12209), (345, 12254), (353, 12281), (359, 12311), (377, 12398), (378, 12401), (387, 12440), (411, 12503), (413, 12512), (427, 12560), (439, 12602), (452, 12647), (455, 12653), (458, 12668), (471, 12722), (480, 12761), (484, 12782), (485, 12785), (490, 12803), (499, 12830), (506, 12851), (508, 12857), (512, 12878), (517, 12896), (519, 12905), (593, 13178), (616, 13232), (633, 13262), (634, 13265), (644, 13316), (663, 13397), (664, 13400), (670, 13433), (676, 13463), (678, 13487), (697, 13553), (743, 13820), (754, 13868), (760, 13901), (762, 13913), (763, 13916), (772, 13976), (774, 13985), (775, 13994), (786, 14045), (809, 14117), (816, 14135), (820, 14156), (837, 14255), (838, 14258), (844, 14291), (853, 14357), (857, 14375), (860, 14390), (867, 14423), (874, 14474), (885, 14525), (898, 14594), (925, 14768), (926, 14771), (942, 14843), (943, 14846), (952, 14912), (953, 14915), (955, 14933), (961, 14993), (971, 15050), (974, 15068), (983, 15149), (984, 15152), (987, 15167), (1015, 15338), (1025, 15392), (1038, 15464), (1040, 15473), (1045, 15509), (1060, 15569), (1063, 15587), (1069, 15605), (1081, 15650), (1087, 15683), (1110, 15794), (1125, 15863), (1144, 15926), (1147, 15944), (1165, 16094),

Gene: Getalong_19 Start: 10672, Stop: 16305, Start Num: 18

Candidate Starts for Getalong_19:

(Start: 18 @10672 has 2 MA's), (Start: 28 @10717 has 2 MA's), (32, 10738), (37, 10759), (46, 10804), (Start: 50 @10819 has 1 MA's), (60, 10903), (68, 10945), (69, 10957), (82, 11020), (85, 11035), (88, 11044), (92, 11062), (94, 11068), (110, 11116), (140, 11251), (177, 11401), (183, 11431), (229, 11650), (249, 11725), (256, 11755), (294, 11959), (305, 12004), (307, 12010), (312, 12031), (316, 12055), (326, 12112), (345, 12178), (353, 12205), (356, 12217), (359, 12235), (360, 12247), (367, 12271), (370, 12283), (377, 12322), (378, 12325), (380, 12334), (387, 12364), (404, 12409), (422, 12469), (427, 12484), (435, 12514), (439, 12526), (452, 12571), (455, 12577), (458, 12592), (465, 12622), (470, 12643), (471, 12646), (485, 12709), (493, 12736), (494, 12739), (495, 12742), (497, 12748), (505, 12772), (506, 12775), (508, 12781), (510, 12787), (512, 12802), (517, 12820), (526, 12865), (542, 12949), (543, 12955), (551, 12982), (576, 13075), (579, 13084), (588, 13141), (589, 13153), (599, 13189), (600, 13195), (615, 13237), (618, 13249), (626, 13288), (628, 13294), (629, 13297), (632, 13315), (633, 13318), (634, 13321), (656, 13420), (665, 13459), (669, 13483), (676, 13516), (694, 13627), (697, 13660), (704, 13723), (709, 13759), (715, 13789), (727, 13867), (728,

13870), (729, 13879), (734, 13903), (754, 13990), (762, 14035), (763, 14038), (765, 14053), (772, 14098), (774, 14107), (775, 14116), (776, 14119), (804, 14224), (818, 14272), (820, 14278), (837, 14377), (838, 14380), (841, 14392), (860, 14509), (867, 14542), (874, 14593), (882, 14623), (891, 14683), (905, 14764), (908, 14785), (909, 14788), (916, 14818), (928, 14881), (929, 14890), (933, 14899), (953, 15013), (958, 15043), (962, 15091), (963, 15094), (970, 15124), (971, 15145), (996, 15343), (1012, 15406), (1013, 15412), (1022, 15463), (1048, 15655), (1063, 15742), (1071, 15769), (1072, 15772), (1089, 15847), (1093, 15871), (1101, 15910), (1106, 15946), (1111, 15967), (1131, 16054), (1142, 16096), (1150, 16129), (1153, 16141), (1166, 16285),

Gene: GiKK_19 Start: 9920, Stop: 14137, Start Num: 39

Candidate Starts for GiKK_19:

(Start: 39 @9920 has 25 MA's), (Start: 43 @9947 has 1 MA's), (86, 10193), (104, 10256), (120, 10313), (129, 10340), (137, 10382), (151, 10445), (154, 10460), (159, 10478), (163, 10496), (167, 10508), (176, 10541), (184, 10583), (188, 10598), (204, 10694), (206, 10703), (220, 10766), (225, 10781), (235, 10817), (249, 10868), (258, 10901), (260, 10910), (280, 10991), (288, 11057), (290, 11066), (291, 11075), (296, 11096), (324, 11231), (327, 11243), (379, 11384), (384, 11405), (396, 11438), (402, 11456), (408, 11474), (432, 11519), (448, 11573), (450, 11579), (460, 11594), (476, 11657), (496, 11705), (503, 11720), (522, 11756), (549, 11810), (559, 11837), (560, 11840), (561, 11843), (568, 11867), (569, 11870), (596, 11930), (648, 11999), (653, 12002), (666, 12020), (673, 12053), (685, 12104), (694, 12134), (698, 12158), (699, 12161), (718, 12287), (720, 12308), (722, 12317), (724, 12326), (725, 12332), (763, 12485), (781, 12554), (782, 12560), (789, 12596), (825, 12725), (855, 12866), (860, 12890), (868, 12935), (895, 13088), (896, 13091), (931, 13283), (938, 13313), (1020, 13487), (1036, 13559), (1043, 13595), (1046, 13619), (1050, 13631), (1057, 13673), (1065, 13715), (1066, 13721), (1074, 13745), (1078, 13763), (1083, 13784), (1088, 13811), (1090, 13817), (1098, 13850), (1100, 13871), (1104, 13898), (1109, 13922), (1116, 13958), (1130, 14006), (1158, 14108),

Gene: Gibbous_16 Start: 9856, Stop: 14970, Start Num: 25

Candidate Starts for Gibbous_16:

(19, 9835), (Start: 25 @9856 has 41 MA's), (29, 9883), (54, 10012), (63, 10096), (66, 10108), (75, 10159), (83, 10192), (89, 10216), (96, 10249), (119, 10339), (135, 10399), (136, 10402), (150, 10468), (159, 10504), (162, 10516), (177, 10573), (180, 10582), (183, 10603), (260, 10942), (274, 10999), (290, 11101), (305, 11167), (307, 11173), (312, 11194), (345, 11341), (359, 11398), (362, 11416), (366, 11431), (370, 11446), (377, 11485), (411, 11590), (416, 11614), (418, 11620), (451, 11731), (455, 11740), (458, 11755), (468, 11794), (490, 11890), (499, 11917), (501, 11923), (503, 11929), (511, 11962), (512, 11965), (534, 12073), (542, 12112), (551, 12145), (560, 12175), (561, 12178), (567, 12199), (568, 12202), (588, 12304), (598, 12349), (604, 12373), (605, 12376), (627, 12454), (632, 12478), (633, 12481), (634, 12484), (644, 12535), (656, 12583), (658, 12589), (666, 12634), (695, 12751), (696, 12757), (704, 12814), (714, 12868), (717, 12889), (718, 12901), (720, 12922), (721, 12925), (737, 12991), (738, 12997), (765, 13132), (775, 13198), (782, 13225), (804, 13303), (855, 13543), (861, 13573), (892, 13747), (899, 13777), (902, 13798), (919, 13906), (938, 13990), (999, 14227), (1027, 14338), (1032, 14356), (1044, 14422), (1053, 14473), (1066, 14545), (1077, 14584), (1078, 14587), (1083, 14614), (1088, 14641), (1098, 14680), (1104, 14728), (1116, 14788), (1125, 14824), (1138, 14878),

Gene: GoldHunter_16 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for GoldHunter_16:

(Start: 18 @9606 has 2 MA's), (Start: 25 @9630 has 41 MA's), (29, 9657), (54, 9786), (62, 9861), (94, 10014), (95, 10017), (119, 10113), (122, 10122), (131, 10152), (133, 10158), (135, 10173), (136, 10176), (140, 10197), (157, 10269), (162, 10290), (180, 10356), (183, 10377), (206, 10494), (247, 10656), (256, 10695), (273, 10770), (301, 10929), (305, 10941), (312, 10968), (319, 11013), (321, 11025), (345, 11115), (350, 11133), (356, 11154), (360, 11184), (367, 11208), (370, 11220), (377, 11259), (385, 11292), (418, 11394), (419, 11397), (427, 11421), (455, 11514), (458, 11529), (468,

11568), (480, 11622), (490, 11664), (504, 11706), (511, 11736), (512, 11739), (534, 11847), (535, 11850), (544, 11901), (568, 11976), (586, 12066), (588, 12078), (598, 12123), (603, 12144), (604, 12147), (605, 12150), (626, 12225), (634, 12258), (637, 12279), (644, 12309), (656, 12357), (658, 12363), (664, 12390), (695, 12525), (714, 12642), (718, 12675), (720, 12696), (721, 12699), (737, 12765), (738, 12771), (741, 12786), (765, 12906), (766, 12915), (782, 12999), (855, 13320), (896, 13539), (902, 13575), (945, 13788), (986, 13980), (999, 14028), (1003, 14049), (1032, 14157), (1044, 14223), (1046, 14241), (1058, 14301), (1066, 14346), (1075, 14376), (1077, 14385), (1083, 14415), (1098, 14481), (1104, 14529), (1116, 14589), (1138, 14676), (1155, 14739),

Gene: GrandSlam_20 Start: 11567, Stop: 16822, Start Num: 40

Candidate Starts for GrandSlam_20:

(35, 11543), (38, 11555), (Start: 39 @11558 has 25 MA's), (Start: 40 @11567 has 15 MA's), (46, 11600), (47, 11603), (69, 11765), (74, 11786), (78, 11807), (84, 11837), (137, 12056), (144, 12101), (169, 12194), (171, 12200), (191, 12287), (196, 12320), (213, 12404), (226, 12449), (230, 12461), (233, 12476), (236, 12491), (252, 12545), (270, 12623), (280, 12668), (285, 12692), (302, 12800), (314, 12842), (320, 12881), (336, 12944), (340, 12962), (354, 13022), (383, 13157), (417, 13265), (420, 13277), (428, 13298), (451, 13379), (462, 13421), (467, 13439), (474, 13469), (479, 13493), (494, 13541), (500, 13559), (505, 13574), (506, 13577), (525, 13658), (540, 13733), (554, 13769), (592, 13895), (597, 13916), (603, 13940), (607, 13952), (628, 14027), (632, 14048), (669, 14192), (676, 14225), (678, 14252), (680, 14258), (696, 14312), (701, 14348), (710, 14405), (716, 14435), (722, 14486), (733, 14543), (753, 14633), (758, 14660), (759, 14663), (771, 14741), (773, 14750), (836, 15029), (858, 15158), (899, 15368), (910, 15461), (936, 15593), (941, 15614), (961, 15722), (978, 15821), (986, 15905), (1089, 16451), (1095, 16484), (1103, 16529), (1113, 16595), (1134, 16685), (1152, 16760), (1160, 16805),

Gene: Guacamole_17 Start: 10278, Stop: 15800, Start Num: 4

Candidate Starts for Guacamole_17:

(Start: 4 @10278 has 39 MA's), (Start: 6 @10293 has 1 MA's), (Start: 7 @10299 has 1 MA's), (Start: 9 @10329 has 1 MA's), (10, 10338), (11, 10341), (13, 10383), (Start: 39 @10494 has 25 MA's), (42, 10515), (Start: 59 @10635 has 7 MA's), (66, 10677), (79, 10743), (82, 10761), (87, 10782), (88, 10785), (92, 10803), (101, 10827), (120, 10911), (121, 10914), (133, 10953), (135, 10968), (137, 10977), (178, 11145), (183, 11172), (206, 11289), (216, 11337), (249, 11460), (256, 11490), (294, 11694), (305, 11739), (312, 11766), (314, 11778), (333, 11868), (345, 11913), (353, 11940), (359, 11970), (377, 12057), (378, 12060), (387, 12099), (415, 12183), (427, 12219), (439, 12261), (452, 12306), (455, 12312), (457, 12324), (458, 12327), (471, 12381), (480, 12420), (484, 12441), (485, 12444), (490, 12462), (493, 12471), (499, 12489), (506, 12510), (508, 12516), (512, 12537), (519, 12564), (533, 12642), (597, 12831), (606, 12855), (615, 12867), (616, 12870), (630, 12885), (633, 12900), (634, 12903), (644, 12954), (663, 13035), (664, 13038), (670, 13071), (676, 13101), (678, 13125), (711, 13284), (743, 13458), (754, 13506), (762, 13551), (763, 13554), (765, 13569), (772, 13614), (774, 13623), (775, 13632), (786, 13683), (809, 13755), (816, 13773), (820, 13794), (837, 13893), (838, 13896), (844, 13929), (853, 13995), (857, 14013), (860, 14028), (867, 14061), (874, 14112), (885, 14163), (892, 14211), (925, 14406), (926, 14409), (942, 14481), (943, 14484), (952, 14550), (953, 14553), (955, 14571), (961, 14631), (971, 14688), (974, 14706), (983, 14787), (984, 14790), (987, 14805), (1025, 15018), (1033, 15084), (1042, 15138), (1043, 15150), (1044, 15156), (1066, 15279), (1074, 15303), (1078, 15321), (1083, 15345), (1085, 15351), (1088, 15372), (1098, 15411), (1125, 15552), (1129, 15564), (1144, 15615), (1147, 15633), (1165, 15783),

Gene: Gustav_16 Start: 9814, Stop: 14301, Start Num: 39

Candidate Starts for Gustav_16:

(Start: 39 @9814 has 25 MA's), (41, 9832), (45, 9853), (49, 9865), (55, 9898), (62, 9967), (145, 10306), (151, 10321), (168, 10381), (186, 10459), (194, 10498), (221, 10627), (231, 10660), (241, 10705), (252, 10738), (272, 10822), (274, 10828), (286, 10909), (297, 10963), (299, 10975), (343, 11158), (360, 11188), (373, 11224), (392, 11293), (405, 11326), (406, 11332), (428, 11362), (452, 11443),

(461, 11464), (469, 11482), (472, 11497), (524, 11650), (541, 11689), (557, 11737), (567, 11770), (570, 11788), (582, 11836), (623, 11878), (640, 11905), (648, 11929), (652, 11941), (654, 11944), (657, 11953), (660, 11965), (667, 12004), (672, 12031), (695, 12118), (698, 12139), (704, 12181), (714, 12235), (718, 12268), (720, 12289), (721, 12292), (722, 12298), (728, 12322), (757, 12448), (763, 12472), (775, 12517), (779, 12532), (782, 12547), (785, 12565), (789, 12583), (813, 12688), (854, 12892), (855, 12901), (1016, 13576), (1031, 13642), (1044, 13705), (1052, 13750), (1060, 13798), (1061, 13807), (1070, 13846), (1079, 13882), (1081, 13891), (1084, 13903), (1105, 14029), (1119, 14107), (1123, 14119), (1124, 14122), (1129, 14143), (1130, 14146), (1143, 14200),

Gene: Hamood_20 Start: 11567, Stop: 16822, Start Num: 40

Candidate Starts for Hamood_20:

(35, 11543), (38, 11555), (Start: 39 @11558 has 25 MA's), (Start: 40 @11567 has 15 MA's), (46, 11600), (47, 11603), (69, 11765), (74, 11786), (78, 11807), (84, 11837), (137, 12056), (144, 12101), (169, 12194), (171, 12200), (191, 12287), (196, 12320), (213, 12404), (226, 12449), (230, 12461), (233, 12476), (236, 12491), (252, 12545), (270, 12623), (280, 12668), (285, 12692), (302, 12800), (314, 12842), (320, 12881), (336, 12944), (340, 12962), (354, 13022), (383, 13157), (417, 13265), (420, 13277), (428, 13298), (451, 13379), (462, 13421), (467, 13439), (474, 13469), (479, 13493), (494, 13541), (500, 13559), (505, 13574), (506, 13577), (525, 13658), (540, 13733), (554, 13769), (592, 13895), (597, 13916), (603, 13940), (607, 13952), (628, 14027), (632, 14048), (669, 14192), (676, 14225), (678, 14252), (680, 14258), (696, 14312), (701, 14348), (710, 14405), (716, 14435), (722, 14486), (733, 14543), (753, 14633), (758, 14660), (759, 14663), (771, 14741), (773, 14750), (836, 15029), (858, 15158), (899, 15368), (910, 15461), (936, 15593), (941, 15614), (961, 15722), (978, 15821), (986, 15905), (1089, 16451), (1095, 16484), (1103, 16529), (1113, 16595), (1134, 16685), (1152, 16760), (1160, 16805),

Gene: HannahD_17 Start: 10605, Stop: 15728, Start Num: 21

Candidate Starts for HannahD_17:

(Start: 21 @10605 has 14 MA's), (Start: 25 @10614 has 41 MA's), (69, 10887), (71, 10896), (77, 10926), (112, 11055), (137, 11166), (149, 11223), (183, 11361), (194, 11415), (201, 11448), (249, 11649), (256, 11679), (274, 11757), (279, 11775), (282, 11796), (294, 11880), (301, 11913), (304, 11922), (307, 11931), (314, 11964), (316, 11976), (320, 12000), (331, 12045), (333, 12054), (343, 12090), (345, 12099), (353, 12126), (356, 12138), (359, 12156), (367, 12192), (400, 12315), (413, 12357), (452, 12492), (453, 12495), (455, 12498), (458, 12513), (471, 12567), (480, 12606), (503, 12687), (508, 12702), (512, 12723), (516, 12738), (519, 12750), (526, 12786), (532, 12822), (579, 12984), (611, 13041), (622, 13053), (624, 13056), (634, 13089), (636, 13107), (654, 13182), (656, 13188), (658, 13194), (662, 13215), (663, 13218), (664, 13221), (676, 13284), (679, 13320), (684, 13335), (691, 13359), (694, 13374), (695, 13377), (702, 13437), (718, 13536), (725, 13578), (743, 13656), (758, 13725), (761, 13743), (780, 13851), (785, 13878), (786, 13881), (797, 13920), (799, 13923), (801, 13932), (813, 13980), (826, 14067), (832, 14091), (846, 14151), (855, 14211), (871, 14289), (886, 14337), (888, 14349), (901, 14409), (906, 14451), (922, 14532), (927, 14559), (932, 14577), (938, 14607), (948, 14655), (949, 14661), (950, 14670), (957, 14718), (967, 14790), (973, 14829), (979, 14871), (1006, 15057), (1008, 15060), (1023, 15117), (1024, 15126), (1026, 15138), (1028, 15159), (1074, 15372), (1082, 15411), (1098, 15480), (1105, 15534), (1120, 15606), (1142, 15687), (1147, 15711),

Gene: Hedwig_18 Start: 11001, Stop: 16013, Start Num: 21

Candidate Starts for Hedwig_18:

(Start: 21 @11001 has 14 MA's), (Start: 28 @11031 has 2 MA's), (32, 11052), (Start: 40 @11088 has 15 MA's), (71, 11292), (77, 11322), (95, 11397), (122, 11502), (137, 11562), (154, 11640), (155, 11643), (174, 11715), (183, 11757), (201, 11844), (294, 12273), (296, 12282), (301, 12306), (307, 12324), (316, 12369), (320, 12393), (331, 12438), (333, 12447), (343, 12483), (345, 12492), (352, 12516), (356, 12531), (359, 12549), (364, 12573), (377, 12636), (393, 12690), (400, 12708), (422, 12783), (431, 12813), (452, 12885), (455, 12891), (458, 12906), (463, 12927), (471, 12960), (485,

13023), (490, 13041), (499, 13068), (503, 13080), (508, 13095), (512, 13116), (537, 13236), (542, 13263), (551, 13296), (563, 13335), (567, 13350), (579, 13398), (583, 13422), (587, 13452), (601, 13515), (618, 13560), (619, 13563), (634, 13632), (649, 13704), (654, 13725), (656, 13731), (658, 13737), (663, 13761), (664, 13764), (667, 13785), (673, 13815), (676, 13827), (679, 13863), (694, 13917), (695, 13920), (696, 13926), (700, 13971), (702, 13980), (725, 14121), (730, 14154), (743, 14199), (744, 14205), (747, 14217), (758, 14268), (775, 14352), (781, 14376), (785, 14400), (786, 14403), (801, 14454), (813, 14502), (826, 14589), (832, 14613), (835, 14625), (841, 14646), (846, 14673), (864, 14778), (871, 14811), (886, 14859), (888, 14871), (907, 14943), (913, 14952), (955, 15108), (968, 15138), (1002, 15330), (1028, 15450), (1029, 15453), (1059, 15597), (1074, 15660), (1105, 15822), (1107, 15834), (1120, 15891), (1139, 15966), (1142, 15972), (1148, 16002), (1149, 16005),

Gene: Heinz_16 Start: 9889, Stop: 14187, Start Num: 39

Candidate Starts for Heinz_16:

(Start: 25 @9820 has 41 MA's), (30, 9850), (Start: 39 @9889 has 25 MA's), (44, 9916), (45, 9922), (49, 9934), (57, 9976), (62, 10024), (78, 10108), (147, 10360), (237, 10714), (245, 10735), (281, 10882), (282, 10885), (320, 11065), (328, 11098), (375, 11224), (381, 11248), (434, 11374), (435, 11377), (456, 11434), (466, 11473), (492, 11560), (527, 11680), (544, 11761), (567, 11830), (575, 11860), (576, 11863), (595, 11896), (644, 11956), (646, 11959), (677, 12049), (695, 12109), (696, 12115), (698, 12130), (699, 12133), (704, 12172), (713, 12223), (718, 12259), (727, 12310), (751, 12409), (779, 12520), (789, 12571), (792, 12595), (798, 12622), (803, 12640), (805, 12649), (815, 12688), (825, 12757), (855, 12898), (861, 12928), (894, 13114), (935, 13324), (936, 13327), (1044, 13627), (1058, 13705), (1066, 13753), (1083, 13819), (1088, 13846), (1098, 13885), (1115, 13990), (1117, 13993), (1123, 14014), (1132, 14047), (1133, 14050),

Gene: Hexbug_18 Start: 10603, Stop: 14823, Start Num: 39

Candidate Starts for Hexbug_18:

(Start: 39 @10603 has 25 MA's), (Start: 43 @10630 has 1 MA's), (104, 10939), (120, 10996), (127, 11020), (137, 11065), (138, 11068), (144, 11110), (151, 11128), (154, 11143), (159, 11161), (161, 11170), (176, 11224), (188, 11281), (202, 11362), (211, 11410), (220, 11449), (225, 11464), (228, 11473), (235, 11500), (242, 11530), (243, 11533), (249, 11551), (280, 11674), (288, 11740), (301, 11803), (320, 11890), (338, 11959), (378, 12064), (379, 12067), (384, 12088), (396, 12121), (402, 12139), (408, 12157), (427, 12181), (432, 12202), (435, 12211), (448, 12256), (449, 12259), (460, 12277), (496, 12388), (502, 12400), (503, 12403), (522, 12439), (545, 12481), (549, 12493), (559, 12520), (569, 12553), (613, 12628), (648, 12682), (653, 12685), (666, 12703), (676, 12748), (685, 12787), (687, 12793), (694, 12817), (697, 12838), (698, 12841), (699, 12844), (718, 12970), (720, 12991), (722, 13000), (724, 13009), (725, 13015), (763, 13168), (775, 13213), (781, 13237), (782, 13243), (789, 13279), (794, 13312), (807, 13336), (818, 13387), (827, 13432), (855, 13570), (861, 13600), (931, 13981), (1020, 14173), (1036, 14245), (1043, 14281), (1046, 14305), (1050, 14317), (1057, 14359), (1066, 14407), (1083, 14470), (1090, 14503), (1098, 14536), (1100, 14557), (1104, 14584), (1109, 14608), (1116, 14644), (1124, 14671), (1125, 14680), (1130, 14692), (1158, 14794),

Gene: Hibiscus_16 Start: 9906, Stop: 14141, Start Num: 39

Candidate Starts for Hibiscus_16:

(Start: 25 @9837 has 41 MA's), (Start: 39 @9906 has 25 MA's), (44, 9933), (45, 9939), (57, 9996), (123, 10296), (164, 10458), (167, 10467), (224, 10725), (241, 10791), (249, 10812), (252, 10824), (259, 10848), (274, 10914), (286, 10995), (297, 11049), (310, 11094), (343, 11244), (360, 11274), (378, 11331), (386, 11364), (435, 11472), (466, 11568), (482, 11628), (486, 11649), (492, 11655), (544, 11736), (547, 11745), (576, 11838), (595, 11871), (667, 11970), (684, 12048), (695, 12084), (696, 12090), (697, 12102), (698, 12105), (704, 12147), (713, 12198), (718, 12234), (727, 12285), (751, 12384), (753, 12399), (779, 12495), (785, 12528), (789, 12546), (792, 12570), (798, 12597), (803, 12615), (805, 12624), (815, 12663), (825, 12732), (855, 12873), (861, 12903), (886, 13038), (903, 13146), (935, 13290), (936, 13293), (1044, 13581), (1066, 13707), (1083, 13773), (1088, 13800),

(1098, 13839), (1112, 13926), (1123, 13968),

Gene: HippoPololi_18 Start: 10513, Stop: 15630, Start Num: 25

Candidate Starts for HippoPololi_18:

(19, 10492), (Start: 25 @10513 has 41 MA's), (29, 10540), (54, 10669), (63, 10753), (70, 10792), (75, 10816), (89, 10873), (95, 10900), (96, 10906), (119, 10996), (135, 11056), (136, 11059), (150, 11125), (162, 11173), (180, 11239), (183, 11260), (260, 11599), (273, 11653), (274, 11656), (290, 11758), (302, 11815), (304, 11821), (305, 11824), (307, 11830), (312, 11851), (333, 11953), (359, 12055), (362, 12073), (377, 12142), (390, 12190), (411, 12247), (416, 12271), (418, 12277), (455, 12397), (458, 12412), (468, 12451), (484, 12526), (490, 12547), (499, 12574), (501, 12580), (511, 12619), (512, 12622), (534, 12730), (551, 12802), (567, 12856), (588, 12961), (598, 13006), (604, 13030), (627, 13111), (633, 13138), (634, 13141), (644, 13192), (656, 13240), (658, 13246), (666, 13291), (695, 13408), (696, 13414), (704, 13471), (714, 13525), (717, 13546), (718, 13558), (720, 13579), (721, 13582), (737, 13648), (738, 13654), (765, 13789), (766, 13798), (775, 13855), (782, 13882), (808, 13975), (855, 14203), (859, 14224), (861, 14233), (892, 14407), (899, 14437), (902, 14458), (938, 14650), (965, 14740), (999, 14887), (1003, 14908), (1032, 15016), (1037, 15049), (1044, 15082), (1053, 15133), (1066, 15205), (1077, 15244), (1078, 15247), (1083, 15274), (1090, 15307), (1098, 15340), (1100, 15361), (1104, 15388), (1125, 15484), (1138, 15538),

Gene: Hitter_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for Hitter_17:

(Start: 4 @10274 has 39 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (Start: 39 @10490 has 25 MA's), (42, 10511), (79, 10739), (82, 10757), (85, 10772), (87, 10778), (88, 10781), (92, 10799), (101, 10823), (120, 10907), (122, 10913), (133, 10949), (135, 10964), (137, 10973), (178, 11141), (183, 11168), (206, 11285), (249, 11456), (256, 11486), (294, 11690), (305, 11735), (345, 11909), (353, 11936), (359, 11966), (377, 12053), (387, 12095), (415, 12179), (427, 12215), (439, 12257), (452, 12302), (455, 12308), (457, 12320), (458, 12323), (471, 12377), (480, 12416), (484, 12437), (485, 12440), (490, 12458), (493, 12467), (499, 12485), (506, 12506), (508, 12512), (512, 12533), (519, 12560), (533, 12638), (597, 12827), (606, 12851), (615, 12863), (616, 12866), (630, 12881), (633, 12896), (634, 12899), (644, 12950), (663, 13031), (664, 13034), (670, 13067), (676, 13097), (678, 13121), (743, 13454), (754, 13502), (762, 13547), (763, 13550), (765, 13565), (772, 13610), (774, 13619), (775, 13628), (786, 13679), (809, 13751), (816, 13769), (820, 13790), (837, 13889), (838, 13892), (844, 13925), (853, 13991), (857, 14009), (860, 14024), (867, 14057), (874, 14108), (885, 14159), (925, 14402), (926, 14405), (942, 14477), (943, 14480), (952, 14546), (953, 14549), (955, 14567), (961, 14627), (971, 14684), (974, 14702), (983, 14783), (984, 14786), (987, 14801), (1025, 15014), (1033, 15080), (1034, 15086), (1043, 15146), (1044, 15152), (1066, 15275), (1074, 15299), (1078, 15317), (1083, 15341), (1085, 15347), (1088, 15368), (1098, 15407), (1125, 15548), (1129, 15560), (1144, 15611), (1147, 15629), (1165, 15779),

Gene: Holliday_18 Start: 9868, Stop: 15501, Start Num: 17

Candidate Starts for Holliday_18:

(Start: 17 @9868 has 14 MA's), (26, 9895), (Start: 28 @9913 has 2 MA's), (32, 9934), (37, 9955), (46, 10000), (Start: 50 @10015 has 1 MA's), (60, 10099), (68, 10141), (69, 10153), (82, 10216), (85, 10231), (88, 10240), (92, 10258), (94, 10264), (110, 10312), (140, 10447), (177, 10597), (183, 10627), (229, 10846), (249, 10921), (256, 10951), (294, 11155), (304, 11197), (305, 11200), (307, 11206), (312, 11227), (326, 11308), (345, 11374), (353, 11401), (356, 11413), (359, 11431), (360, 11443), (367, 11467), (370, 11479), (377, 11518), (378, 11521), (380, 11530), (387, 11560), (404, 11605), (422, 11665), (427, 11680), (435, 11710), (439, 11722), (452, 11767), (455, 11773), (458, 11788), (465, 11818), (470, 11839), (471, 11842), (485, 11905), (493, 11932), (494, 11935), (495, 11938), (497, 11944), (505, 11968), (506, 11971), (508, 11977), (510, 11983), (512, 11998), (517, 12016), (532, 12097), (542, 12145), (543, 12151), (551, 12178), (588, 12337), (589, 12349), (599, 12385), (618, 12445), (626, 12484), (628, 12490), (629, 12493), (633, 12514), (634, 12517), (656, 12616),

(665, 12655), (669, 12679), (676, 12712), (683, 12757), (692, 12811), (700, 12898), (704, 12919), (709, 12955), (715, 12985), (727, 13063), (728, 13066), (729, 13075), (734, 13099), (752, 13180), (754, 13186), (762, 13231), (763, 13234), (765, 13249), (772, 13294), (774, 13303), (775, 13312), (776, 13315), (804, 13420), (818, 13468), (820, 13474), (837, 13573), (838, 13576), (841, 13588), (860, 13705), (867, 13738), (874, 13789), (878, 13801), (882, 13819), (891, 13879), (905, 13960), (908, 13981), (916, 14014), (928, 14077), (933, 14095), (953, 14209), (958, 14239), (960, 14248), (962, 14287), (963, 14290), (970, 14320), (971, 14341), (989, 14494), (996, 14545), (1012, 14608), (1013, 14614), (1022, 14665), (1048, 14851), (1063, 14938), (1071, 14965), (1072, 14968), (1089, 15043), (1093, 15067), (1101, 15106), (1106, 15142), (1111, 15163), (1131, 15250), (1142, 15292), (1150, 15325), (1153, 15337), (1163, 15415), (1166, 15481),

Gene: Horseradish_17 Start: 9515, Stop: 14311, Start Num: 100

Candidate Starts for Horseradish_17:

(Start: 100 @9515 has 16 MA's), (Start: 107 @9542 has 1 MA's), (110, 9548), (136, 9671), (160, 9773), (171, 9818), (175, 9830), (180, 9848), (185, 9875), (187, 9878), (190, 9893), (200, 9944), (201, 9947), (212, 10004), (213, 10007), (214, 10010), (223, 10049), (229, 10067), (240, 10112), (254, 10148), (261, 10181), (270, 10214), (272, 10226), (285, 10280), (290, 10319), (293, 10334), (295, 10343), (303, 10370), (315, 10421), (329, 10481), (332, 10490), (346, 10544), (363, 10607), (367, 10622), (380, 10685), (416, 10775), (426, 10802), (452, 10895), (455, 10901), (458, 10916), (468, 10955), (485, 11033), (495, 11066), (508, 11105), (511, 11123), (512, 11126), (519, 11153), (529, 11210), (533, 11231), (562, 11342), (568, 11363), (576, 11399), (585, 11441), (586, 11453), (588, 11465), (598, 11510), (599, 11513), (603, 11531), (604, 11534), (605, 11537), (626, 11612), (634, 11645), (647, 11705), (662, 11771), (663, 11774), (664, 11777), (666, 11795), (690, 11894), (694, 11909), (695, 11912), (718, 12062), (720, 12083), (729, 12125), (737, 12152), (738, 12158), (764, 12290), (766, 12302), (782, 12389), (791, 12431), (804, 12467), (813, 12503), (821, 12542), (830, 12593), (842, 12632), (852, 12710), (862, 12761), (872, 12818), (899, 12956), (908, 13028), (938, 13172), (945, 13193), (972, 13370), (973, 13376), (1032, 13700), (1034, 13706), (1044, 13766), (1046, 13784), (1053, 13817), (1066, 13889), (1077, 13928), (1083, 13958), (1098, 14024), (1099, 14042), (1104, 14072), (1116, 14132), (1140, 14222), (1155, 14282),

Gene: Horus_18 Start: 9926, Stop: 15514, Start Num: 28

Candidate Starts for Horus_18:

(Start: 17 @9881 has 14 MA's), (Start: 28 @9926 has 2 MA's), (32, 9947), (37, 9968), (46, 10013), (Start: 50 @10028 has 1 MA's), (60, 10112), (68, 10154), (69, 10166), (82, 10229), (85, 10244), (88, 10253), (92, 10271), (94, 10277), (110, 10325), (140, 10460), (177, 10610), (183, 10640), (256, 10964), (279, 11060), (294, 11168), (304, 11210), (305, 11213), (307, 11219), (312, 11240), (326, 11321), (345, 11387), (353, 11414), (356, 11426), (359, 11444), (360, 11456), (367, 11480), (370, 11492), (377, 11531), (378, 11534), (380, 11543), (387, 11573), (422, 11678), (427, 11693), (435, 11723), (439, 11735), (452, 11780), (455, 11786), (458, 11801), (465, 11831), (470, 11852), (471, 11855), (485, 11918), (493, 11945), (494, 11948), (495, 11951), (497, 11957), (505, 11981), (506, 11984), (508, 11990), (510, 11996), (512, 12011), (517, 12029), (526, 12074), (542, 12158), (543, 12164), (551, 12191), (576, 12284), (579, 12293), (588, 12350), (589, 12362), (599, 12398), (615, 12446), (618, 12458), (626, 12497), (628, 12503), (629, 12506), (632, 12524), (633, 12527), (634, 12530), (638, 12554), (656, 12629), (669, 12692), (676, 12725), (685, 12800), (692, 12824), (694, 12836), (697, 12869), (704, 12932), (709, 12968), (715, 12998), (727, 13076), (728, 13079), (729, 13088), (754, 13199), (762, 13244), (763, 13247), (765, 13262), (772, 13307), (774, 13316), (775, 13325), (776, 13328), (804, 13433), (818, 13481), (820, 13487), (837, 13586), (838, 13589), (841, 13601), (860, 13718), (867, 13751), (874, 13802), (882, 13832), (891, 13892), (905, 13973), (908, 13994), (909, 13997), (916, 14027), (928, 14090), (929, 14099), (933, 14108), (953, 14222), (958, 14252), (962, 14300), (963, 14303), (970, 14333), (971, 14354), (996, 14552), (1012, 14615), (1013, 14621), (1022, 14672), (1048, 14864), (1063, 14951), (1071, 14978), (1072, 14981), (1089, 15056), (1093, 15080), (1101, 15119), (1106, 15155), (1111, 15176), (1131, 15263), (1142, 15305), (1150, 15338), (1153, 15350), (1166, 15494),

Gene: Jalammah_19 Start: 11050, Stop: 16590, Start Num: 4

Candidate Starts for Jalammah_19:

(Start: 4 @11050 has 39 MA's), (Start: 9 @11101 has 1 MA's), (10, 11110), (11, 11113), (13, 11155), (Start: 39 @11266 has 25 MA's), (42, 11287), (Start: 59 @11407 has 7 MA's), (66, 11449), (79, 11515), (82, 11533), (87, 11554), (88, 11557), (92, 11575), (101, 11599), (120, 11683), (133, 11725), (135, 11740), (137, 11749), (178, 11917), (183, 11944), (206, 12061), (249, 12232), (256, 12262), (294, 12466), (305, 12511), (312, 12538), (314, 12550), (333, 12640), (345, 12685), (353, 12712), (359, 12742), (377, 12829), (378, 12832), (387, 12871), (415, 12955), (427, 12991), (439, 13033), (452, 13078), (455, 13084), (457, 13096), (458, 13099), (471, 13153), (480, 13192), (484, 13213), (485, 13216), (490, 13234), (499, 13261), (506, 13282), (508, 13288), (512, 13309), (519, 13336), (568, 13546), (597, 13624), (606, 13648), (615, 13660), (616, 13663), (630, 13678), (633, 13693), (634, 13696), (644, 13747), (663, 13828), (664, 13831), (670, 13864), (676, 13894), (678, 13918), (697, 13984), (743, 14251), (754, 14299), (762, 14344), (763, 14347), (765, 14362), (772, 14407), (774, 14416), (775, 14425), (786, 14476), (809, 14548), (816, 14566), (820, 14587), (837, 14686), (838, 14689), (844, 14722), (853, 14788), (857, 14806), (860, 14821), (867, 14854), (874, 14905), (885, 14956), (925, 15199), (926, 15202), (942, 15274), (943, 15277), (952, 15343), (953, 15346), (955, 15364), (961, 15424), (971, 15481), (974, 15499), (983, 15580), (984, 15583), (987, 15598), (1015, 15757), (1025, 15811), (1033, 15877), (1034, 15883), (1043, 15943), (1044, 15949), (1050, 15979), (1066, 16072), (1074, 16096), (1078, 16114), (1083, 16138), (1085, 16144), (1088, 16165), (1098, 16204), (1125, 16345), (1129, 16357), (1144, 16408), (1147, 16426), (1165, 16576),

Gene: Jamzy_19 Start: 9930, Stop: 14147, Start Num: 39

Candidate Starts for Jamzy_19:

(Start: 39 @9930 has 25 MA's), (Start: 43 @9957 has 1 MA's), (86, 10203), (104, 10266), (120, 10323), (129, 10350), (137, 10392), (151, 10455), (154, 10470), (159, 10488), (163, 10506), (167, 10518), (176, 10551), (184, 10593), (188, 10608), (204, 10704), (206, 10713), (220, 10776), (225, 10791), (235, 10827), (249, 10878), (258, 10911), (260, 10920), (280, 11001), (288, 11067), (290, 11076), (291, 11085), (296, 11106), (324, 11241), (327, 11253), (379, 11394), (384, 11415), (396, 11448), (402, 11466), (408, 11484), (432, 11529), (448, 11583), (460, 11604), (476, 11667), (496, 11715), (503, 11730), (522, 11766), (549, 11820), (559, 11847), (561, 11853), (568, 11877), (569, 11880), (596, 11940), (625, 11973), (653, 12012), (666, 12030), (667, 12033), (676, 12075), (677, 12087), (687, 12120), (688, 12123), (694, 12144), (698, 12168), (699, 12171), (714, 12264), (717, 12285), (718, 12297), (720, 12318), (722, 12327), (724, 12336), (725, 12342), (763, 12495), (779, 12555), (781, 12564), (782, 12570), (789, 12606), (827, 12738), (855, 12876), (860, 12900), (895, 13098), (896, 13101), (925, 13263), (930, 13287), (931, 13290), (959, 13392), (1020, 13497), (1036, 13569), (1040, 13593), (1043, 13605), (1046, 13629), (1050, 13641), (1065, 13725), (1066, 13731), (1078, 13773), (1083, 13794), (1090, 13827), (1098, 13860), (1100, 13881), (1104, 13908), (1116, 13968), (1124, 13995), (1125, 14004), (1130, 14016), (1158, 14118),

Gene: JasperJr_17 Start: 10278, Stop: 15800, Start Num: 4

Candidate Starts for JasperJr_17:

(Start: 4 @10278 has 39 MA's), (Start: 6 @10293 has 1 MA's), (Start: 7 @10299 has 1 MA's), (Start: 9 @10329 has 1 MA's), (10, 10338), (11, 10341), (13, 10383), (Start: 39 @10494 has 25 MA's), (42, 10515), (Start: 59 @10635 has 7 MA's), (66, 10677), (79, 10743), (82, 10761), (87, 10782), (88, 10785), (92, 10803), (101, 10827), (120, 10911), (121, 10914), (133, 10953), (135, 10968), (137, 10977), (178, 11145), (183, 11172), (206, 11289), (216, 11337), (249, 11460), (256, 11490), (294, 11694), (305, 11739), (312, 11766), (314, 11778), (333, 11868), (345, 11913), (353, 11940), (359, 11970), (377, 12057), (378, 12060), (387, 12099), (415, 12183), (427, 12219), (439, 12261), (452, 12306), (455, 12312), (457, 12324), (458, 12327), (471, 12381), (480, 12420), (484, 12441), (485, 12444), (490, 12462), (493, 12471), (499, 12489), (506, 12510), (508, 12516), (512, 12537), (519, 12564), (533, 12642), (597, 12831), (606, 12855), (615, 12867), (616, 12870), (630, 12885), (633, 12900), (634, 12903), (644, 12954), (663, 13035), (664, 13038), (670, 13071), (676, 13101), (678,

13125), (711, 13284), (743, 13458), (754, 13506), (762, 13551), (763, 13554), (765, 13569), (772, 13614), (774, 13623), (775, 13632), (786, 13683), (809, 13755), (816, 13773), (820, 13794), (837, 13893), (838, 13896), (844, 13929), (853, 13995), (857, 14013), (860, 14028), (867, 14061), (874, 14112), (885, 14163), (892, 14211), (925, 14406), (926, 14409), (942, 14481), (943, 14484), (952, 14550), (953, 14553), (955, 14571), (961, 14631), (971, 14688), (974, 14706), (983, 14787), (984, 14790), (987, 14805), (1025, 15018), (1033, 15084), (1042, 15138), (1043, 15150), (1044, 15156), (1066, 15279), (1074, 15303), (1078, 15321), (1083, 15345), (1085, 15351), (1088, 15372), (1098, 15411), (1125, 15552), (1129, 15564), (1144, 15615), (1147, 15633), (1165, 15783),

Gene: Jecs_18 Start: 10920, Stop: 16037, Start Num: 21

Candidate Starts for Jecs_18:

(Start: 21 @10920 has 14 MA's), (Start: 25 @10929 has 41 MA's), (69, 11202), (71, 11211), (77, 11241), (80, 11250), (92, 11307), (101, 11331), (128, 11442), (134, 11463), (137, 11481), (174, 11634), (177, 11646), (183, 11676), (247, 11955), (248, 11958), (256, 11994), (274, 12072), (294, 12195), (301, 12228), (307, 12246), (314, 12279), (316, 12291), (320, 12315), (331, 12360), (333, 12369), (343, 12405), (353, 12441), (356, 12453), (359, 12471), (367, 12507), (400, 12630), (407, 12654), (413, 12672), (452, 12807), (455, 12813), (458, 12828), (471, 12882), (476, 12909), (477, 12912), (480, 12921), (484, 12942), (485, 12945), (490, 12963), (493, 12972), (506, 13011), (508, 13017), (512, 13038), (519, 13065), (528, 13113), (533, 13143), (558, 13221), (568, 13254), (579, 13299), (611, 13356), (622, 13368), (624, 13371), (634, 13404), (656, 13503), (658, 13509), (662, 13530), (663, 13533), (664, 13536), (666, 13554), (676, 13599), (679, 13635), (691, 13674), (694, 13689), (695, 13692), (696, 13698), (700, 13743), (702, 13752), (718, 13851), (725, 13893), (743, 13971), (758, 14040), (761, 14058), (780, 14166), (781, 14169), (785, 14193), (786, 14196), (792, 14217), (797, 14235), (799, 14238), (801, 14247), (831, 14400), (832, 14406), (855, 14526), (871, 14604), (886, 14652), (888, 14664), (901, 14724), (922, 14844), (927, 14871), (932, 14889), (948, 14967), (949, 14973), (950, 14982), (954, 15009), (967, 15102), (973, 15141), (979, 15183), (998, 15336), (1006, 15369), (1008, 15372), (1023, 15429), (1024, 15438), (1026, 15450), (1028, 15471), (1074, 15684), (1082, 15723), (1098, 15792), (1105, 15846), (1142, 15999),

Gene: Jojo24_16 Start: 9900, Stop: 14138, Start Num: 39

Candidate Starts for Jojo24_16:

(Start: 25 @9831 has 41 MA's), (Start: 39 @9900 has 25 MA's), (44, 9927), (45, 9933), (57, 9990), (93, 10197), (123, 10290), (164, 10452), (167, 10461), (224, 10719), (241, 10785), (249, 10806), (252, 10818), (259, 10842), (286, 10989), (297, 11043), (310, 11088), (343, 11238), (360, 11268), (378, 11325), (386, 11358), (434, 11463), (435, 11466), (464, 11556), (466, 11562), (482, 11622), (486, 11643), (492, 11649), (544, 11730), (547, 11739), (576, 11832), (595, 11865), (644, 11925), (646, 11928), (667, 11964), (695, 12078), (696, 12084), (697, 12096), (698, 12099), (704, 12141), (713, 12192), (718, 12228), (727, 12279), (728, 12282), (751, 12378), (753, 12393), (779, 12489), (789, 12540), (792, 12564), (798, 12591), (803, 12609), (805, 12618), (815, 12657), (825, 12726), (855, 12867), (861, 12897), (886, 13032), (899, 13098), (903, 13140), (935, 13281), (936, 13284), (1044, 13578), (1066, 13704), (1083, 13770), (1098, 13836), (1112, 13923), (1123, 13965),

Gene: JuJu_17 Start: 10202, Stop: 15721, Start Num: 4

Candidate Starts for JuJu_17:

(Start: 4 @10202 has 39 MA's), (Start: 6 @10217 has 1 MA's), (Start: 7 @10223 has 1 MA's), (Start: 9 @10253 has 1 MA's), (10, 10262), (11, 10265), (13, 10307), (Start: 39 @10418 has 25 MA's), (42, 10439), (82, 10685), (87, 10706), (88, 10709), (92, 10727), (101, 10751), (120, 10835), (122, 10841), (133, 10877), (135, 10892), (137, 10901), (140, 10916), (150, 10961), (178, 11069), (183, 11096), (191, 11129), (256, 11414), (294, 11618), (305, 11663), (345, 11837), (353, 11864), (359, 11894), (377, 11981), (387, 12023), (413, 12095), (427, 12143), (439, 12185), (452, 12230), (455, 12236), (457, 12248), (458, 12251), (471, 12305), (480, 12344), (484, 12365), (485, 12368), (490, 12386), (493, 12395), (499, 12413), (506, 12434), (508, 12440), (512, 12461), (519, 12488), (533, 12566), (567, 12674), (593, 12740), (606, 12779), (633, 12824), (634, 12827), (644, 12878), (663, 12959),

(664, 12962), (670, 12995), (676, 13025), (697, 13115), (709, 13196), (729, 13316), (743, 13382), (754, 13430), (762, 13475), (763, 13478), (765, 13493), (766, 13502), (772, 13538), (774, 13547), (775, 13556), (809, 13679), (820, 13718), (837, 13817), (838, 13820), (853, 13919), (857, 13937), (860, 13952), (867, 13985), (874, 14036), (885, 14087), (898, 14156), (925, 14330), (926, 14333), (940, 14399), (942, 14405), (943, 14408), (952, 14474), (953, 14477), (955, 14495), (961, 14555), (971, 14612), (974, 14630), (983, 14711), (987, 14729), (993, 14780), (1015, 14888), (1025, 14942), (1033, 15008), (1042, 15062), (1043, 15074), (1044, 15080), (1050, 15110), (1066, 15203), (1074, 15227), (1078, 15245), (1083, 15269), (1085, 15275), (1088, 15296), (1098, 15335), (1125, 15476), (1144, 15539), (1147, 15557), (1161, 15614), (1165, 15707),

Gene: Kamaru_18 Start: 9868, Stop: 15501, Start Num: 17

Candidate Starts for Kamaru_18:

(Start: 17 @9868 has 14 MA's), (26, 9895), (Start: 28 @9913 has 2 MA's), (32, 9934), (37, 9955), (46, 10000), (Start: 50 @10015 has 1 MA's), (60, 10099), (68, 10141), (69, 10153), (82, 10216), (85, 10231), (88, 10240), (92, 10258), (94, 10264), (110, 10312), (140, 10447), (177, 10597), (183, 10627), (229, 10846), (249, 10921), (256, 10951), (294, 11155), (304, 11197), (305, 11200), (307, 11206), (312, 11227), (326, 11308), (345, 11374), (353, 11401), (356, 11413), (359, 11431), (360, 11443), (367, 11467), (370, 11479), (377, 11518), (378, 11521), (380, 11530), (387, 11560), (404, 11605), (422, 11665), (427, 11680), (435, 11710), (439, 11722), (452, 11767), (455, 11773), (458, 11788), (465, 11818), (470, 11839), (471, 11842), (485, 11905), (493, 11932), (494, 11935), (495, 11938), (497, 11944), (505, 11968), (506, 11971), (508, 11977), (510, 11983), (512, 11998), (517, 12016), (532, 12097), (542, 12145), (543, 12151), (551, 12178), (588, 12337), (589, 12349), (599, 12385), (618, 12445), (626, 12484), (628, 12490), (629, 12493), (633, 12514), (634, 12517), (656, 12616), (665, 12655), (669, 12679), (676, 12712), (683, 12757), (692, 12811), (700, 12898), (704, 12919), (709, 12955), (715, 12985), (727, 13063), (728, 13066), (729, 13075), (734, 13099), (752, 13180), (754, 13186), (762, 13231), (763, 13234), (765, 13249), (772, 13294), (774, 13303), (775, 13312), (776, 13315), (804, 13420), (818, 13468), (820, 13474), (837, 13573), (838, 13576), (841, 13588), (860, 13705), (867, 13738), (874, 13789), (878, 13801), (882, 13819), (891, 13879), (905, 13960), (908, 13981), (916, 14014), (928, 14077), (933, 14095), (953, 14209), (958, 14239), (960, 14248), (962, 14287), (963, 14290), (970, 14320), (971, 14341), (989, 14494), (996, 14545), (1012, 14608), (1013, 14614), (1022, 14665), (1048, 14851), (1063, 14938), (1071, 14965), (1072, 14968), (1089, 15043), (1093, 15067), (1101, 15106), (1106, 15142), (1111, 15163), (1131, 15250), (1142, 15292), (1150, 15325), (1153, 15337), (1163, 15415), (1166, 15481),

Gene: KappaFarmDelta_17 Start: 10424, Stop: 15964, Start Num: 4

Candidate Starts for KappaFarmDelta_17:

(Start: 4 @10424 has 39 MA's), (Start: 6 @10439 has 1 MA's), (Start: 7 @10445 has 1 MA's), (Start: 9 @10475 has 1 MA's), (10, 10484), (11, 10487), (13, 10529), (Start: 39 @10640 has 25 MA's), (42, 10661), (79, 10889), (82, 10907), (87, 10928), (88, 10931), (92, 10949), (101, 10973), (120, 11057), (122, 11063), (133, 11099), (135, 11114), (137, 11123), (178, 11291), (183, 11318), (206, 11435), (249, 11606), (256, 11636), (294, 11840), (305, 11885), (312, 11912), (345, 12059), (353, 12086), (359, 12116), (377, 12203), (378, 12206), (387, 12245), (390, 12251), (427, 12365), (439, 12407), (452, 12452), (455, 12458), (457, 12470), (458, 12473), (471, 12527), (480, 12566), (484, 12587), (485, 12590), (490, 12608), (499, 12635), (506, 12656), (508, 12662), (512, 12683), (519, 12710), (532, 12782), (593, 12983), (597, 12998), (606, 13022), (616, 13037), (633, 13067), (634, 13070), (644, 13121), (664, 13205), (670, 13238), (678, 13292), (727, 13547), (743, 13625), (754, 13673), (760, 13706), (762, 13718), (763, 13721), (765, 13736), (766, 13745), (772, 13781), (774, 13790), (775, 13799), (804, 13907), (818, 13955), (819, 13958), (820, 13961), (821, 13982), (838, 14063), (839, 14066), (860, 14192), (867, 14225), (873, 14273), (874, 14276), (879, 14291), (885, 14327), (925, 14570), (926, 14573), (942, 14645), (943, 14648), (952, 14714), (953, 14717), (955, 14735), (961, 14795), (971, 14852), (974, 14870), (983, 14951), (987, 14969), (1025, 15182), (1033, 15248), (1043, 15314), (1044, 15320), (1050, 15350), (1066, 15443), (1074, 15467), (1083, 15509), (1088, 15536), (1098, 15575), (1125, 15716), (1144, 15779), (1147, 15797), (1161, 15854),

Gene: KayGee_16 Start: 9384, Stop: 14468, Start Num: 25

Candidate Starts for KayGee_16:

(Start: 25 @9384 has 41 MA's), (54, 9540), (72, 9669), (78, 9699), (94, 9768), (98, 9780), (112, 9825), (119, 9867), (122, 9876), (133, 9912), (137, 9936), (163, 10050), (174, 10089), (176, 10095), (177, 10101), (180, 10110), (183, 10131), (218, 10302), (234, 10365), (247, 10410), (266, 10491), (294, 10650), (301, 10683), (305, 10695), (312, 10722), (321, 10779), (329, 10809), (332, 10821), (358, 10923), (359, 10926), (377, 11013), (390, 11061), (427, 11175), (455, 11268), (458, 11283), (463, 11304), (471, 11337), (477, 11367), (481, 11379), (490, 11418), (498, 11442), (499, 11445), (507, 11469), (512, 11493), (533, 11598), (548, 11646), (558, 11676), (563, 11691), (567, 11706), (576, 11745), (585, 11787), (586, 11799), (588, 11811), (590, 11826), (594, 11841), (598, 11856), (604, 11880), (618, 11919), (620, 11934), (621, 11940), (627, 11961), (632, 11985), (634, 11991), (662, 12117), (668, 12147), (677, 12198), (688, 12234), (694, 12255), (695, 12258), (705, 12330), (714, 12375), (718, 12408), (720, 12429), (730, 12483), (751, 12558), (766, 12642), (782, 12729), (829, 12915), (855, 13047), (861, 13077), (886, 13215), (898, 13266), (902, 13296), (931, 13452), (938, 13482), (981, 13662), (988, 13713), (999, 13740), (1003, 13761), (1032, 13857), (1040, 13905), (1044, 13923), (1066, 14046), (1074, 14070), (1077, 14085), (1083, 14115), (1088, 14142), (1090, 14148), (1098, 14181), (1108, 14250), (1109, 14253), (1116, 14289), (1140, 14379),

Gene: Kenna_17 Start: 9881, Stop: 15508, Start Num: 17

Candidate Starts for Kenna_17:

(Start: 17 @9881 has 14 MA's), (26, 9908), (Start: 28 @9926 has 2 MA's), (32, 9947), (37, 9968), (46, 10013), (Start: 50 @10028 has 1 MA's), (60, 10112), (68, 10154), (69, 10166), (82, 10229), (85, 10244), (88, 10253), (92, 10271), (94, 10277), (110, 10325), (140, 10460), (177, 10610), (183, 10640), (256, 10964), (279, 11060), (294, 11168), (305, 11213), (307, 11219), (312, 11240), (316, 11264), (326, 11321), (345, 11387), (353, 11414), (356, 11426), (359, 11444), (360, 11456), (367, 11480), (370, 11492), (377, 11531), (378, 11534), (380, 11543), (387, 11573), (404, 11618), (422, 11678), (427, 11693), (435, 11723), (439, 11735), (452, 11780), (455, 11786), (458, 11801), (465, 11831), (470, 11852), (471, 11855), (485, 11918), (493, 11945), (494, 11948), (495, 11951), (497, 11957), (505, 11981), (506, 11984), (508, 11990), (510, 11996), (512, 12011), (517, 12029), (526, 12074), (542, 12158), (543, 12164), (551, 12191), (576, 12284), (579, 12293), (588, 12350), (589, 12362), (599, 12398), (600, 12404), (615, 12446), (618, 12458), (626, 12497), (628, 12503), (629, 12506), (632, 12524), (633, 12527), (634, 12530), (638, 12554), (656, 12629), (665, 12668), (669, 12692), (676, 12725), (694, 12836), (697, 12869), (704, 12932), (709, 12968), (715, 12998), (727, 13076), (728, 13079), (729, 13088), (734, 13112), (752, 13193), (754, 13199), (762, 13244), (763, 13247), (765, 13262), (772, 13307), (774, 13316), (775, 13325), (776, 13328), (804, 13433), (818, 13481), (819, 13484), (820, 13487), (837, 13586), (838, 13589), (841, 13601), (860, 13718), (867, 13751), (874, 13802), (882, 13832), (891, 13892), (905, 13973), (908, 13994), (916, 14027), (929, 14099), (933, 14108), (953, 14222), (958, 14252), (960, 14261), (962, 14300), (963, 14303), (970, 14333), (971, 14354), (996, 14552), (1012, 14615), (1013, 14621), (1022, 14672), (1048, 14858), (1063, 14945), (1071, 14972), (1072, 14975), (1089, 15050), (1093, 15074), (1101, 15113), (1106, 15149), (1111, 15170), (1131, 15257), (1142, 15299), (1150, 15332), (1153, 15344), (1163, 15422), (1166, 15488),

Gene: Kiko_18 Start: 10875, Stop: 15764, Start Num: 21

Candidate Starts for Kiko_18:

(Start: 21 @10875 has 14 MA's), (27, 10899), (Start: 40 @10962 has 15 MA's), (52, 11019), (62, 11115), (64, 11127), (67, 11142), (71, 11166), (77, 11196), (106, 11307), (109, 11313), (110, 11316), (111, 11322), (112, 11325), (115, 11337), (122, 11376), (134, 11418), (136, 11430), (148, 11490), (157, 11523), (174, 11589), (180, 11610), (183, 11631), (194, 11685), (201, 11718), (226, 11835), (247, 11910), (249, 11919), (256, 11949), (274, 12027), (294, 12147), (304, 12189), (307, 12198), (314, 12231), (316, 12243), (320, 12267), (321, 12276), (333, 12321), (343, 12357), (345, 12366), (350, 12384), (359, 12423), (367, 12459), (369, 12468), (377, 12510), (400, 12582), (418, 12645),

(442, 12723), (451, 12756), (452, 12759), (455, 12765), (458, 12780), (463, 12801), (470, 12831), (471, 12834), (481, 12876), (493, 12924), (499, 12942), (501, 12948), (506, 12963), (508, 12969), (511, 12987), (512, 12990), (519, 13017), (528, 13065), (529, 13074), (537, 13110), (538, 13113), (551, 13170), (560, 13200), (567, 13224), (579, 13272), (583, 13296), (585, 13305), (587, 13326), (612, 13416), (632, 13500), (634, 13506), (673, 13557), (679, 13605), (684, 13620), (691, 13644), (693, 13656), (694, 13659), (695, 13662), (696, 13668), (700, 13713), (702, 13722), (725, 13863), (730, 13896), (743, 13941), (780, 14136), (781, 14139), (782, 14145), (797, 14205), (801, 14217), (822, 14322), (832, 14376), (842, 14412), (846, 14436), (887, 14637), (914, 14727), (946, 14844), (955, 14886), (1005, 15093), (1008, 15102), (1024, 15168), (1028, 15201), (1074, 15411), (1105, 15573), (1107, 15585), (1120, 15642), (1143, 15726), (1148, 15753),

Gene: Lauer_15 Start: 9433, Stop: 14517, Start Num: 25

Candidate Starts for Lauer_15:

(Start: 25 @9433 has 41 MA's), (54, 9589), (72, 9718), (78, 9748), (94, 9817), (98, 9829), (119, 9916), (122, 9925), (133, 9961), (137, 9985), (150, 10045), (163, 10099), (174, 10138), (176, 10144), (180, 10159), (183, 10180), (218, 10351), (234, 10414), (247, 10459), (266, 10540), (294, 10699), (301, 10732), (305, 10744), (312, 10771), (321, 10828), (329, 10858), (332, 10870), (358, 10972), (359, 10975), (377, 11062), (390, 11110), (427, 11224), (455, 11317), (458, 11332), (463, 11353), (471, 11386), (477, 11416), (481, 11428), (490, 11467), (498, 11491), (499, 11494), (507, 11518), (512, 11542), (533, 11647), (558, 11725), (567, 11755), (568, 11758), (576, 11794), (585, 11836), (588, 11860), (590, 11875), (594, 11890), (598, 11905), (604, 11929), (618, 11968), (620, 11983), (621, 11989), (627, 12010), (632, 12034), (634, 12040), (662, 12166), (668, 12196), (676, 12235), (688, 12283), (694, 12304), (695, 12307), (705, 12379), (714, 12424), (718, 12457), (720, 12478), (730, 12532), (751, 12607), (766, 12691), (782, 12778), (829, 12964), (855, 13096), (861, 13126), (886, 13264), (898, 13315), (902, 13345), (931, 13501), (938, 13531), (981, 13711), (988, 13762), (999, 13789), (1003, 13810), (1032, 13906), (1040, 13954), (1044, 13972), (1066, 14095), (1074, 14119), (1077, 14134), (1083, 14164), (1088, 14191), (1090, 14197), (1098, 14230), (1108, 14299), (1109, 14302), (1116, 14338), (1140, 14428),

Gene: Leroy_18 Start: 9882, Stop: 15515, Start Num: 17

Candidate Starts for Leroy_18:

(Start: 17 @9882 has 14 MA's), (Start: 28 @9927 has 2 MA's), (32, 9948), (37, 9969), (46, 10014), (Start: 50 @10029 has 1 MA's), (60, 10113), (68, 10155), (69, 10167), (82, 10230), (85, 10245), (88, 10254), (92, 10272), (94, 10278), (110, 10326), (140, 10461), (177, 10611), (183, 10641), (249, 10935), (256, 10965), (294, 11169), (304, 11211), (305, 11214), (307, 11220), (312, 11241), (316, 11265), (326, 11322), (345, 11388), (353, 11415), (356, 11427), (359, 11445), (360, 11457), (367, 11481), (370, 11493), (377, 11532), (378, 11535), (380, 11544), (387, 11574), (390, 11580), (422, 11679), (427, 11694), (435, 11724), (439, 11736), (452, 11781), (455, 11787), (458, 11802), (465, 11832), (470, 11853), (471, 11856), (485, 11919), (493, 11946), (495, 11952), (505, 11982), (506, 11985), (508, 11991), (510, 11997), (512, 12012), (517, 12030), (532, 12111), (542, 12159), (543, 12165), (546, 12180), (551, 12192), (588, 12351), (589, 12363), (599, 12399), (600, 12405), (618, 12459), (626, 12498), (628, 12504), (629, 12507), (632, 12525), (633, 12528), (634, 12531), (638, 12555), (656, 12630), (669, 12693), (676, 12726), (683, 12771), (692, 12825), (694, 12837), (700, 12912), (704, 12933), (709, 12969), (715, 12999), (728, 13080), (729, 13089), (734, 13113), (754, 13200), (762, 13245), (763, 13248), (772, 13308), (774, 13317), (775, 13326), (804, 13434), (818, 13482), (820, 13488), (837, 13587), (838, 13590), (841, 13602), (860, 13719), (867, 13752), (874, 13803), (882, 13833), (891, 13893), (905, 13974), (908, 13995), (916, 14028), (929, 14100), (933, 14109), (953, 14223), (958, 14253), (960, 14262), (962, 14301), (963, 14304), (970, 14334), (971, 14355), (996, 14553), (1012, 14616), (1013, 14622), (1022, 14673), (1048, 14865), (1063, 14952), (1071, 14979), (1072, 14982), (1089, 15057), (1093, 15081), (1101, 15120), (1106, 15156), (1111, 15177), (1131, 15264), (1142, 15306), (1150, 15339), (1153, 15351), (1166, 15495),

Gene: LitninMcQueen_18 Start: 9869, Stop: 15502, Start Num: 17

Candidate Starts for LitninMcQueen_18:

(Start: 17 @9869 has 14 MA's), (26, 9896), (Start: 28 @9914 has 2 MA's), (32, 9935), (37, 9956), (46, 10001), (Start: 50 @10016 has 1 MA's), (60, 10100), (68, 10142), (69, 10154), (82, 10217), (85, 10232), (88, 10241), (92, 10259), (94, 10265), (110, 10313), (140, 10448), (177, 10598), (183, 10628), (229, 10847), (249, 10922), (256, 10952), (294, 11156), (304, 11198), (305, 11201), (307, 11207), (312, 11228), (326, 11309), (345, 11375), (353, 11402), (356, 11414), (359, 11432), (360, 11444), (367, 11468), (370, 11480), (377, 11519), (378, 11522), (380, 11531), (387, 11561), (404, 11606), (422, 11666), (427, 11681), (435, 11711), (439, 11723), (452, 11768), (455, 11774), (458, 11789), (465, 11819), (470, 11840), (471, 11843), (485, 11906), (493, 11933), (494, 11936), (495, 11939), (497, 11945), (505, 11969), (506, 11972), (508, 11978), (510, 11984), (512, 11999), (517, 12017), (532, 12098), (542, 12146), (543, 12152), (551, 12179), (588, 12338), (589, 12350), (599, 12386), (618, 12446), (626, 12485), (628, 12491), (629, 12494), (633, 12515), (634, 12518), (656, 12617), (665, 12656), (669, 12680), (676, 12713), (683, 12758), (692, 12812), (700, 12899), (704, 12920), (709, 12956), (715, 12986), (727, 13064), (728, 13067), (729, 13076), (734, 13100), (752, 13181), (754, 13187), (762, 13232), (763, 13235), (765, 13250), (772, 13295), (774, 13304), (775, 13313), (776, 13316), (804, 13421), (818, 13469), (820, 13475), (837, 13574), (838, 13577), (841, 13589), (860, 13706), (867, 13739), (874, 13790), (882, 13820), (891, 13880), (905, 13961), (908, 13982), (916, 14015), (928, 14078), (933, 14096), (953, 14210), (958, 14240), (960, 14249), (962, 14288), (963, 14291), (970, 14321), (971, 14342), (989, 14495), (996, 14546), (1012, 14609), (1013, 14615), (1022, 14666), (1048, 14852), (1063, 14939), (1071, 14966), (1072, 14969), (1089, 15044), (1093, 15068), (1101, 15107), (1106, 15143), (1111, 15164), (1131, 15251), (1142, 15293), (1150, 15326), (1153, 15338), (1163, 15416), (1166, 15482),

Gene: Lutum_18 Start: 9881, Stop: 15508, Start Num: 17

Candidate Starts for Lutum_18:

(Start: 17 @9881 has 14 MA's), (26, 9908), (Start: 28 @9926 has 2 MA's), (32, 9947), (37, 9968), (46, 10013), (Start: 50 @10028 has 1 MA's), (60, 10112), (68, 10154), (69, 10166), (82, 10229), (85, 10244), (88, 10253), (92, 10271), (94, 10277), (110, 10325), (140, 10460), (177, 10610), (183, 10640), (256, 10964), (279, 11060), (294, 11168), (305, 11213), (307, 11219), (312, 11240), (316, 11264), (326, 11321), (345, 11387), (353, 11414), (356, 11426), (359, 11444), (360, 11456), (367, 11480), (370, 11492), (377, 11531), (378, 11534), (380, 11543), (387, 11573), (404, 11618), (422, 11678), (427, 11693), (435, 11723), (439, 11735), (452, 11780), (455, 11786), (458, 11801), (465, 11831), (470, 11852), (471, 11855), (485, 11918), (493, 11945), (494, 11948), (495, 11951), (497, 11957), (505, 11981), (506, 11984), (508, 11990), (510, 11996), (512, 12011), (517, 12029), (526, 12074), (542, 12158), (543, 12164), (551, 12191), (576, 12284), (579, 12293), (588, 12350), (589, 12362), (599, 12398), (600, 12404), (615, 12446), (618, 12458), (626, 12497), (628, 12503), (629, 12506), (632, 12524), (633, 12527), (634, 12530), (638, 12554), (656, 12629), (665, 12668), (669, 12692), (676, 12725), (694, 12836), (697, 12869), (704, 12932), (709, 12968), (715, 12998), (727, 13076), (728, 13079), (729, 13088), (734, 13112), (752, 13193), (754, 13199), (762, 13244), (763, 13247), (765, 13262), (772, 13307), (774, 13316), (775, 13325), (776, 13328), (804, 13433), (818, 13481), (819, 13484), (820, 13487), (837, 13586), (838, 13589), (841, 13601), (860, 13718), (867, 13751), (874, 13802), (882, 13832), (891, 13892), (905, 13973), (908, 13994), (916, 14027), (929, 14099), (933, 14108), (953, 14222), (958, 14252), (960, 14261), (962, 14300), (963, 14303), (970, 14333), (971, 14354), (996, 14552), (1012, 14615), (1013, 14621), (1022, 14672), (1048, 14858), (1063, 14945), (1071, 14972), (1072, 14975), (1089, 15050), (1093, 15074), (1101, 15113), (1106, 15149), (1111, 15170), (1131, 15257), (1142, 15299), (1150, 15332), (1153, 15344), (1163, 15422), (1166, 15488),

Gene: Lysidious_18 Start: 10777, Stop: 16320, Start Num: 4

Candidate Starts for Lysidious_18:

(Start: 4 @10777 has 39 MA's), (Start: 9 @10828 has 1 MA's), (10, 10837), (11, 10840), (13, 10882), (Start: 39 @10993 has 25 MA's), (42, 11014), (Start: 59 @11134 has 7 MA's), (66, 11176), (79, 11242), (82, 11260), (87, 11281), (88, 11284), (92, 11302), (101, 11326), (120, 11410), (122, 11416),

(133, 11452), (135, 11467), (137, 11476), (178, 11644), (183, 11671), (206, 11788), (249, 11959), (256, 11989), (294, 12193), (305, 12238), (312, 12265), (314, 12277), (333, 12367), (345, 12412), (353, 12439), (359, 12469), (377, 12556), (378, 12559), (387, 12598), (427, 12718), (439, 12760), (452, 12805), (455, 12811), (457, 12823), (458, 12826), (471, 12880), (480, 12919), (484, 12940), (485, 12943), (490, 12961), (493, 12970), (499, 12988), (506, 13009), (508, 13015), (512, 13036), (519, 13063), (567, 13270), (597, 13351), (606, 13375), (615, 13387), (616, 13390), (630, 13405), (633, 13420), (634, 13423), (644, 13474), (663, 13555), (664, 13558), (670, 13591), (676, 13621), (678, 13645), (697, 13711), (743, 13978), (754, 14026), (762, 14071), (763, 14074), (765, 14089), (772, 14134), (774, 14143), (775, 14152), (786, 14203), (809, 14275), (816, 14293), (820, 14314), (837, 14413), (838, 14416), (844, 14449), (853, 14515), (857, 14533), (860, 14548), (867, 14581), (874, 14632), (885, 14683), (925, 14926), (926, 14929), (942, 15001), (943, 15004), (952, 15070), (953, 15073), (955, 15091), (961, 15151), (971, 15208), (974, 15226), (983, 15307), (984, 15310), (987, 15325), (1015, 15484), (1025, 15538), (1033, 15604), (1034, 15610), (1043, 15670), (1044, 15676), (1066, 15799), (1074, 15823), (1078, 15841), (1083, 15865), (1085, 15871), (1088, 15892), (1098, 15931), (1125, 16072), (1129, 16084), (1144, 16135), (1147, 16153), (1161, 16210), (1165, 16303),

Gene: MAnor_16 Start: 9376, Stop: 14475, Start Num: 25

Candidate Starts for MAnor_16:

(Start: 25 @9376 has 41 MA's), (54, 9532), (68, 9637), (72, 9661), (82, 9712), (94, 9760), (110, 9808), (112, 9817), (119, 9859), (121, 9865), (122, 9868), (133, 9904), (137, 9928), (143, 9955), (163, 10042), (174, 10081), (176, 10087), (180, 10102), (183, 10123), (218, 10294), (234, 10357), (247, 10402), (256, 10441), (266, 10483), (294, 10645), (296, 10654), (301, 10678), (305, 10690), (312, 10717), (314, 10729), (321, 10774), (329, 10804), (332, 10816), (358, 10918), (359, 10921), (377, 11008), (384, 11035), (404, 11095), (414, 11125), (419, 11146), (427, 11170), (455, 11263), (458, 11278), (459, 11287), (463, 11299), (471, 11332), (481, 11374), (497, 11434), (498, 11437), (499, 11440), (501, 11446), (507, 11464), (512, 11488), (533, 11593), (567, 11701), (568, 11704), (576, 11740), (588, 11806), (590, 11821), (594, 11836), (598, 11851), (603, 11872), (604, 11875), (605, 11878), (618, 11914), (620, 11929), (621, 11935), (627, 11956), (632, 11980), (634, 11986), (662, 12112), (668, 12142), (676, 12181), (688, 12229), (694, 12250), (695, 12253), (696, 12259), (705, 12325), (714, 12370), (718, 12403), (720, 12424), (730, 12478), (765, 12628), (766, 12637), (782, 12724), (825, 12901), (855, 13042), (861, 13072), (886, 13210), (902, 13291), (931, 13444), (938, 13474), (985, 13696), (986, 13705), (988, 13711), (999, 13747), (1032, 13864), (1040, 13912), (1044, 13930), (1066, 14053), (1074, 14077), (1077, 14092), (1083, 14122), (1088, 14149), (1090, 14155), (1098, 14188), (1108, 14257), (1109, 14260), (1116, 14296), (1136, 14368), (1137, 14371), (1140, 14386),

Gene: MScarn_18 Start: 9601, Stop: 14400, Start Num: 100

Candidate Starts for MScarn_18:

(Start: 100 @9601 has 16 MA's), (Start: 107 @9628 has 1 MA's), (110, 9634), (136, 9757), (160, 9859), (171, 9904), (175, 9916), (180, 9934), (185, 9961), (187, 9964), (190, 9979), (200, 10030), (201, 10033), (212, 10090), (213, 10093), (223, 10135), (229, 10153), (240, 10198), (254, 10234), (261, 10267), (270, 10300), (272, 10312), (285, 10366), (290, 10405), (293, 10420), (295, 10429), (303, 10456), (315, 10507), (329, 10567), (332, 10576), (346, 10630), (363, 10693), (367, 10708), (416, 10861), (426, 10888), (452, 10981), (455, 10987), (458, 11002), (468, 11041), (485, 11119), (495, 11152), (508, 11191), (511, 11209), (512, 11212), (519, 11239), (529, 11296), (533, 11317), (562, 11428), (568, 11449), (576, 11485), (585, 11527), (586, 11539), (588, 11551), (598, 11596), (599, 11599), (603, 11617), (604, 11620), (605, 11623), (626, 11698), (634, 11731), (647, 11791), (662, 11857), (663, 11860), (664, 11863), (666, 11881), (690, 11980), (694, 11995), (695, 11998), (718, 12148), (720, 12169), (729, 12211), (737, 12238), (738, 12244), (766, 12388), (782, 12475), (791, 12517), (804, 12553), (821, 12628), (830, 12679), (842, 12718), (847, 12742), (862, 12847), (872, 12904), (899, 13042), (908, 13117), (938, 13261), (945, 13282), (972, 13459), (973, 13465), (1032, 13789), (1034, 13795), (1044, 13855), (1053, 13906), (1066, 13978), (1077, 14017), (1083, 14047), (1098, 14113), (1104, 14161), (1116, 14221), (1140, 14311), (1155, 14371),

Gene: MaVan_18 Start: 10619, Stop: 15748, Start Num: 25

Candidate Starts for MaVan_18:

(19, 10598), (Start: 25 @10619 has 41 MA's), (29, 10646), (54, 10775), (66, 10871), (75, 10922), (89, 10979), (96, 11012), (98, 11015), (119, 11102), (123, 11114), (135, 11162), (136, 11165), (137, 11171), (148, 11225), (150, 11231), (162, 11279), (180, 11345), (183, 11366), (273, 11759), (274, 11762), (290, 11864), (305, 11930), (307, 11936), (312, 11957), (359, 12161), (362, 12179), (367, 12197), (370, 12209), (377, 12248), (380, 12260), (390, 12296), (411, 12353), (416, 12377), (418, 12383), (455, 12503), (458, 12518), (468, 12557), (484, 12632), (494, 12665), (499, 12680), (501, 12686), (503, 12692), (512, 12728), (534, 12836), (551, 12908), (567, 12962), (569, 12968), (598, 13112), (604, 13136), (621, 13196), (625, 13208), (626, 13214), (632, 13241), (633, 13244), (634, 13247), (654, 13340), (656, 13346), (666, 13397), (678, 13466), (691, 13499), (695, 13514), (696, 13520), (704, 13577), (706, 13589), (713, 13628), (714, 13631), (717, 13652), (718, 13664), (720, 13685), (721, 13688), (729, 13727), (730, 13739), (737, 13754), (765, 13895), (782, 13991), (801, 14057), (806, 14078), (808, 14084), (855, 14321), (861, 14351), (868, 14390), (892, 14525), (899, 14555), (902, 14576), (931, 14735), (938, 14768), (986, 14981), (994, 14999), (999, 15005), (1032, 15134), (1044, 15200), (1053, 15251), (1066, 15323), (1077, 15362), (1083, 15392), (1090, 15425), (1098, 15458), (1109, 15530), (1125, 15602), (1138, 15656), (1141, 15662), (1155, 15719),

Gene: MagicMan_17 Start: 10932, Stop: 16046, Start Num: 21

Candidate Starts for MagicMan_17:

(Start: 21 @10932 has 14 MA's), (Start: 25 @10941 has 41 MA's), (69, 11214), (71, 11223), (77, 11253), (80, 11262), (92, 11319), (112, 11382), (128, 11454), (134, 11475), (137, 11493), (174, 11646), (183, 11688), (194, 11742), (201, 11775), (247, 11967), (248, 11970), (256, 12006), (274, 12084), (282, 12123), (294, 12207), (301, 12240), (304, 12249), (307, 12258), (314, 12291), (316, 12303), (320, 12327), (331, 12372), (333, 12381), (343, 12417), (345, 12426), (353, 12453), (356, 12465), (359, 12483), (367, 12519), (400, 12642), (413, 12684), (452, 12819), (453, 12822), (455, 12825), (458, 12840), (471, 12894), (480, 12933), (499, 13002), (503, 13014), (508, 13029), (512, 13050), (516, 13065), (519, 13077), (526, 13113), (532, 13149), (579, 13311), (611, 13368), (622, 13380), (624, 13383), (634, 13416), (654, 13509), (656, 13515), (658, 13521), (662, 13542), (663, 13545), (664, 13548), (676, 13611), (679, 13647), (684, 13662), (691, 13686), (694, 13701), (695, 13704), (696, 13710), (702, 13764), (718, 13863), (725, 13905), (743, 13983), (749, 14007), (758, 14052), (780, 14178), (782, 14187), (785, 14205), (786, 14208), (797, 14247), (799, 14250), (801, 14259), (832, 14418), (855, 14538), (871, 14616), (886, 14664), (888, 14676), (901, 14736), (922, 14853), (927, 14880), (932, 14898), (948, 14976), (949, 14982), (950, 14991), (954, 15018), (967, 15111), (973, 15150), (979, 15192), (998, 15345), (1006, 15378), (1008, 15381), (1023, 15438), (1024, 15447), (1026, 15459), (1028, 15480), (1035, 15501), (1074, 15693), (1082, 15732), (1098, 15801), (1105, 15855), (1142, 16008),

Gene: Mahdia_16 Start: 9733, Stop: 13983, Start Num: 39

Candidate Starts for Mahdia_16:

(Start: 39 @9733 has 25 MA's), (41, 9751), (49, 9784), (55, 9817), (69, 9928), (132, 10159), (145, 10225), (151, 10240), (168, 10300), (179, 10339), (194, 10417), (199, 10447), (210, 10501), (221, 10546), (231, 10579), (241, 10624), (252, 10657), (274, 10747), (286, 10828), (297, 10882), (299, 10894), (313, 10951), (329, 11026), (343, 11077), (360, 11107), (405, 11245), (410, 11257), (439, 11317), (448, 11338), (449, 11341), (473, 11392), (479, 11419), (483, 11422), (496, 11440), (521, 11488), (545, 11533), (554, 11557), (559, 11572), (567, 11599), (569, 11605), (626, 11704), (648, 11731), (651, 11737), (667, 11758), (693, 11866), (695, 11872), (698, 11893), (718, 12022), (720, 12043), (721, 12046), (722, 12052), (728, 12076), (737, 12112), (738, 12118), (775, 12259), (789, 12325), (793, 12349), (800, 12376), (812, 12412), (813, 12427), (855, 12649), (925, 13030), (1040, 13396), (1044, 13420), (1053, 13471), (1057, 13492), (1066, 13546), (1074, 13570), (1083, 13612), (1098, 13678), (1099, 13696), (1115, 13783), (1124, 13810), (1128, 13828), (1130, 13831),

Gene: MakCheese_18 Start: 9949, Stop: 14994, Start Num: 39

Candidate Starts for MakCheese_18:

(Start: 39 @9949 has 25 MA's), (46, 9988), (48, 9997), (56, 10048), (62, 10111), (78, 10195), (162, 10552), (169, 10582), (171, 10588), (177, 10609), (191, 10675), (196, 10708), (213, 10792), (214, 10795), (220, 10822), (230, 10849), (236, 10879), (242, 10900), (250, 10927), (263, 10984), (265, 10990), (271, 11014), (277, 11041), (280, 11056), (285, 11080), (292, 11143), (317, 11254), (336, 11332), (340, 11350), (341, 11353), (351, 11389), (354, 11410), (369, 11476), (383, 11545), (395, 11581), (397, 11587), (399, 11590), (409, 11620), (426, 11677), (428, 11686), (429, 11689), (461, 11806), (462, 11809), (475, 11866), (479, 11881), (505, 11962), (506, 11965), (525, 12046), (531, 12088), (558, 12169), (592, 12283), (600, 12316), (603, 12328), (605, 12334), (628, 12415), (637, 12463), (639, 12472), (659, 12550), (669, 12580), (674, 12604), (678, 12640), (681, 12649), (696, 12700), (701, 12736), (712, 12802), (716, 12823), (726, 12895), (727, 12898), (732, 12928), (733, 12931), (748, 12997), (753, 13021), (756, 13039), (770, 13123), (771, 13129), (773, 13138), (817, 13306), (858, 13540), (869, 13600), (875, 13627), (897, 13705), (937, 13876), (977, 14047), (1055, 14470), (1076, 14560), (1094, 14653), (1095, 14659), (1103, 14704), (1110, 14749), (1113, 14770), (1122, 14809), (1148, 14923), (1152, 14932), (1154, 14944), (1162, 14983),

Gene: Malachai_18 Start: 10785, Stop: 16274, Start Num: 4

Candidate Starts for Malachai_18:

(Start: 4 @10785 has 39 MA's), (8, 10824), (Start: 9 @10836 has 1 MA's), (10, 10845), (11, 10848), (13, 10890), (Start: 39 @11001 has 25 MA's), (42, 11022), (Start: 59 @11142 has 7 MA's), (66, 11184), (79, 11250), (82, 11268), (85, 11283), (87, 11289), (88, 11292), (92, 11310), (101, 11334), (120, 11418), (133, 11460), (135, 11475), (137, 11484), (178, 11652), (183, 11679), (198, 11754), (206, 11796), (216, 11844), (249, 11967), (256, 11997), (294, 12201), (305, 12246), (312, 12273), (314, 12285), (333, 12375), (345, 12420), (353, 12447), (359, 12477), (377, 12564), (387, 12606), (427, 12726), (439, 12768), (452, 12813), (455, 12819), (457, 12831), (458, 12834), (471, 12888), (480, 12927), (484, 12948), (485, 12951), (490, 12969), (499, 12996), (508, 13023), (512, 13044), (519, 13071), (532, 13143), (593, 13344), (597, 13359), (606, 13383), (616, 13398), (633, 13428), (634, 13431), (644, 13482), (663, 13563), (664, 13566), (670, 13599), (676, 13629), (678, 13653), (697, 13719), (743, 13986), (754, 14034), (762, 14079), (763, 14082), (765, 14097), (772, 14142), (774, 14151), (775, 14160), (786, 14211), (809, 14283), (816, 14301), (820, 14322), (837, 14421), (838, 14424), (844, 14457), (853, 14523), (857, 14541), (860, 14556), (867, 14589), (874, 14640), (885, 14691), (925, 14934), (926, 14937), (943, 15012), (952, 15078), (953, 15081), (955, 15099), (961, 15159), (983, 15315), (984, 15318), (987, 15333), (1025, 15552), (1036, 15609), (1038, 15624), (1045, 15672), (1056, 15717), (1086, 15837), (1087, 15846), (1096, 15885), (1110, 15957), (1125, 16026), (1129, 16038), (1144, 16089), (1147, 16107), (1161, 16164), (1165, 16257),

Gene: Malisha_19 Start: 11668, Stop: 17280, Start Num: 17

Candidate Starts for Malisha_19:

(Start: 17 @11668 has 14 MA's), (23, 11686), (26, 11695), (Start: 28 @11713 has 2 MA's), (32, 11734), (34, 11746), (46, 11800), (Start: 50 @11815 has 1 MA's), (77, 11992), (82, 12016), (88, 12040), (92, 12058), (106, 12103), (121, 12169), (122, 12172), (137, 12232), (177, 12397), (183, 12427), (213, 12583), (249, 12721), (279, 12847), (294, 12955), (301, 12988), (305, 13000), (312, 13027), (345, 13174), (353, 13201), (359, 13231), (367, 13267), (377, 13318), (378, 13321), (380, 13330), (390, 13366), (413, 13432), (427, 13480), (431, 13495), (435, 13510), (451, 13564), (452, 13567), (455, 13573), (457, 13585), (458, 13588), (470, 13639), (471, 13642), (480, 13681), (508, 13777), (512, 13798), (558, 14002), (567, 14032), (585, 14113), (588, 14137), (589, 14149), (599, 14185), (618, 14245), (626, 14284), (629, 14293), (633, 14314), (634, 14317), (656, 14416), (665, 14455), (669, 14479), (676, 14512), (683, 14557), (692, 14611), (694, 14623), (700, 14698), (704, 14719), (709, 14755), (715, 14785), (728, 14866), (729, 14875), (734, 14899), (752, 14980), (754, 14986), (762, 15031), (763, 15034), (772, 15094), (774, 15103), (775, 15112), (804, 15220), (818, 15268), (820, 15274), (837, 15373), (838, 15376), (841, 15388), (860, 15505), (867, 15538), (873, 15586), (874, 15589), (882, 15619), (891, 15679), (905, 15760), (908, 15781), (909, 15784), (928, 15877), (929,

15886), (950, 15988), (953, 16009), (958, 16039), (960, 16048), (962, 16087), (963, 16090), (964, 16093), (970, 16120), (976, 16174), (989, 16291), (1004, 16375), (1009, 16387), (1012, 16399), (1013, 16405), (1017, 16432), (1022, 16456), (1048, 16633), (1063, 16720), (1069, 16738), (1071, 16747), (1089, 16825), (1091, 16840), (1093, 16849), (1106, 16924), (1108, 16933), (1111, 16945), (1131, 17032), (1142, 17074), (1150, 17107), (1153, 17119), (1163, 17194), (1166, 17260),

Gene: Malvina_18 Start: 10516, Stop: 15633, Start Num: 25

Candidate Starts for Malvina_18:

(19, 10495), (Start: 25 @10516 has 41 MA's), (29, 10543), (54, 10672), (63, 10756), (70, 10795), (75, 10819), (89, 10876), (95, 10903), (96, 10909), (119, 10999), (135, 11059), (136, 11062), (150, 11128), (162, 11176), (180, 11242), (183, 11263), (260, 11602), (273, 11656), (274, 11659), (290, 11761), (302, 11818), (304, 11824), (305, 11827), (307, 11833), (312, 11854), (321, 11911), (333, 11956), (359, 12058), (362, 12076), (377, 12145), (390, 12193), (411, 12250), (416, 12274), (418, 12280), (455, 12400), (458, 12415), (468, 12454), (484, 12529), (490, 12550), (499, 12577), (501, 12583), (511, 12622), (512, 12625), (534, 12733), (551, 12805), (566, 12856), (567, 12859), (588, 12964), (598, 13009), (604, 13033), (627, 13114), (633, 13141), (634, 13144), (644, 13195), (656, 13243), (658, 13249), (666, 13294), (695, 13411), (696, 13417), (704, 13474), (714, 13528), (717, 13549), (718, 13561), (720, 13582), (721, 13585), (737, 13651), (738, 13657), (765, 13792), (766, 13801), (775, 13858), (782, 13885), (808, 13978), (855, 14206), (859, 14227), (861, 14236), (892, 14410), (899, 14440), (902, 14461), (938, 14653), (965, 14743), (999, 14890), (1003, 14911), (1032, 15019), (1044, 15085), (1053, 15136), (1066, 15208), (1077, 15247), (1078, 15250), (1083, 15277), (1090, 15310), (1098, 15343), (1100, 15364), (1104, 15391), (1125, 15487), (1138, 15541), (1141, 15547),

Gene: Margaret_19 Start: 10311, Stop: 14516, Start Num: 39

Candidate Starts for Margaret_19:

(Start: 39 @10311 has 25 MA's), (Start: 43 @10338 has 1 MA's), (97, 10626), (104, 10647), (108, 10653), (116, 10686), (120, 10704), (127, 10728), (144, 10818), (148, 10827), (151, 10836), (159, 10869), (165, 10896), (168, 10905), (175, 10929), (206, 11082), (220, 11145), (225, 11160), (235, 11196), (242, 11226), (249, 11247), (260, 11289), (280, 11370), (290, 11445), (291, 11454), (296, 11475), (327, 11622), (379, 11763), (384, 11784), (396, 11817), (402, 11835), (410, 11856), (427, 11877), (432, 11898), (447, 11949), (448, 11952), (449, 11955), (460, 11973), (482, 12054), (496, 12084), (522, 12135), (549, 12189), (559, 12216), (569, 12249), (596, 12309), (648, 12378), (653, 12381), (685, 12483), (687, 12489), (694, 12513), (698, 12537), (699, 12540), (714, 12633), (718, 12666), (720, 12687), (722, 12696), (724, 12705), (725, 12711), (763, 12864), (781, 12933), (782, 12939), (789, 12975), (825, 13104), (855, 13245), (860, 13269), (868, 13314), (895, 13467), (896, 13470), (931, 13659), (938, 13689), (1020, 13866), (1036, 13938), (1040, 13962), (1043, 13974), (1046, 13998), (1050, 14010), (1065, 14094), (1066, 14100), (1078, 14142), (1083, 14163), (1090, 14196), (1098, 14229), (1100, 14250), (1104, 14277), (1109, 14301), (1116, 14337), (1130, 14385), (1158, 14487),

Gene: Mayweather_17 Start: 10006, Stop: 15090, Start Num: 25

Candidate Starts for Mayweather_17:

(Start: 25 @10006 has 41 MA's), (54, 10162), (72, 10291), (78, 10321), (94, 10390), (98, 10402), (102, 10417), (110, 10438), (112, 10447), (119, 10489), (122, 10498), (133, 10534), (137, 10558), (150, 10618), (163, 10672), (174, 10711), (176, 10717), (180, 10732), (183, 10753), (218, 10924), (234, 10987), (247, 11032), (266, 11113), (294, 11272), (301, 11305), (305, 11317), (312, 11344), (321, 11401), (329, 11431), (332, 11443), (358, 11545), (359, 11548), (377, 11635), (390, 11683), (427, 11797), (455, 11890), (458, 11905), (463, 11926), (471, 11959), (481, 12001), (490, 12040), (498, 12064), (499, 12067), (501, 12073), (507, 12091), (512, 12115), (533, 12220), (548, 12268), (567, 12328), (568, 12331), (576, 12367), (588, 12433), (590, 12448), (598, 12478), (603, 12499), (604, 12502), (618, 12541), (621, 12562), (627, 12583), (632, 12607), (634, 12613), (662, 12739), (668, 12769), (676, 12808), (688, 12856), (694, 12877), (695, 12880), (705, 12952), (714, 12997), (718, 13030), (720, 13051), (730, 13105), (751, 13180), (766, 13264), (782, 13351), (855, 13669), (861,

13699), (886, 13837), (898, 13888), (902, 13918), (931, 14071), (938, 14101), (985, 14311), (986, 14320), (988, 14326), (999, 14362), (1032, 14479), (1034, 14485), (1040, 14527), (1044, 14545), (1066, 14668), (1074, 14692), (1077, 14707), (1083, 14737), (1088, 14764), (1090, 14770), (1098, 14803), (1108, 14872), (1109, 14875), (1116, 14911), (1136, 14983), (1140, 15001),

Gene: McDazzle_15 Start: 10003, Stop: 14937, Start Num: 54

Candidate Starts for McDazzle_15:

(Start: 25 @9847 has 41 MA's), (54, 10003), (68, 10108), (72, 10132), (82, 10183), (94, 10231), (110, 10279), (112, 10288), (119, 10330), (121, 10336), (122, 10339), (133, 10375), (137, 10399), (143, 10426), (163, 10513), (174, 10552), (176, 10558), (180, 10573), (183, 10594), (194, 10648), (218, 10765), (234, 10828), (247, 10873), (256, 10912), (266, 10954), (294, 11116), (296, 11125), (301, 11149), (305, 11161), (312, 11188), (314, 11200), (321, 11245), (329, 11275), (332, 11287), (358, 11389), (359, 11392), (377, 11479), (384, 11506), (404, 11566), (414, 11596), (419, 11617), (427, 11641), (442, 11692), (455, 11734), (458, 11749), (459, 11758), (463, 11770), (471, 11803), (481, 11845), (497, 11905), (498, 11908), (499, 11911), (507, 11935), (512, 11959), (533, 12064), (548, 12112), (567, 12172), (568, 12175), (576, 12211), (588, 12277), (590, 12292), (594, 12307), (598, 12322), (603, 12343), (604, 12346), (618, 12385), (620, 12400), (621, 12406), (627, 12427), (632, 12451), (634, 12457), (662, 12583), (668, 12613), (676, 12652), (688, 12700), (694, 12721), (695, 12724), (696, 12730), (705, 12796), (714, 12841), (718, 12874), (720, 12895), (730, 12949), (765, 13099), (766, 13108), (782, 13195), (825, 13372), (855, 13513), (861, 13543), (886, 13681), (902, 13762), (931, 13915), (938, 13945), (985, 14167), (986, 14176), (988, 14182), (999, 14209), (1032, 14326), (1034, 14332), (1040, 14374), (1044, 14392), (1066, 14515), (1074, 14539), (1077, 14554), (1083, 14584), (1088, 14611), (1090, 14617), (1098, 14650), (1108, 14719), (1109, 14722), (1116, 14758), (1136, 14830), (1140, 14848),

Gene: Melba_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for Melba_17:

(Start: 4 @10274 has 39 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (Start: 39 @10490 has 25 MA's), (42, 10511), (Start: 59 @10631 has 7 MA's), (66, 10673), (79, 10739), (82, 10757), (87, 10778), (88, 10781), (92, 10799), (101, 10823), (120, 10907), (121, 10910), (133, 10949), (135, 10964), (137, 10973), (178, 11141), (183, 11168), (206, 11285), (249, 11456), (256, 11486), (294, 11690), (305, 11735), (312, 11762), (314, 11774), (333, 11864), (345, 11909), (353, 11936), (359, 11966), (377, 12053), (378, 12056), (387, 12095), (415, 12179), (427, 12215), (439, 12257), (452, 12302), (455, 12308), (457, 12320), (458, 12323), (471, 12377), (480, 12416), (484, 12437), (485, 12440), (490, 12458), (493, 12467), (499, 12485), (506, 12506), (508, 12512), (512, 12533), (519, 12560), (533, 12638), (597, 12827), (606, 12851), (615, 12863), (616, 12866), (630, 12881), (633, 12896), (634, 12899), (644, 12950), (663, 13031), (664, 13034), (670, 13067), (676, 13097), (678, 13121), (743, 13454), (754, 13502), (762, 13547), (763, 13550), (765, 13565), (772, 13610), (774, 13619), (775, 13628), (786, 13679), (809, 13751), (816, 13769), (820, 13790), (837, 13889), (838, 13892), (844, 13925), (853, 13991), (857, 14009), (860, 14024), (867, 14057), (874, 14108), (885, 14159), (892, 14207), (925, 14402), (926, 14405), (942, 14477), (943, 14480), (952, 14546), (953, 14549), (955, 14567), (961, 14627), (971, 14684), (974, 14702), (983, 14783), (984, 14786), (987, 14801), (1025, 15014), (1033, 15080), (1042, 15134), (1043, 15146), (1044, 15152), (1066, 15275), (1074, 15299), (1078, 15317), (1083, 15341), (1085, 15347), (1088, 15368), (1098, 15407), (1125, 15548), (1129, 15560), (1144, 15611), (1147, 15629), (1165, 15779),

Gene: Mellie_16 Start: 10014, Stop: 15557, Start Num: 4

Candidate Starts for Mellie_16:

(Start: 4 @10014 has 39 MA's), (Start: 6 @10029 has 1 MA's), (Start: 7 @10035 has 1 MA's), (Start: 9 @10065 has 1 MA's), (10, 10074), (11, 10077), (13, 10119), (Start: 39 @10230 has 25 MA's), (42, 10251), (79, 10479), (82, 10497), (85, 10512), (87, 10518), (88, 10521), (92, 10539), (101, 10563), (120, 10647), (122, 10653), (133, 10689), (135, 10704), (137, 10713), (178, 10881), (183, 10908),

(206, 11025), (249, 11196), (256, 11226), (294, 11430), (305, 11475), (312, 11502), (314, 11514), (333, 11604), (353, 11676), (359, 11706), (377, 11793), (378, 11796), (387, 11835), (427, 11955), (439, 11997), (452, 12042), (455, 12048), (457, 12060), (458, 12063), (471, 12117), (480, 12156), (484, 12177), (485, 12180), (490, 12198), (506, 12246), (508, 12252), (512, 12273), (519, 12300), (532, 12372), (567, 12507), (597, 12588), (606, 12612), (616, 12627), (633, 12657), (634, 12660), (644, 12711), (663, 12792), (664, 12795), (670, 12828), (676, 12858), (678, 12882), (697, 12948), (743, 13215), (747, 13233), (754, 13263), (762, 13308), (763, 13311), (765, 13326), (766, 13335), (772, 13371), (774, 13380), (775, 13389), (786, 13440), (809, 13512), (816, 13530), (820, 13551), (837, 13650), (838, 13653), (844, 13686), (853, 13752), (857, 13770), (860, 13785), (867, 13818), (874, 13869), (885, 13920), (925, 14163), (926, 14166), (942, 14238), (943, 14241), (952, 14307), (953, 14310), (955, 14328), (961, 14388), (971, 14445), (974, 14463), (983, 14544), (984, 14547), (987, 14562), (1025, 14775), (1033, 14841), (1034, 14847), (1043, 14907), (1044, 14913), (1066, 15036), (1074, 15060), (1078, 15078), (1083, 15102), (1085, 15108), (1088, 15129), (1098, 15168), (1125, 15309), (1129, 15321), (1144, 15372), (1147, 15390), (1165, 15540),

Gene: MintFen_17 Start: 10274, Stop: 15796, Start Num: 4

Candidate Starts for MintFen_17:

(Start: 4 @10274 has 39 MA's), (Start: 6 @10289 has 1 MA's), (Start: 7 @10295 has 1 MA's), (Start: 9 @10325 has 1 MA's), (10, 10334), (11, 10337), (13, 10379), (Start: 39 @10490 has 25 MA's), (42, 10511), (Start: 59 @10631 has 7 MA's), (66, 10673), (79, 10739), (82, 10757), (87, 10778), (88, 10781), (92, 10799), (101, 10823), (120, 10907), (121, 10910), (133, 10949), (135, 10964), (137, 10973), (178, 11141), (183, 11168), (206, 11285), (249, 11456), (256, 11486), (294, 11690), (305, 11735), (312, 11762), (314, 11774), (333, 11864), (345, 11909), (353, 11936), (359, 11966), (377, 12053), (378, 12056), (387, 12095), (415, 12179), (427, 12215), (439, 12257), (452, 12302), (455, 12308), (457, 12320), (458, 12323), (471, 12377), (480, 12416), (484, 12437), (485, 12440), (490, 12458), (493, 12467), (499, 12485), (506, 12506), (508, 12512), (512, 12533), (519, 12560), (533, 12638), (597, 12827), (606, 12851), (615, 12863), (616, 12866), (630, 12881), (633, 12896), (634, 12899), (644, 12950), (663, 13031), (664, 13034), (670, 13067), (676, 13097), (678, 13121), (743, 13454), (754, 13502), (762, 13547), (763, 13550), (765, 13565), (772, 13610), (774, 13619), (775, 13628), (786, 13679), (809, 13751), (816, 13769), (820, 13790), (837, 13889), (838, 13892), (844, 13925), (853, 13991), (857, 14009), (860, 14024), (867, 14057), (874, 14108), (885, 14159), (892, 14207), (925, 14402), (926, 14405), (942, 14477), (943, 14480), (952, 14546), (953, 14549), (955, 14567), (961, 14627), (971, 14684), (974, 14702), (983, 14783), (984, 14786), (987, 14801), (1025, 15014), (1033, 15080), (1042, 15134), (1043, 15146), (1044, 15152), (1066, 15275), (1074, 15299), (1078, 15317), (1083, 15341), (1085, 15347), (1088, 15368), (1098, 15407), (1125, 15548), (1129, 15560), (1144, 15611), (1147, 15629), (1165, 15779),

Gene: MissRona_19 Start: 10619, Stop: 16108, Start Num: 4

Candidate Starts for MissRona_19:

(Start: 4 @10619 has 39 MA's), (Start: 6 @10634 has 1 MA's), (Start: 7 @10640 has 1 MA's), (Start: 9 @10670 has 1 MA's), (10, 10679), (11, 10682), (13, 10724), (Start: 39 @10835 has 25 MA's), (42, 10856), (Start: 59 @10976 has 7 MA's), (66, 11018), (79, 11084), (82, 11102), (87, 11123), (88, 11126), (92, 11144), (101, 11168), (120, 11252), (133, 11294), (135, 11309), (137, 11318), (178, 11486), (183, 11513), (206, 11630), (249, 11801), (256, 11831), (294, 12035), (305, 12080), (312, 12107), (314, 12119), (316, 12131), (333, 12209), (345, 12254), (353, 12281), (359, 12311), (377, 12398), (378, 12401), (387, 12440), (411, 12503), (413, 12512), (427, 12560), (439, 12602), (452, 12647), (455, 12653), (458, 12668), (471, 12722), (480, 12761), (484, 12782), (485, 12785), (490, 12803), (499, 12830), (506, 12851), (508, 12857), (512, 12878), (517, 12896), (519, 12905), (593, 13178), (616, 13232), (633, 13262), (634, 13265), (644, 13316), (663, 13397), (664, 13400), (670, 13433), (676, 13463), (678, 13487), (697, 13553), (743, 13820), (754, 13868), (760, 13901), (762, 13913), (763, 13916), (772, 13976), (774, 13985), (775, 13994), (786, 14045), (809, 14117), (816, 14135), (820, 14156), (837, 14255), (838, 14258), (844, 14291), (853, 14357), (857, 14375), (860, 14390), (867, 14423), (874, 14474), (885, 14525), (898, 14594), (925, 14768), (926, 14771), (942,

14843), (943, 14846), (952, 14912), (953, 14915), (955, 14933), (961, 14993), (971, 15050), (974, 15068), (983, 15149), (984, 15152), (987, 15167), (1015, 15338), (1025, 15392), (1038, 15464), (1040, 15473), (1045, 15509), (1060, 15569), (1063, 15587), (1069, 15605), (1081, 15650), (1087, 15683), (1110, 15794), (1125, 15863), (1144, 15926), (1147, 15944), (1165, 16094),

Gene: ModicumRichard_17 Start: 10946, Stop: 15646, Start Num: 59

Candidate Starts for ModicumRichard_17:

(Start: 59 @10946 has 7 MA's), (90, 11105), (123, 11228), (154, 11363), (177, 11450), (178, 11453), (183, 11480), (189, 11507), (190, 11513), (192, 11516), (238, 11735), (248, 11762), (324, 12137), (334, 12170), (337, 12179), (344, 12209), (347, 12221), (361, 12257), (371, 12302), (376, 12323), (377, 12332), (381, 12347), (401, 12395), (407, 12416), (430, 12491), (433, 12503), (445, 12536), (446, 12539), (451, 12557), (456, 12563), (463, 12590), (465, 12599), (466, 12602), (477, 12644), (480, 12653), (494, 12701), (512, 12764), (540, 12902), (544, 12911), (574, 12998), (578, 13010), (582, 13031), (595, 13037), (633, 13064), (634, 13067), (645, 13115), (648, 13124), (666, 13166), (669, 13178), (677, 13220), (686, 13241), (689, 13253), (698, 13295), (753, 13565), (755, 13571), (762, 13607), (781, 13694), (794, 13772), (811, 13820), (822, 13877), (823, 13883), (832, 13931), (840, 13967), (843, 13991), (865, 14114), (880, 14186), (887, 14225), (932, 14432), (982, 14711), (991, 14789), (1047, 15095), (1054, 15140), (1074, 15218), (1075, 15224), (1078, 15236), (1087, 15281), (1088, 15284), (1121, 15458), (1159, 15617),

Gene: Morgana_17 Start: 10951, Stop: 15636, Start Num: 59

Candidate Starts for Morgana_17:

(Start: 59 @10951 has 7 MA's), (90, 11110), (123, 11236), (177, 11440), (178, 11443), (183, 11470), (189, 11497), (190, 11503), (192, 11506), (238, 11725), (248, 11752), (324, 12127), (334, 12160), (337, 12169), (344, 12199), (347, 12211), (361, 12247), (371, 12292), (376, 12313), (377, 12322), (381, 12337), (401, 12385), (407, 12406), (425, 12463), (430, 12481), (433, 12493), (445, 12526), (451, 12547), (456, 12553), (465, 12589), (466, 12592), (477, 12634), (480, 12643), (494, 12691), (512, 12754), (544, 12901), (574, 12988), (578, 13000), (582, 13021), (595, 13027), (633, 13054), (634, 13057), (645, 13105), (648, 13114), (666, 13156), (669, 13168), (677, 13210), (686, 13231), (689, 13243), (698, 13285), (719, 13414), (755, 13561), (780, 13681), (781, 13684), (782, 13690), (794, 13762), (811, 13810), (822, 13867), (832, 13921), (840, 13957), (843, 13981), (880, 14176), (887, 14215), (932, 14422), (982, 14701), (991, 14779), (1041, 15037), (1047, 15085), (1054, 15130), (1074, 15208), (1075, 15214), (1078, 15226), (1087, 15271), (1088, 15274), (1121, 15448), (1159, 15607),

Gene: Morrissey_17 Start: 10161, Stop: 15197, Start Num: 39

Candidate Starts for Morrissey_17:

(Start: 39 @10161 has 25 MA's), (45, 10200), (57, 10257), (61, 10305), (66, 10335), (90, 10452), (99, 10482), (132, 10629), (152, 10725), (182, 10848), (191, 10893), (214, 11016), (221, 11046), (226, 11067), (229, 11076), (233, 11094), (235, 11100), (239, 11121), (255, 11175), (257, 11184), (261, 11208), (288, 11349), (306, 11427), (339, 11574), (355, 11652), (374, 11751), (379, 11772), (380, 11778), (384, 11793), (403, 11847), (408, 11862), (410, 11865), (418, 11898), (420, 11907), (429, 11937), (434, 11958), (441, 11976), (445, 11991), (478, 12111), (486, 12144), (498, 12183), (518, 12258), (520, 12264), (548, 12399), (559, 12432), (560, 12435), (561, 12438), (564, 12447), (567, 12459), (575, 12495), (582, 12525), (617, 12564), (632, 12606), (633, 12609), (634, 12612), (637, 12633), (644, 12663), (662, 12738), (664, 12744), (673, 12795), (677, 12819), (698, 12900), (714, 12996), (717, 13017), (718, 13029), (720, 13050), (721, 13053), (728, 13083), (737, 13119), (757, 13209), (763, 13233), (775, 13278), (782, 13308), (785, 13326), (790, 13344), (794, 13365), (795, 13368), (854, 13623), (855, 13632), (899, 13866), (919, 13998), (921, 14004), (925, 14022), (935, 14064), (966, 14181), (1001, 14433), (1007, 14460), (1030, 14565), (1040, 14607), (1043, 14625), (1044, 14631), (1066, 14757), (1074, 14781), (1079, 14805), (1083, 14823), (1085, 14829), (1098, 14889), (1123, 15018), (1124, 15021), (1128, 15039), (1130, 15042), (1144, 15099),

Gene: Mulch_20 Start: 11504, Stop: 16288, Start Num: 40

Candidate Starts for Mulch_20:

(38, 11492), (Start: 39 @11495 has 25 MA's), (Start: 40 @11504 has 15 MA's), (46, 11537), (56, 11597), (82, 11765), (144, 12038), (157, 12080), (178, 12161), (196, 12227), (232, 12353), (250, 12386), (269, 12431), (285, 12491), (287, 12524), (325, 12665), (330, 12674), (365, 12806), (374, 12851), (413, 12962), (428, 13013), (445, 13070), (463, 13112), (466, 13118), (497, 13232), (498, 13235), (525, 13340), (540, 13415), (545, 13427), (554, 13451), (607, 13634), (628, 13709), (632, 13730), (639, 13766), (669, 13874), (676, 13907), (678, 13934), (680, 13940), (685, 13952), (696, 13994), (701, 14030), (710, 14087), (716, 14117), (727, 14192), (733, 14225), (753, 14315), (759, 14345), (771, 14423), (773, 14432), (796, 14540), (836, 14711), (858, 14840), (884, 14978), (936, 15287), (941, 15308), (961, 15416), (1004, 15506), (1067, 15818), (1068, 15821), (1095, 15950), (1103, 15995), (1113, 16061), (1122, 16100), (1134, 16151), (1152, 16226), (1160, 16271),

Gene: MunkgeeRoachy_16 Start: 9677, Stop: 14815, Start Num: 25

Candidate Starts for MunkgeeRoachy_16:

(Start: 18 @9653 has 2 MA's), (Start: 25 @9677 has 41 MA's), (29, 9704), (54, 9833), (62, 9908), (94, 10061), (95, 10064), (119, 10160), (122, 10169), (131, 10199), (133, 10205), (135, 10220), (136, 10223), (140, 10244), (157, 10316), (162, 10337), (180, 10403), (183, 10424), (206, 10541), (247, 10703), (256, 10742), (273, 10817), (301, 10976), (305, 10988), (312, 11015), (319, 11060), (321, 11072), (350, 11180), (356, 11201), (360, 11231), (367, 11255), (370, 11267), (377, 11306), (385, 11339), (418, 11441), (419, 11444), (426, 11462), (427, 11468), (455, 11561), (458, 11576), (468, 11615), (480, 11669), (490, 11711), (504, 11753), (511, 11783), (512, 11786), (534, 11894), (535, 11897), (544, 11948), (568, 12023), (586, 12113), (588, 12125), (598, 12170), (603, 12191), (604, 12194), (605, 12197), (626, 12272), (634, 12305), (637, 12326), (644, 12356), (656, 12404), (658, 12410), (664, 12437), (695, 12572), (714, 12689), (718, 12722), (720, 12743), (721, 12746), (737, 12812), (738, 12818), (741, 12833), (765, 12953), (766, 12962), (782, 13046), (855, 13367), (896, 13586), (902, 13622), (945, 13835), (986, 14027), (999, 14075), (1003, 14096), (1032, 14204), (1044, 14270), (1046, 14288), (1066, 14393), (1075, 14423), (1077, 14432), (1083, 14462), (1098, 14528), (1104, 14576), (1116, 14636), (1138, 14723), (1155, 14786),

Gene: Murp_17 Start: 10264, Stop: 15864, Start Num: 4

Candidate Starts for Murp_17:

(Start: 4 @10264 has 39 MA's), (Start: 6 @10279 has 1 MA's), (Start: 7 @10285 has 1 MA's), (Start: 9 @10315 has 1 MA's), (10, 10324), (11, 10327), (13, 10369), (Start: 39 @10480 has 25 MA's), (42, 10501), (Start: 59 @10621 has 7 MA's), (67, 10669), (79, 10729), (82, 10747), (87, 10768), (88, 10771), (92, 10789), (120, 10897), (122, 10903), (133, 10939), (135, 10954), (137, 10963), (178, 11131), (183, 11158), (206, 11275), (249, 11446), (256, 11476), (279, 11572), (294, 11680), (305, 11725), (312, 11752), (314, 11764), (333, 11854), (345, 11899), (353, 11926), (359, 11956), (377, 12043), (387, 12085), (390, 12091), (427, 12205), (439, 12247), (452, 12292), (455, 12298), (458, 12313), (471, 12367), (480, 12406), (484, 12427), (485, 12430), (490, 12448), (493, 12457), (499, 12475), (506, 12496), (508, 12502), (512, 12523), (519, 12550), (528, 12598), (533, 12628), (593, 12802), (606, 12841), (616, 12856), (633, 12886), (634, 12889), (644, 12940), (663, 13021), (664, 13024), (670, 13057), (676, 13087), (678, 13111), (696, 13165), (697, 13177), (727, 13366), (743, 13444), (752, 13486), (762, 13537), (763, 13540), (765, 13555), (767, 13567), (772, 13600), (774, 13609), (795, 13723), (810, 13777), (814, 13795), (824, 13879), (828, 13885), (834, 13921), (886, 14245), (894, 14293), (898, 14305), (904, 14368), (918, 14437), (923, 14467), (924, 14470), (925, 14479), (926, 14482), (934, 14515), (942, 14554), (943, 14557), (952, 14623), (953, 14626), (955, 14644), (961, 14704), (971, 14761), (974, 14779), (983, 14860), (987, 14878), (1025, 15079), (1033, 15145), (1043, 15211), (1044, 15217), (1066, 15343), (1074, 15367), (1078, 15385), (1083, 15409), (1085, 15415), (1088, 15436), (1098, 15475), (1125, 15616), (1144, 15679), (1147, 15697), (1161, 15757), (1165, 15850),

Gene: NaLuna_17 Start: 10605, Stop: 15728, Start Num: 21

Candidate Starts for NaLuna_17:

(Start: 21 @10605 has 14 MA's), (Start: 25 @10614 has 41 MA's), (69, 10887), (71, 10896), (77, 10926), (112, 11055), (137, 11166), (149, 11223), (183, 11361), (194, 11415), (201, 11448), (249, 11649), (256, 11679), (274, 11757), (279, 11775), (282, 11796), (294, 11880), (301, 11913), (304, 11922), (307, 11931), (314, 11964), (316, 11976), (320, 12000), (331, 12045), (333, 12054), (343, 12090), (345, 12099), (353, 12126), (356, 12138), (359, 12156), (367, 12192), (400, 12315), (413, 12357), (452, 12492), (453, 12495), (455, 12498), (458, 12513), (471, 12567), (480, 12606), (503, 12687), (508, 12702), (512, 12723), (516, 12738), (519, 12750), (526, 12786), (532, 12822), (579, 12984), (611, 13041), (622, 13053), (624, 13056), (634, 13089), (636, 13107), (654, 13182), (656, 13188), (658, 13194), (662, 13215), (663, 13218), (664, 13221), (676, 13284), (679, 13320), (684, 13335), (691, 13359), (694, 13374), (695, 13377), (702, 13437), (718, 13536), (725, 13578), (743, 13656), (758, 13725), (761, 13743), (780, 13851), (785, 13878), (786, 13881), (797, 13920), (799, 13923), (801, 13932), (813, 13980), (826, 14067), (832, 14091), (846, 14151), (855, 14211), (871, 14289), (886, 14337), (888, 14349), (901, 14409), (906, 14451), (922, 14532), (927, 14559), (932, 14577), (938, 14607), (948, 14655), (949, 14661), (950, 14670), (957, 14718), (967, 14790), (973, 14829), (979, 14871), (1006, 15057), (1008, 15060), (1023, 15117), (1024, 15126), (1026, 15138), (1028, 15159), (1074, 15372), (1082, 15411), (1098, 15480), (1105, 15534), (1120, 15606), (1142, 15687), (1147, 15711),

Gene: Nadeem_20 Start: 11504, Stop: 16288, Start Num: 40

Candidate Starts for Nadeem_20:

(38, 11492), (Start: 39 @11495 has 25 MA's), (Start: 40 @11504 has 15 MA's), (46, 11537), (56, 11597), (82, 11765), (144, 12038), (157, 12080), (178, 12161), (196, 12227), (232, 12353), (250, 12386), (269, 12431), (285, 12491), (287, 12524), (325, 12665), (330, 12674), (365, 12806), (374, 12851), (413, 12962), (428, 13013), (445, 13070), (463, 13112), (466, 13118), (497, 13232), (498, 13235), (525, 13340), (540, 13415), (545, 13427), (554, 13451), (607, 13634), (628, 13709), (632, 13730), (639, 13766), (669, 13874), (676, 13907), (678, 13934), (680, 13940), (685, 13952), (696, 13994), (701, 14030), (710, 14087), (716, 14117), (727, 14192), (733, 14225), (753, 14315), (759, 14345), (771, 14423), (773, 14432), (796, 14540), (836, 14711), (858, 14840), (884, 14978), (936, 15287), (941, 15308), (961, 15416), (1004, 15506), (1067, 15818), (1068, 15821), (1095, 15950), (1103, 15995), (1113, 16061), (1122, 16100), (1134, 16151), (1152, 16226), (1160, 16271),

Gene: NancyRae_20 Start: 11504, Stop: 16294, Start Num: 40

Candidate Starts for NancyRae_20:

(38, 11492), (Start: 39 @11495 has 25 MA's), (Start: 40 @11504 has 15 MA's), (46, 11537), (56, 11597), (82, 11765), (144, 12038), (157, 12080), (178, 12161), (196, 12227), (232, 12353), (250, 12386), (269, 12431), (285, 12491), (287, 12524), (325, 12665), (330, 12674), (365, 12806), (374, 12851), (413, 12962), (428, 13013), (445, 13070), (463, 13112), (466, 13118), (497, 13232), (498, 13235), (525, 13340), (540, 13415), (545, 13427), (554, 13451), (592, 13577), (607, 13634), (628, 13709), (632, 13730), (639, 13766), (669, 13874), (676, 13907), (678, 13934), (680, 13940), (696, 13994), (701, 14030), (710, 14087), (716, 14117), (727, 14192), (733, 14225), (753, 14315), (759, 14345), (771, 14423), (773, 14432), (796, 14540), (836, 14711), (858, 14840), (884, 14978), (936, 15287), (941, 15308), (961, 15416), (1004, 15512), (1067, 15824), (1068, 15827), (1095, 15956), (1103, 16001), (1113, 16067), (1122, 16106), (1134, 16157), (1152, 16232), (1160, 16277),

Gene: Nibbles_18 Start: 10619, Stop: 15748, Start Num: 25

Candidate Starts for Nibbles_18:

(19, 10598), (Start: 25 @10619 has 41 MA's), (29, 10646), (54, 10775), (66, 10871), (75, 10922), (89, 10979), (96, 11012), (98, 11015), (119, 11102), (123, 11114), (135, 11162), (136, 11165), (137, 11171), (148, 11225), (150, 11231), (162, 11279), (180, 11345), (183, 11366), (273, 11759), (274, 11762), (290, 11864), (305, 11930), (307, 11936), (312, 11957), (359, 12161), (362, 12179), (364, 12185), (367, 12197), (370, 12209), (377, 12248), (380, 12260), (390, 12296), (411, 12353), (416, 12377), (455, 12503), (458, 12518), (468, 12557), (484, 12632), (494, 12665), (499, 12680), (501,

12686), (503, 12692), (512, 12728), (534, 12836), (551, 12908), (567, 12962), (598, 13112), (604, 13136), (621, 13196), (625, 13208), (626, 13214), (632, 13241), (633, 13244), (634, 13247), (654, 13340), (656, 13346), (666, 13397), (678, 13466), (691, 13499), (695, 13514), (696, 13520), (704, 13577), (706, 13589), (713, 13628), (714, 13631), (717, 13652), (718, 13664), (720, 13685), (721, 13688), (729, 13727), (730, 13739), (737, 13754), (765, 13895), (782, 13991), (801, 14057), (806, 14078), (808, 14084), (855, 14321), (861, 14351), (868, 14390), (892, 14525), (899, 14555), (902, 14576), (931, 14735), (938, 14768), (986, 14981), (994, 14999), (999, 15005), (1032, 15134), (1044, 15200), (1053, 15251), (1066, 15323), (1077, 15362), (1083, 15392), (1090, 15425), (1098, 15458), (1109, 15530), (1125, 15602), (1138, 15656), (1141, 15662), (1155, 15719),

Gene: Nina_17 Start: 10662, Stop: 15809, Start Num: 25

Candidate Starts for Nina_17:

(Start: 18 @10638 has 2 MA's), (Start: 25 @10662 has 41 MA's), (29, 10689), (54, 10818), (63, 10911), (64, 10914), (81, 11004), (87, 11028), (101, 11073), (102, 11082), (119, 11154), (121, 11160), (122, 11163), (130, 11190), (132, 11196), (135, 11214), (136, 11217), (140, 11238), (157, 11310), (162, 11331), (180, 11397), (183, 11418), (206, 11535), (247, 11697), (256, 11736), (273, 11811), (301, 11970), (305, 11982), (312, 12009), (319, 12054), (321, 12066), (345, 12156), (350, 12174), (356, 12195), (360, 12225), (367, 12249), (370, 12261), (377, 12300), (385, 12333), (418, 12435), (419, 12438), (427, 12462), (455, 12555), (458, 12570), (468, 12609), (480, 12663), (490, 12705), (494, 12717), (504, 12747), (511, 12777), (512, 12780), (534, 12888), (535, 12891), (544, 12942), (546, 12948), (568, 13017), (586, 13107), (588, 13119), (598, 13164), (603, 13185), (604, 13188), (605, 13191), (626, 13266), (634, 13299), (637, 13320), (644, 13350), (656, 13398), (658, 13404), (664, 13431), (695, 13566), (714, 13683), (718, 13716), (720, 13737), (737, 13806), (738, 13812), (741, 13827), (765, 13947), (766, 13956), (782, 14040), (855, 14361), (859, 14382), (896, 14580), (902, 14616), (945, 14829), (986, 15021), (999, 15069), (1003, 15090), (1032, 15198), (1044, 15264), (1046, 15282), (1066, 15387), (1075, 15417), (1077, 15426), (1083, 15456), (1098, 15522), (1104, 15570), (1116, 15630), (1138, 15717), (1155, 15780),

Gene: Nodigi_18 Start: 10594, Stop: 14802, Start Num: 39

Candidate Starts for Nodigi_18:

(Start: 39 @10594 has 25 MA's), (Start: 43 @10621 has 1 MA's), (104, 10930), (120, 10987), (127, 11011), (137, 11056), (144, 11101), (151, 11119), (154, 11134), (159, 11152), (161, 11161), (176, 11215), (188, 11272), (202, 11353), (211, 11401), (220, 11440), (225, 11455), (228, 11464), (235, 11491), (242, 11521), (249, 11542), (280, 11665), (288, 11731), (301, 11794), (320, 11881), (338, 11950), (379, 12058), (384, 12079), (396, 12112), (402, 12130), (408, 12148), (427, 12172), (435, 12202), (448, 12247), (449, 12250), (460, 12268), (496, 12379), (502, 12391), (503, 12394), (522, 12430), (545, 12472), (549, 12484), (559, 12511), (569, 12544), (613, 12619), (648, 12673), (653, 12676), (666, 12694), (676, 12739), (687, 12784), (698, 12832), (699, 12835), (718, 12961), (722, 12991), (724, 13000), (725, 13006), (763, 13159), (775, 13204), (781, 13228), (782, 13234), (789, 13270), (807, 13327), (818, 13378), (827, 13423), (855, 13561), (861, 13591), (895, 13783), (931, 13960), (1020, 14152), (1036, 14224), (1043, 14260), (1046, 14284), (1050, 14296), (1057, 14338), (1066, 14386), (1083, 14449), (1088, 14476), (1090, 14482), (1098, 14515), (1100, 14536), (1104, 14563), (1109, 14587), (1116, 14623), (1124, 14650), (1125, 14659), (1130, 14671), (1158, 14773),

Gene: ObLaDi_17 Start: 10934, Stop: 15625, Start Num: 59

Candidate Starts for ObLaDi_17:

(Start: 59 @10934 has 7 MA's), (90, 11093), (123, 11216), (154, 11351), (177, 11438), (178, 11441), (183, 11468), (189, 11495), (190, 11501), (192, 11504), (238, 11723), (248, 11750), (324, 12125), (334, 12158), (337, 12167), (344, 12197), (347, 12209), (361, 12245), (371, 12290), (376, 12311), (377, 12320), (381, 12335), (401, 12383), (407, 12404), (430, 12479), (433, 12491), (445, 12524), (451, 12545), (456, 12551), (463, 12578), (465, 12587), (466, 12590), (477, 12632), (480, 12641), (494, 12689), (512, 12752), (540, 12890), (544, 12899), (565, 12956), (574, 12986), (578, 12998), (582, 13019), (595, 13025), (633, 13052), (634, 13055), (645, 13103), (648, 13112), (666, 13154),

(669, 13166), (677, 13208), (686, 13229), (689, 13241), (698, 13283), (719, 13412), (742, 13511), (755, 13559), (762, 13595), (780, 13679), (781, 13682), (782, 13688), (794, 13760), (822, 13865), (823, 13871), (832, 13919), (840, 13955), (843, 13979), (880, 14174), (881, 14186), (932, 14411), (982, 14690), (991, 14768), (1041, 15026), (1047, 15074), (1054, 15119), (1074, 15197), (1075, 15203), (1078, 15215), (1087, 15260), (1088, 15263), (1121, 15437), (1159, 15596),

Gene: Obliviate_16 Start: 10043, Stop: 15586, Start Num: 4

Candidate Starts for Obliviate_16:

(Start: 4 @10043 has 39 MA's), (Start: 6 @10058 has 1 MA's), (Start: 7 @10064 has 1 MA's), (Start: 9 @10094 has 1 MA's), (10, 10103), (11, 10106), (13, 10148), (Start: 39 @10259 has 25 MA's), (42, 10280), (79, 10508), (82, 10526), (85, 10541), (87, 10547), (88, 10550), (92, 10568), (101, 10592), (120, 10676), (122, 10682), (133, 10718), (135, 10733), (137, 10742), (178, 10910), (183, 10937), (206, 11054), (218, 11108), (249, 11225), (256, 11255), (294, 11459), (305, 11504), (312, 11531), (314, 11543), (333, 11633), (345, 11678), (353, 11705), (359, 11735), (377, 11822), (378, 11825), (387, 11864), (427, 11984), (439, 12026), (452, 12071), (455, 12077), (457, 12089), (458, 12092), (471, 12146), (480, 12185), (484, 12206), (485, 12209), (490, 12227), (499, 12254), (506, 12275), (508, 12281), (512, 12302), (519, 12329), (532, 12401), (567, 12536), (597, 12617), (606, 12641), (616, 12656), (633, 12686), (634, 12689), (644, 12740), (663, 12821), (664, 12824), (670, 12857), (676, 12887), (678, 12911), (697, 12977), (743, 13244), (747, 13262), (754, 13292), (762, 13337), (763, 13340), (765, 13355), (766, 13364), (772, 13400), (774, 13409), (775, 13418), (786, 13469), (809, 13541), (816, 13559), (820, 13580), (837, 13679), (838, 13682), (844, 13715), (853, 13781), (857, 13799), (860, 13814), (867, 13847), (874, 13898), (885, 13949), (925, 14192), (926, 14195), (942, 14267), (943, 14270), (952, 14336), (953, 14339), (955, 14357), (961, 14417), (971, 14474), (974, 14492), (983, 14573), (984, 14576), (987, 14591), (1015, 14750), (1025, 14804), (1033, 14870), (1034, 14876), (1043, 14936), (1044, 14942), (1053, 14993), (1066, 15065), (1074, 15089), (1078, 15107), (1083, 15131), (1085, 15137), (1088, 15158), (1098, 15197), (1125, 15338), (1129, 15350), (1144, 15401), (1147, 15419), (1165, 15569),

Gene: Opie_17 Start: 10940, Stop: 16069, Start Num: 21

Candidate Starts for Opie_17:

(Start: 21 @10940 has 14 MA's), (Start: 25 @10949 has 41 MA's), (69, 11222), (71, 11231), (92, 11327), (105, 11369), (112, 11390), (134, 11483), (137, 11501), (183, 11696), (215, 11855), (247, 11975), (248, 11978), (256, 12014), (274, 12092), (294, 12215), (301, 12248), (304, 12257), (307, 12266), (314, 12299), (316, 12311), (320, 12335), (331, 12380), (343, 12425), (353, 12461), (356, 12473), (359, 12491), (367, 12527), (400, 12650), (413, 12692), (452, 12827), (453, 12830), (455, 12833), (458, 12848), (471, 12902), (480, 12941), (503, 13022), (508, 13037), (512, 13058), (516, 13073), (519, 13085), (526, 13121), (532, 13157), (579, 13319), (591, 13352), (611, 13376), (622, 13388), (624, 13391), (634, 13424), (636, 13442), (656, 13523), (658, 13529), (662, 13550), (663, 13553), (664, 13556), (679, 13655), (684, 13670), (691, 13694), (694, 13709), (695, 13712), (696, 13718), (702, 13772), (718, 13871), (725, 13913), (730, 13946), (743, 13991), (749, 14015), (758, 14060), (761, 14078), (780, 14186), (786, 14216), (797, 14255), (799, 14258), (801, 14267), (851, 14516), (856, 14540), (886, 14684), (890, 14708), (901, 14759), (922, 14876), (927, 14903), (932, 14921), (948, 14999), (949, 15005), (950, 15014), (954, 15041), (967, 15134), (973, 15173), (979, 15215), (998, 15368), (1006, 15401), (1008, 15404), (1023, 15461), (1024, 15470), (1026, 15482), (1028, 15503), (1035, 15524), (1074, 15716), (1082, 15755), (1097, 15821), (1098, 15824), (1105, 15878), (1142, 16031),

Gene: Orla_18 Start: 10598, Stop: 14806, Start Num: 39

Candidate Starts for Orla_18:

(Start: 39 @10598 has 25 MA's), (Start: 43 @10625 has 1 MA's), (104, 10934), (120, 10991), (127, 11015), (137, 11060), (144, 11105), (151, 11123), (154, 11138), (159, 11156), (161, 11165), (176, 11219), (188, 11276), (202, 11357), (211, 11405), (220, 11444), (225, 11459), (228, 11468), (235, 11495), (242, 11525), (249, 11546), (280, 11669), (288, 11735), (301, 11798), (320, 11885), (338,

11954), (379, 12062), (384, 12083), (396, 12116), (402, 12134), (408, 12152), (427, 12176), (435, 12206), (448, 12251), (449, 12254), (460, 12272), (496, 12383), (502, 12395), (522, 12434), (545, 12476), (549, 12488), (553, 12500), (559, 12515), (569, 12548), (613, 12623), (648, 12677), (653, 12680), (666, 12698), (676, 12743), (685, 12782), (687, 12788), (694, 12812), (697, 12833), (698, 12836), (699, 12839), (718, 12965), (720, 12986), (722, 12995), (724, 13004), (725, 13010), (763, 13163), (775, 13208), (781, 13232), (782, 13238), (789, 13274), (794, 13307), (807, 13331), (818, 13382), (827, 13427), (855, 13565), (861, 13595), (895, 13787), (931, 13964), (1020, 14156), (1036, 14228), (1043, 14264), (1046, 14288), (1050, 14300), (1057, 14342), (1066, 14390), (1083, 14453), (1088, 14480), (1090, 14486), (1098, 14519), (1100, 14540), (1104, 14567), (1109, 14591), (1116, 14627), (1124, 14654), (1125, 14663), (1130, 14675), (1158, 14777),

Gene: PCoral7_17 Start: 10271, Stop: 15886, Start Num: 4

Candidate Starts for PCoral7_17:

(Start: 3 @10235 has 1 MA's), (Start: 4 @10271 has 39 MA's), (Start: 7 @10292 has 1 MA's), (10, 10331), (13, 10376), (33, 10466), (36, 10475), (Start: 39 @10487 has 25 MA's), (42, 10508), (53, 10565), (60, 10637), (63, 10658), (71, 10700), (72, 10703), (77, 10730), (81, 10751), (82, 10754), (87, 10775), (92, 10796), (109, 10847), (110, 10850), (122, 10910), (165, 11093), (183, 11165), (222, 11351), (249, 11453), (253, 11468), (256, 11483), (269, 11540), (305, 11732), (331, 11852), (353, 11933), (359, 11963), (367, 11999), (377, 12050), (418, 12185), (419, 12188), (427, 12212), (442, 12263), (452, 12299), (455, 12305), (458, 12320), (471, 12374), (480, 12413), (485, 12437), (490, 12455), (506, 12503), (508, 12509), (511, 12527), (512, 12530), (516, 12545), (519, 12557), (528, 12605), (567, 12743), (585, 12824), (588, 12848), (589, 12860), (590, 12863), (599, 12896), (627, 12998), (632, 13025), (633, 13028), (634, 13031), (635, 13037), (644, 13082), (648, 13094), (650, 13106), (656, 13130), (660, 13145), (663, 13160), (664, 13163), (668, 13187), (673, 13214), (694, 13295), (707, 13379), (723, 13484), (729, 13517), (743, 13583), (745, 13592), (754, 13631), (760, 13664), (762, 13676), (763, 13679), (765, 13694), (766, 13703), (772, 13739), (774, 13748), (775, 13757), (818, 13913), (819, 13916), (820, 13919), (821, 13940), (838, 14021), (848, 14063), (860, 14150), (867, 14183), (868, 14192), (874, 14234), (898, 14348), (924, 14513), (942, 14597), (943, 14600), (947, 14630), (948, 14633), (952, 14666), (953, 14669), (961, 14747), (971, 14804), (987, 14921), (993, 14972), (1019, 15074), (1025, 15107), (1033, 15173), (1043, 15239), (1044, 15245), (1046, 15263), (1053, 15296), (1066, 15368), (1078, 15410), (1080, 15416), (1083, 15434), (1085, 15440), (1088, 15461), (1098, 15500), (1125, 15641), (1144, 15704), (1161, 15779), (1165, 15872),

Gene: Parada_20 Start: 11504, Stop: 16288, Start Num: 40

Candidate Starts for Parada_20:

(38, 11492), (Start: 39 @11495 has 25 MA's), (Start: 40 @11504 has 15 MA's), (46, 11537), (56, 11597), (82, 11765), (144, 12038), (157, 12080), (178, 12161), (196, 12227), (232, 12353), (250, 12386), (269, 12431), (285, 12491), (287, 12524), (325, 12665), (330, 12674), (365, 12806), (374, 12851), (413, 12962), (428, 13013), (445, 13070), (463, 13112), (466, 13118), (497, 13232), (498, 13235), (525, 13340), (540, 13415), (545, 13427), (554, 13451), (607, 13634), (628, 13709), (632, 13730), (639, 13766), (669, 13874), (676, 13907), (678, 13934), (680, 13940), (685, 13952), (696, 13994), (701, 14030), (710, 14087), (716, 14117), (727, 14192), (733, 14225), (753, 14315), (759, 14345), (771, 14423), (773, 14432), (796, 14540), (836, 14711), (858, 14840), (884, 14978), (936, 15287), (941, 15308), (961, 15416), (1004, 15506), (1067, 15818), (1068, 15821), (1095, 15950), (1103, 15995), (1113, 16061), (1122, 16100), (1134, 16151), (1152, 16226), (1160, 16271),

Gene: Periwinkle_20 Start: 10340, Stop: 15973, Start Num: 16

Candidate Starts for Periwinkle_20:

(12, 10313), (Start: 16 @10340 has 1 MA's), (Start: 28 @10385 has 2 MA's), (32, 10406), (37, 10427), (46, 10472), (Start: 50 @10487 has 1 MA's), (60, 10571), (68, 10613), (69, 10625), (82, 10688), (85, 10703), (88, 10712), (92, 10730), (94, 10736), (110, 10784), (120, 10838), (140, 10919), (176, 11063), (177, 11069), (183, 11099), (229, 11318), (249, 11393), (256, 11423), (290, 11606), (294, 11627), (305, 11672), (307, 11678), (312, 11699), (326, 11780), (345, 11846), (353, 11873), (356, 11885),

(359, 11903), (360, 11915), (367, 11939), (370, 11951), (377, 11990), (378, 11993), (380, 12002), (387, 12032), (404, 12077), (422, 12137), (427, 12152), (435, 12182), (439, 12194), (452, 12239), (455, 12245), (457, 12257), (458, 12260), (463, 12281), (470, 12311), (471, 12314), (485, 12377), (493, 12404), (494, 12407), (495, 12410), (497, 12416), (505, 12440), (506, 12443), (508, 12449), (510, 12455), (512, 12470), (517, 12488), (532, 12569), (542, 12617), (543, 12623), (551, 12650), (588, 12809), (589, 12821), (599, 12857), (618, 12917), (626, 12956), (628, 12962), (629, 12965), (633, 12986), (634, 12989), (656, 13088), (665, 13127), (669, 13151), (676, 13184), (683, 13229), (692, 13283), (700, 13370), (704, 13391), (709, 13427), (715, 13457), (728, 13538), (729, 13547), (734, 13571), (752, 13652), (754, 13658), (762, 13703), (763, 13706), (772, 13766), (774, 13775), (775, 13784), (804, 13892), (818, 13940), (820, 13946), (837, 14045), (838, 14048), (841, 14060), (860, 14177), (867, 14210), (874, 14261), (882, 14291), (891, 14351), (905, 14432), (908, 14453), (916, 14486), (928, 14549), (929, 14558), (933, 14567), (953, 14681), (958, 14711), (960, 14720), (962, 14759), (963, 14762), (970, 14792), (971, 14813), (996, 15017), (1012, 15080), (1013, 15086), (1022, 15137), (1048, 15323), (1063, 15410), (1071, 15437), (1072, 15440), (1089, 15515), (1093, 15539), (1101, 15578), (1106, 15614), (1111, 15635), (1131, 15722), (1142, 15764), (1150, 15797), (1153, 15809), (1163, 15887), (1166, 15953),

Gene: Petra_19 Start: 10705, Stop: 16197, Start Num: 9

Candidate Starts for Petra_19:

(Start: 4 @10654 has 39 MA's), (Start: 6 @10669 has 1 MA's), (Start: 7 @10675 has 1 MA's), (Start: 9 @10705 has 1 MA's), (10, 10714), (11, 10717), (13, 10759), (Start: 39 @10870 has 25 MA's), (42, 10891), (79, 11119), (82, 11137), (87, 11158), (88, 11161), (92, 11179), (101, 11203), (120, 11287), (133, 11329), (135, 11344), (137, 11353), (178, 11521), (183, 11548), (206, 11665), (249, 11836), (256, 11866), (294, 12070), (305, 12115), (345, 12289), (353, 12316), (359, 12346), (377, 12433), (387, 12475), (390, 12481), (427, 12595), (431, 12610), (439, 12637), (452, 12682), (455, 12688), (458, 12703), (471, 12757), (480, 12796), (484, 12817), (485, 12820), (490, 12838), (499, 12865), (506, 12886), (508, 12892), (512, 12913), (519, 12940), (593, 13213), (606, 13252), (616, 13267), (633, 13297), (634, 13300), (644, 13351), (663, 13432), (664, 13435), (670, 13468), (676, 13498), (697, 13588), (743, 13855), (754, 13903), (762, 13948), (763, 13951), (765, 13966), (766, 13975), (772, 14011), (774, 14020), (775, 14029), (786, 14080), (809, 14152), (816, 14170), (820, 14191), (837, 14290), (838, 14293), (844, 14326), (853, 14392), (857, 14410), (860, 14425), (867, 14458), (874, 14509), (885, 14560), (925, 14803), (926, 14806), (942, 14878), (943, 14881), (952, 14947), (953, 14950), (955, 14968), (961, 15028), (971, 15085), (974, 15103), (983, 15184), (984, 15187), (987, 15202), (1015, 15361), (1025, 15415), (1033, 15481), (1043, 15547), (1044, 15553), (1066, 15676), (1074, 15700), (1078, 15718), (1083, 15742), (1085, 15748), (1088, 15769), (1098, 15808), (1125, 15949), (1129, 15961), (1144, 16012), (1147, 16030), (1161, 16087), (1165, 16180),

Gene: Phabuloso_18 Start: 9869, Stop: 15502, Start Num: 17

Candidate Starts for Phabuloso_18:

(Start: 17 @9869 has 14 MA's), (26, 9896), (Start: 28 @9914 has 2 MA's), (32, 9935), (37, 9956), (46, 10001), (Start: 50 @10016 has 1 MA's), (60, 10100), (68, 10142), (69, 10154), (82, 10217), (85, 10232), (88, 10241), (92, 10259), (94, 10265), (110, 10313), (140, 10448), (177, 10598), (183, 10628), (229, 10847), (249, 10922), (256, 10952), (294, 11156), (304, 11198), (305, 11201), (307, 11207), (312, 11228), (326, 11309), (345, 11375), (353, 11402), (356, 11414), (359, 11432), (360, 11444), (367, 11468), (370, 11480), (377, 11519), (378, 11522), (380, 11531), (387, 11561), (404, 11606), (422, 11666), (427, 11681), (435, 11711), (439, 11723), (452, 11768), (455, 11774), (458, 11789), (465, 11819), (470, 11840), (471, 11843), (485, 11906), (493, 11933), (494, 11936), (495, 11939), (497, 11945), (505, 11969), (506, 11972), (508, 11978), (510, 11984), (512, 11999), (517, 12017), (532, 12098), (542, 12146), (543, 12152), (551, 12179), (588, 12338), (589, 12350), (599, 12386), (618, 12446), (626, 12485), (628, 12491), (629, 12494), (633, 12515), (634, 12518), (656, 12617), (665, 12656), (669, 12680), (676, 12713), (683, 12758), (692, 12812), (700, 12899), (704, 12920), (709, 12956), (715, 12986), (727, 13064), (728, 13067), (729, 13076), (734, 13100), (752, 13181), (754, 13187), (762, 13232), (763, 13235), (765, 13250), (772, 13295), (774, 13304), (775, 13313),

(776, 13316), (804, 13421), (818, 13469), (820, 13475), (837, 13574), (838, 13577), (841, 13589), (860, 13706), (867, 13739), (874, 13790), (882, 13820), (891, 13880), (905, 13961), (908, 13982), (916, 14015), (928, 14078), (933, 14096), (953, 14210), (958, 14240), (960, 14249), (962, 14288), (963, 14291), (970, 14321), (971, 14342), (989, 14495), (996, 14546), (1012, 14609), (1013, 14615), (1022, 14666), (1048, 14852), (1063, 14939), (1071, 14966), (1072, 14969), (1089, 15044), (1093, 15068), (1101, 15107), (1106, 15143), (1111, 15164), (1131, 15251), (1142, 15293), (1150, 15326), (1153, 15338), (1163, 15416), (1166, 15482),

Gene: Phistory_19 Start: 10653, Stop: 16280, Start Num: 15

Candidate Starts for Phistory_19:

(Start: 15 @10653 has 1 MA's), (20, 10659), (Start: 28 @10698 has 2 MA's), (46, 10785), (60, 10884), (68, 10926), (69, 10938), (82, 11001), (85, 11016), (88, 11025), (92, 11043), (94, 11049), (110, 11097), (126, 11172), (140, 11232), (177, 11382), (183, 11412), (249, 11706), (256, 11736), (290, 11919), (294, 11940), (304, 11982), (305, 11985), (307, 11991), (312, 12012), (314, 12024), (324, 12084), (331, 12105), (345, 12159), (353, 12186), (356, 12198), (359, 12216), (360, 12228), (367, 12252), (370, 12264), (377, 12303), (378, 12306), (380, 12315), (389, 12348), (413, 12417), (418, 12438), (427, 12465), (429, 12471), (439, 12507), (440, 12510), (452, 12552), (455, 12558), (457, 12570), (458, 12573), (470, 12624), (471, 12627), (485, 12690), (488, 12699), (493, 12717), (494, 12720), (497, 12729), (508, 12762), (512, 12783), (513, 12789), (516, 12798), (526, 12846), (533, 12888), (542, 12930), (551, 12963), (566, 13014), (567, 13017), (576, 13056), (579, 13065), (588, 13122), (589, 13134), (599, 13170), (618, 13230), (626, 13269), (628, 13275), (633, 13299), (634, 13302), (636, 13320), (656, 13401), (669, 13464), (676, 13497), (685, 13572), (692, 13596), (694, 13608), (697, 13641), (704, 13704), (709, 13740), (715, 13770), (727, 13848), (728, 13851), (729, 13860), (734, 13884), (754, 13971), (762, 14016), (763, 14019), (765, 14034), (772, 14079), (774, 14088), (775, 14097), (776, 14100), (804, 14205), (818, 14253), (820, 14259), (837, 14358), (838, 14361), (841, 14373), (860, 14490), (867, 14523), (874, 14574), (882, 14604), (891, 14664), (905, 14745), (908, 14766), (909, 14769), (928, 14862), (933, 14880), (953, 14994), (958, 15024), (960, 15033), (962, 15072), (963, 15075), (970, 15105), (971, 15126), (996, 15324), (1012, 15387), (1013, 15393), (1017, 15420), (1022, 15444), (1048, 15630), (1063, 15717), (1071, 15744), (1072, 15747), (1089, 15822), (1093, 15846), (1101, 15885), (1106, 15921), (1111, 15942), (1131, 16029), (1142, 16071), (1150, 16104), (1153, 16116), (1163, 16194), (1166, 16260),

Gene: PhrostedPhlake_18 Start: 10632, Stop: 16172, Start Num: 4

Candidate Starts for PhrostedPhlake_18:

(Start: 4 @10632 has 39 MA's), (Start: 6 @10647 has 1 MA's), (Start: 7 @10653 has 1 MA's), (Start: 9 @10683 has 1 MA's), (10, 10692), (13, 10737), (Start: 39 @10848 has 25 MA's), (42, 10869), (79, 11097), (82, 11115), (87, 11136), (88, 11139), (92, 11157), (101, 11181), (120, 11265), (122, 11271), (133, 11307), (135, 11322), (137, 11331), (150, 11391), (178, 11499), (183, 11526), (206, 11643), (218, 11697), (229, 11739), (249, 11814), (256, 11844), (294, 12048), (305, 12093), (345, 12267), (353, 12294), (359, 12324), (377, 12411), (387, 12453), (411, 12516), (427, 12573), (439, 12615), (452, 12660), (455, 12666), (458, 12681), (471, 12735), (480, 12774), (484, 12795), (485, 12798), (490, 12816), (499, 12843), (506, 12864), (508, 12870), (512, 12891), (519, 12918), (606, 13230), (616, 13245), (633, 13275), (634, 13278), (644, 13329), (663, 13410), (664, 13413), (670, 13446), (676, 13476), (697, 13566), (743, 13833), (754, 13881), (760, 13914), (762, 13926), (763, 13929), (765, 13944), (766, 13953), (772, 13989), (774, 13998), (775, 14007), (804, 14115), (818, 14163), (819, 14166), (820, 14169), (838, 14271), (839, 14274), (860, 14400), (867, 14433), (873, 14481), (874, 14484), (885, 14535), (898, 14604), (925, 14778), (926, 14781), (942, 14853), (943, 14856), (952, 14922), (953, 14925), (955, 14943), (961, 15003), (971, 15060), (974, 15078), (983, 15159), (984, 15162), (987, 15177), (1015, 15336), (1025, 15390), (1033, 15456), (1043, 15522), (1044, 15528), (1050, 15558), (1066, 15651), (1074, 15675), (1078, 15693), (1083, 15717), (1085, 15723), (1088, 15744), (1098, 15783), (1125, 15924), (1144, 15987), (1147, 16005), (1165, 16155),

Gene: Pimento_21 Start: 11708, Stop: 15985, Start Num: 40

Candidate Starts for Pimento_21:

(38, 11696), (Start: 39 @11699 has 25 MA's), (Start: 40 @11708 has 15 MA's), (46, 11741), (82, 11969), (103, 12053), (118, 12116), (150, 12242), (158, 12275), (166, 12290), (178, 12323), (209, 12413), (262, 12488), (269, 12512), (278, 12527), (308, 12611), (325, 12632), (330, 12641), (334, 12653), (339, 12665), (348, 12692), (357, 12713), (364, 12731), (374, 12743), (376, 12749), (436, 12878), (454, 12923), (509, 13073), (517, 13103), (572, 13268), (573, 13271), (574, 13274), (607, 13361), (610, 13364), (614, 13370), (641, 13481), (676, 13604), (696, 13691), (717, 13820), (727, 13889), (733, 13922), (759, 14042), (771, 14120), (773, 14129), (796, 14237), (836, 14408), (858, 14537), (884, 14675), (936, 14984), (941, 15005), (961, 15113), (1004, 15203), (1067, 15515), (1068, 15518), (1095, 15647), (1103, 15692), (1113, 15758), (1122, 15797), (1134, 15848), (1152, 15923), (1160, 15968),

Gene: Pipp_17 Start: 10133, Stop: 15790, Start Num: 2

Candidate Starts for Pipp_17:

(1, 10094), (Start: 2 @10133 has 1 MA's), (Start: 4 @10247 has 39 MA's), (Start: 6 @10262 has 1 MA's), (Start: 7 @10268 has 1 MA's), (Start: 9 @10298 has 1 MA's), (10, 10307), (11, 10310), (13, 10352), (Start: 39 @10463 has 25 MA's), (42, 10484), (82, 10730), (87, 10751), (88, 10754), (92, 10772), (101, 10796), (120, 10880), (122, 10886), (133, 10922), (135, 10937), (137, 10946), (140, 10961), (150, 11006), (178, 11114), (183, 11141), (191, 11174), (206, 11258), (256, 11459), (294, 11663), (307, 11714), (312, 11735), (314, 11747), (333, 11837), (345, 11882), (353, 11909), (359, 11939), (377, 12026), (378, 12029), (387, 12068), (413, 12140), (427, 12188), (439, 12230), (452, 12275), (455, 12281), (457, 12293), (458, 12296), (471, 12350), (480, 12389), (484, 12410), (485, 12413), (490, 12431), (499, 12458), (506, 12479), (508, 12485), (512, 12506), (567, 12740), (593, 12806), (606, 12845), (616, 12860), (633, 12890), (634, 12893), (644, 12944), (663, 13025), (664, 13028), (670, 13061), (676, 13091), (697, 13181), (729, 13382), (743, 13448), (754, 13496), (762, 13541), (763, 13544), (765, 13559), (766, 13568), (772, 13604), (774, 13613), (775, 13622), (809, 13745), (820, 13784), (837, 13883), (838, 13886), (853, 13985), (857, 14003), (860, 14018), (867, 14051), (874, 14102), (885, 14153), (898, 14222), (925, 14396), (926, 14399), (940, 14465), (942, 14471), (943, 14474), (952, 14540), (953, 14543), (955, 14561), (961, 14621), (971, 14678), (974, 14696), (983, 14777), (987, 14795), (993, 14846), (1015, 14954), (1025, 15008), (1033, 15074), (1042, 15128), (1043, 15140), (1044, 15146), (1050, 15176), (1066, 15269), (1074, 15293), (1078, 15311), (1083, 15335), (1085, 15341), (1088, 15362), (1098, 15401), (1125, 15542), (1144, 15605), (1147, 15623), (1161, 15680), (1165, 15773),

Gene: Pons_16 Start: 9384, Stop: 14465, Start Num: 25

Candidate Starts for Pons_16:

(Start: 25 @9384 has 41 MA's), (54, 9540), (72, 9669), (78, 9699), (94, 9768), (98, 9780), (102, 9795), (110, 9816), (112, 9825), (119, 9867), (122, 9876), (133, 9912), (137, 9936), (150, 9996), (163, 10050), (174, 10089), (176, 10095), (180, 10110), (183, 10131), (194, 10185), (218, 10302), (234, 10365), (247, 10410), (256, 10449), (266, 10491), (294, 10650), (301, 10683), (305, 10695), (312, 10722), (321, 10779), (329, 10809), (332, 10821), (358, 10923), (359, 10926), (377, 11013), (390, 11061), (427, 11175), (442, 11226), (455, 11268), (458, 11283), (459, 11292), (463, 11304), (471, 11337), (481, 11379), (497, 11439), (498, 11442), (499, 11445), (501, 11451), (507, 11469), (512, 11493), (533, 11598), (548, 11646), (567, 11706), (568, 11709), (576, 11745), (590, 11826), (598, 11856), (603, 11877), (604, 11880), (605, 11883), (627, 11961), (632, 11985), (634, 11991), (662, 12117), (668, 12147), (676, 12186), (688, 12234), (694, 12255), (695, 12258), (696, 12264), (705, 12330), (714, 12375), (718, 12408), (720, 12429), (730, 12483), (765, 12633), (766, 12642), (782, 12729), (855, 13047), (861, 13077), (886, 13215), (902, 13296), (931, 13446), (938, 13476), (985, 13686), (986, 13695), (988, 13701), (999, 13737), (1032, 13854), (1034, 13860), (1040, 13902), (1044, 13920), (1066, 14043), (1074, 14067), (1077, 14082), (1083, 14112), (1088, 14139), (1090, 14145), (1098, 14178), (1108, 14247), (1109, 14250), (1116, 14286), (1136, 14358), (1140, 14376),

Gene: PotPie_16 Start: 10237, Stop: 15330, Start Num: 25

Candidate Starts for PotPie_16:

(Start: 25 @10237 has 41 MA's), (54, 10393), (72, 10522), (78, 10552), (94, 10621), (98, 10633), (110, 10669), (112, 10678), (119, 10720), (122, 10729), (133, 10765), (137, 10789), (163, 10903), (174, 10942), (180, 10963), (183, 10984), (218, 11155), (234, 11218), (247, 11263), (266, 11344), (294, 11503), (301, 11536), (305, 11548), (312, 11575), (321, 11632), (329, 11662), (332, 11674), (358, 11776), (359, 11779), (377, 11866), (390, 11914), (427, 12028), (455, 12121), (458, 12136), (463, 12157), (471, 12190), (477, 12220), (481, 12232), (490, 12271), (498, 12295), (499, 12298), (507, 12322), (512, 12346), (533, 12451), (558, 12529), (567, 12559), (568, 12562), (576, 12598), (585, 12640), (588, 12664), (590, 12679), (594, 12694), (598, 12709), (604, 12733), (618, 12772), (620, 12787), (621, 12793), (632, 12838), (634, 12844), (662, 12970), (668, 13000), (677, 13051), (688, 13087), (694, 13108), (695, 13111), (705, 13183), (714, 13228), (718, 13261), (720, 13282), (730, 13336), (751, 13411), (766, 13495), (782, 13582), (855, 13900), (861, 13930), (886, 14068), (898, 14119), (902, 14149), (931, 14314), (938, 14344), (981, 14524), (988, 14575), (999, 14602), (1003, 14623), (1032, 14719), (1040, 14767), (1044, 14785), (1066, 14908), (1074, 14932), (1077, 14947), (1083, 14977), (1088, 15004), (1090, 15010), (1098, 15043), (1108, 15112), (1109, 15115), (1116, 15151), (1140, 15241),

Gene: PrincePatrick_17 Start: 10339, Stop: 15960, Start Num: 4

Candidate Starts for PrincePatrick_17:

(Start: 3 @10303 has 1 MA's), (Start: 4 @10339 has 39 MA's), (Start: 7 @10360 has 1 MA's), (10, 10399), (13, 10444), (33, 10534), (36, 10543), (Start: 39 @10555 has 25 MA's), (42, 10576), (53, 10633), (60, 10705), (63, 10726), (71, 10768), (72, 10771), (77, 10798), (81, 10819), (82, 10822), (87, 10843), (92, 10864), (109, 10915), (110, 10918), (122, 10978), (165, 11161), (183, 11233), (222, 11419), (249, 11521), (253, 11536), (256, 11551), (269, 11608), (305, 11800), (331, 11920), (353, 12001), (359, 12031), (367, 12067), (377, 12118), (387, 12160), (413, 12232), (423, 12268), (427, 12280), (442, 12331), (455, 12373), (458, 12388), (471, 12442), (480, 12481), (485, 12505), (490, 12523), (506, 12571), (508, 12577), (511, 12595), (512, 12598), (516, 12613), (519, 12625), (528, 12673), (533, 12703), (557, 12778), (585, 12892), (588, 12916), (589, 12928), (590, 12931), (599, 12964), (627, 13066), (634, 13099), (644, 13150), (648, 13162), (650, 13174), (656, 13198), (664, 13234), (668, 13258), (673, 13285), (694, 13366), (707, 13450), (723, 13555), (729, 13588), (743, 13654), (745, 13663), (754, 13702), (760, 13735), (762, 13747), (763, 13750), (765, 13765), (766, 13774), (772, 13810), (774, 13819), (775, 13828), (784, 13870), (818, 13984), (819, 13987), (820, 13990), (821, 14011), (838, 14092), (848, 14134), (860, 14221), (867, 14254), (868, 14263), (874, 14305), (898, 14419), (942, 14668), (943, 14671), (947, 14701), (948, 14704), (951, 14728), (952, 14737), (953, 14740), (961, 14818), (971, 14875), (987, 14992), (993, 15043), (1025, 15181), (1033, 15247), (1043, 15313), (1044, 15319), (1046, 15337), (1064, 15430), (1066, 15442), (1080, 15490), (1083, 15508), (1085, 15514), (1088, 15535), (1098, 15574), (1125, 15715), (1144, 15778), (1161, 15853), (1165, 15946),

Gene: PsychoKiller_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for PsychoKiller_16:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247, 10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377, 11258), (385, 11291), (418, 11393), (419, 11396), (427, 11420), (455, 11513), (458, 11528), (468, 11567), (503, 11702), (504, 11705), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (588, 12077), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1066, 14345), (1075, 14375),

(1077, 14384), (1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: Puppies_16 Start: 9686, Stop: 14305, Start Num: 39

Candidate Starts for Puppies_16:

(Start: 39 @9686 has 25 MA's), (119, 10070), (142, 10154), (153, 10196), (161, 10232), (172, 10271), (193, 10361), (194, 10373), (198, 10394), (199, 10403), (210, 10457), (224, 10514), (231, 10535), (233, 10547), (234, 10550), (241, 10580), (249, 10601), (252, 10613), (286, 10784), (297, 10838), (321, 10952), (329, 10982), (343, 11033), (360, 11063), (373, 11099), (421, 11231), (424, 11240), (428, 11252), (443, 11303), (461, 11369), (475, 11429), (478, 11441), (503, 11528), (512, 11564), (521, 11606), (523, 11612), (535, 11675), (536, 11678), (545, 11717), (554, 11741), (559, 11756), (569, 11789), (577, 11813), (594, 11840), (625, 11882), (627, 11891), (634, 11921), (638, 11945), (651, 12005), (661, 12038), (663, 12050), (667, 12074), (668, 12077), (678, 12137), (694, 12182), (698, 12206), (704, 12248), (717, 12323), (718, 12335), (720, 12356), (721, 12359), (724, 12374), (753, 12500), (754, 12503), (783, 12632), (787, 12653), (789, 12662), (800, 12716), (802, 12722), (855, 12980), (887, 13151), (890, 13169), (914, 13316), (919, 13358), (1044, 13739), (1053, 13790), (1058, 13817), (1066, 13865), (1074, 13889), (1079, 13913), (1083, 13931), (1098, 13997), (1115, 14102), (1123, 14126), (1124, 14129), (1128, 14147), (1130, 14150), (1151, 14237),

Gene: Quasar_16 Start: 10238, Stop: 15376, Start Num: 25

Candidate Starts for Quasar_16:

(Start: 18 @10214 has 2 MA's), (Start: 25 @10238 has 41 MA's), (29, 10265), (54, 10394), (62, 10469), (94, 10622), (95, 10625), (119, 10721), (122, 10730), (131, 10760), (133, 10766), (135, 10781), (136, 10784), (140, 10805), (157, 10877), (162, 10898), (180, 10964), (183, 10985), (206, 11102), (247, 11264), (256, 11303), (273, 11378), (301, 11537), (305, 11549), (312, 11576), (319, 11621), (321, 11633), (345, 11723), (350, 11741), (356, 11762), (360, 11792), (367, 11816), (370, 11828), (377, 11867), (385, 11900), (418, 12002), (419, 12005), (427, 12029), (429, 12035), (455, 12122), (458, 12137), (468, 12176), (504, 12314), (511, 12344), (512, 12347), (534, 12455), (535, 12458), (544, 12509), (568, 12584), (588, 12686), (598, 12731), (603, 12752), (604, 12755), (605, 12758), (626, 12833), (634, 12866), (637, 12887), (644, 12917), (656, 12965), (658, 12971), (664, 12998), (695, 13133), (714, 13250), (718, 13283), (720, 13304), (721, 13307), (737, 13373), (738, 13379), (741, 13394), (765, 13514), (766, 13523), (782, 13607), (855, 13928), (896, 14147), (902, 14183), (945, 14396), (986, 14588), (999, 14636), (1003, 14657), (1032, 14765), (1044, 14831), (1046, 14849), (1066, 14954), (1075, 14984), (1077, 14993), (1083, 15023), (1098, 15089), (1104, 15137), (1116, 15197), (1138, 15284), (1155, 15347),

Gene: RADical_17 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for RADical_17:

(Start: 18 @9606 has 2 MA's), (Start: 25 @9630 has 41 MA's), (29, 9657), (54, 9786), (62, 9861), (94, 10014), (95, 10017), (119, 10113), (122, 10122), (131, 10152), (133, 10158), (135, 10173), (136, 10176), (139, 10191), (140, 10197), (157, 10269), (162, 10290), (180, 10356), (183, 10377), (206, 10494), (247, 10656), (256, 10695), (273, 10770), (301, 10929), (305, 10941), (312, 10968), (319, 11013), (321, 11025), (345, 11115), (350, 11133), (356, 11154), (360, 11184), (367, 11208), (370, 11220), (377, 11259), (385, 11292), (418, 11394), (419, 11397), (427, 11421), (455, 11514), (458, 11529), (468, 11568), (490, 11664), (494, 11676), (504, 11706), (512, 11739), (534, 11847), (535, 11850), (544, 11901), (568, 11976), (588, 12078), (598, 12123), (603, 12144), (604, 12147), (605, 12150), (626, 12225), (634, 12258), (637, 12279), (656, 12357), (658, 12363), (664, 12390), (695, 12525), (714, 12642), (718, 12675), (720, 12696), (737, 12765), (738, 12771), (741, 12786), (765, 12906), (766, 12915), (782, 12999), (855, 13320), (896, 13539), (902, 13575), (945, 13788), (986, 13980), (999, 14028), (1003, 14049), (1032, 14157), (1044, 14223), (1046, 14241), (1058, 14301), (1066, 14346), (1075, 14376), (1077, 14385), (1083, 14415), (1098, 14481), (1104, 14529), (1116, 14589), (1138, 14676), (1155, 14739),

Gene: RSchmailzl_17 Start: 9773, Stop: 14911, Start Num: 25

Candidate Starts for RSchmailzl_17:

(Start: 18 @9749 has 2 MA's), (Start: 25 @9773 has 41 MA's), (29, 9800), (54, 9929), (62, 10004), (94, 10157), (95, 10160), (119, 10256), (122, 10265), (131, 10295), (133, 10301), (135, 10316), (136, 10319), (140, 10340), (157, 10412), (162, 10433), (180, 10499), (183, 10520), (206, 10637), (247, 10799), (256, 10838), (273, 10913), (301, 11072), (305, 11084), (312, 11111), (319, 11156), (321, 11168), (345, 11258), (350, 11276), (356, 11297), (360, 11327), (367, 11351), (370, 11363), (377, 11402), (385, 11435), (389, 11447), (418, 11537), (419, 11540), (427, 11564), (429, 11570), (455, 11657), (458, 11672), (468, 11711), (480, 11765), (490, 11807), (494, 11819), (501, 11840), (512, 11882), (534, 11990), (546, 12050), (568, 12119), (586, 12209), (588, 12221), (598, 12266), (603, 12287), (604, 12290), (605, 12293), (626, 12368), (631, 12386), (634, 12401), (644, 12452), (656, 12500), (658, 12506), (664, 12533), (695, 12668), (714, 12785), (718, 12818), (720, 12839), (721, 12842), (737, 12908), (738, 12914), (741, 12929), (765, 13049), (766, 13058), (782, 13142), (855, 13463), (896, 13682), (902, 13718), (945, 13931), (986, 14123), (999, 14171), (1003, 14192), (1032, 14300), (1044, 14366), (1046, 14384), (1066, 14489), (1075, 14519), (1077, 14528), (1083, 14558), (1098, 14624), (1104, 14672), (1116, 14732), (1138, 14819), (1155, 14882),

Gene: RanchParmCat_19 Start: 10311, Stop: 14516, Start Num: 39

Candidate Starts for RanchParmCat_19:

(Start: 39 @10311 has 25 MA's), (Start: 43 @10338 has 1 MA's), (97, 10626), (104, 10647), (108, 10653), (116, 10686), (120, 10704), (127, 10728), (144, 10818), (148, 10827), (151, 10836), (159, 10869), (165, 10896), (168, 10905), (175, 10929), (206, 11082), (220, 11145), (225, 11160), (235, 11196), (242, 11226), (249, 11247), (260, 11289), (280, 11370), (290, 11445), (291, 11454), (296, 11475), (327, 11622), (379, 11763), (384, 11784), (394, 11814), (396, 11817), (402, 11835), (410, 11856), (427, 11877), (432, 11898), (447, 11949), (448, 11952), (449, 11955), (460, 11973), (482, 12054), (496, 12084), (522, 12135), (549, 12189), (559, 12216), (569, 12249), (596, 12309), (648, 12378), (653, 12381), (685, 12483), (687, 12489), (698, 12537), (699, 12540), (714, 12633), (718, 12666), (720, 12687), (722, 12696), (724, 12705), (725, 12711), (763, 12864), (781, 12933), (782, 12939), (789, 12975), (825, 13104), (855, 13245), (860, 13269), (868, 13314), (895, 13467), (896, 13470), (931, 13659), (938, 13689), (1020, 13866), (1036, 13938), (1040, 13962), (1043, 13974), (1046, 13998), (1050, 14010), (1065, 14094), (1066, 14100), (1078, 14142), (1083, 14163), (1090, 14196), (1098, 14229), (1100, 14250), (1104, 14277), (1109, 14301), (1116, 14337), (1130, 14385), (1158, 14487),

Gene: RedBaron_18 Start: 9673, Stop: 14811, Start Num: 25

Candidate Starts for RedBaron_18:

(Start: 18 @9649 has 2 MA's), (Start: 25 @9673 has 41 MA's), (29, 9700), (54, 9829), (62, 9904), (94, 10057), (95, 10060), (119, 10156), (122, 10165), (131, 10195), (133, 10201), (135, 10216), (136, 10219), (140, 10240), (157, 10312), (162, 10333), (180, 10399), (183, 10420), (206, 10537), (247, 10699), (256, 10738), (273, 10813), (312, 11011), (335, 11119), (356, 11197), (359, 11215), (362, 11233), (377, 11302), (378, 11305), (380, 11314), (389, 11347), (426, 11458), (427, 11464), (455, 11557), (458, 11572), (490, 11707), (501, 11740), (512, 11782), (534, 11890), (544, 11944), (567, 12016), (568, 12019), (588, 12121), (598, 12166), (600, 12175), (603, 12187), (604, 12190), (605, 12193), (626, 12268), (627, 12271), (628, 12274), (631, 12286), (632, 12295), (634, 12301), (642, 12343), (644, 12352), (656, 12400), (664, 12433), (695, 12568), (714, 12685), (718, 12718), (720, 12739), (737, 12808), (738, 12814), (765, 12949), (766, 12958), (782, 13042), (855, 13363), (896, 13582), (902, 13618), (986, 14023), (999, 14071), (1003, 14092), (1032, 14200), (1044, 14266), (1046, 14284), (1066, 14389), (1075, 14419), (1077, 14428), (1083, 14458), (1098, 14524), (1104, 14572), (1116, 14632), (1138, 14719), (1155, 14782),

Gene: Reyja_17 Start: 10078, Stop: 14313, Start Num: 39

Candidate Starts for Reyja_17:

(Start: 25 @10009 has 41 MA's), (30, 10039), (Start: 39 @10078 has 25 MA's), (44, 10105), (49, 10123), (55, 10156), (57, 10168), (93, 10375), (123, 10468), (145, 10567), (164, 10630), (167, 10639), (207, 10825), (221, 10885), (224, 10897), (227, 10906), (241, 10963), (249, 10984), (252, 10996), (286, 11167), (297, 11221), (343, 11416), (360, 11446), (379, 11506), (388, 11542), (435, 11644), (466, 11740), (482, 11800), (486, 11821), (492, 11827), (544, 11908), (547, 11917), (575, 12007), (576, 12010), (595, 12043), (644, 12103), (646, 12106), (677, 12196), (684, 12220), (695, 12256), (696, 12262), (698, 12277), (704, 12319), (713, 12370), (718, 12406), (727, 12457), (751, 12556), (777, 12658), (779, 12667), (789, 12718), (792, 12742), (798, 12769), (803, 12787), (805, 12796), (815, 12835), (825, 12904), (855, 13045), (886, 13213), (890, 13237), (894, 13261), (899, 13279), (935, 13468), (936, 13471), (940, 13489), (1044, 13759), (1066, 13879), (1083, 13945), (1098, 14011), (1123, 14140),

Gene: Ruthy_17 Start: 10300, Stop: 15261, Start Num: 39

Candidate Starts for Ruthy_17:

(Start: 39 @10300 has 25 MA's), (46, 10339), (48, 10348), (82, 10567), (162, 10903), (171, 10939), (196, 11059), (213, 11143), (214, 11146), (230, 11200), (236, 11230), (245, 11260), (250, 11278), (256, 11302), (263, 11335), (265, 11341), (271, 11365), (277, 11392), (285, 11431), (317, 11605), (327, 11656), (336, 11683), (340, 11701), (341, 11704), (351, 11740), (354, 11761), (383, 11896), (399, 11941), (426, 12028), (428, 12037), (429, 12040), (442, 12085), (461, 12157), (466, 12175), (469, 12184), (492, 12274), (506, 12316), (514, 12352), (515, 12355), (522, 12388), (525, 12397), (531, 12439), (540, 12472), (592, 12634), (600, 12667), (628, 12766), (632, 12787), (639, 12823), (651, 12877), (659, 12901), (669, 12931), (674, 12955), (678, 12991), (696, 13051), (701, 13087), (712, 13153), (726, 13246), (727, 13249), (732, 13279), (737, 13294), (748, 13348), (753, 13372), (755, 13378), (758, 13399), (768, 13456), (771, 13480), (778, 13516), (796, 13597), (817, 13657), (823, 13702), (836, 13768), (850, 13837), (858, 13903), (877, 13993), (889, 14050), (917, 14188), (1010, 14482), (1030, 14590), (1076, 14827), (1094, 14920), (1095, 14926), (1103, 14971), (1110, 15016), (1113, 15037), (1122, 15076), (1154, 15211), (1160, 15244), (1162, 15250),

Gene: Samba_17 Start: 10382, Stop: 15874, Start Num: 4

Candidate Starts for Samba_17:

(Start: 4 @10382 has 39 MA's), (Start: 6 @10397 has 1 MA's), (Start: 7 @10403 has 1 MA's), (Start: 9 @10433 has 1 MA's), (10, 10442), (11, 10445), (13, 10487), (Start: 39 @10598 has 25 MA's), (42, 10619), (Start: 59 @10739 has 7 MA's), (66, 10781), (79, 10847), (82, 10865), (85, 10880), (87, 10886), (88, 10889), (92, 10907), (101, 10931), (120, 11015), (133, 11057), (135, 11072), (137, 11081), (178, 11249), (183, 11276), (206, 11393), (249, 11564), (256, 11594), (294, 11798), (305, 11843), (312, 11870), (314, 11882), (333, 11972), (345, 12017), (353, 12044), (359, 12074), (377, 12161), (387, 12203), (411, 12266), (413, 12275), (427, 12323), (439, 12365), (452, 12410), (455, 12416), (457, 12428), (458, 12431), (471, 12485), (480, 12524), (484, 12545), (485, 12548), (490, 12566), (493, 12575), (506, 12614), (508, 12620), (511, 12638), (512, 12641), (519, 12668), (593, 12941), (601, 12968), (606, 12980), (615, 12992), (616, 12995), (633, 13025), (634, 13028), (644, 13079), (663, 13160), (664, 13163), (670, 13196), (676, 13226), (678, 13250), (697, 13316), (743, 13583), (754, 13631), (762, 13676), (763, 13679), (765, 13694), (772, 13739), (774, 13748), (775, 13757), (786, 13808), (809, 13880), (816, 13898), (820, 13919), (837, 14018), (838, 14021), (844, 14054), (853, 14120), (857, 14138), (860, 14153), (867, 14186), (874, 14237), (885, 14288), (925, 14531), (926, 14534), (942, 14606), (943, 14609), (952, 14675), (953, 14678), (955, 14696), (961, 14756), (983, 14912), (984, 14915), (987, 14930), (1015, 15101), (1025, 15155), (1036, 15212), (1038, 15227), (1045, 15275), (1056, 15320), (1086, 15440), (1087, 15449), (1096, 15488), (1110, 15560), (1125, 15629), (1144, 15692), (1147, 15710), (1165, 15860),

Gene: Santhid_16 Start: 9908, Stop: 14146, Start Num: 39

Candidate Starts for Santhid_16:

(Start: 25 @9839 has 41 MA's), (Start: 39 @9908 has 25 MA's), (44, 9935), (45, 9941), (51, 9962), (57, 9998), (93, 10205), (123, 10298), (164, 10460), (167, 10469), (224, 10727), (241, 10793), (249,

10814), (252, 10826), (259, 10850), (286, 10997), (297, 11051), (310, 11096), (343, 11246), (360, 11276), (378, 11333), (386, 11366), (435, 11474), (466, 11570), (482, 11630), (486, 11651), (492, 11657), (544, 11738), (547, 11747), (576, 11840), (595, 11873), (644, 11933), (646, 11936), (667, 11972), (695, 12086), (696, 12092), (698, 12107), (704, 12149), (713, 12200), (718, 12236), (727, 12287), (751, 12386), (753, 12401), (779, 12497), (789, 12548), (792, 12572), (798, 12599), (803, 12617), (805, 12626), (815, 12665), (825, 12734), (855, 12875), (860, 12899), (861, 12905), (886, 13040), (903, 13148), (935, 13292), (936, 13295), (1044, 13586), (1050, 13616), (1066, 13712), (1074, 13736), (1083, 13778), (1088, 13805), (1098, 13844), (1112, 13931), (1123, 13973), (1124, 13976),

Gene: Schnabeltier_17 Start: 10933, Stop: 16047, Start Num: 21

Candidate Starts for Schnabeltier_17:

(Start: 21 @10933 has 14 MA's), (Start: 25 @10942 has 41 MA's), (69, 11215), (71, 11224), (77, 11254), (80, 11263), (92, 11320), (112, 11383), (128, 11455), (134, 11476), (137, 11494), (174, 11647), (183, 11689), (194, 11743), (201, 11776), (247, 11968), (248, 11971), (256, 12007), (274, 12085), (282, 12124), (294, 12208), (301, 12241), (304, 12250), (307, 12259), (314, 12292), (316, 12304), (320, 12328), (331, 12373), (333, 12382), (343, 12418), (345, 12427), (353, 12454), (356, 12466), (359, 12484), (367, 12520), (400, 12643), (413, 12685), (452, 12820), (453, 12823), (455, 12826), (458, 12841), (471, 12895), (480, 12934), (499, 13003), (503, 13015), (508, 13030), (512, 13051), (516, 13066), (519, 13078), (526, 13114), (532, 13150), (579, 13312), (611, 13369), (622, 13381), (624, 13384), (634, 13417), (654, 13510), (656, 13516), (658, 13522), (662, 13543), (663, 13546), (664, 13549), (676, 13612), (679, 13648), (684, 13663), (691, 13687), (694, 13702), (695, 13705), (696, 13711), (702, 13765), (718, 13864), (725, 13906), (743, 13984), (749, 14008), (758, 14053), (780, 14179), (782, 14188), (785, 14206), (786, 14209), (797, 14248), (799, 14251), (801, 14260), (832, 14419), (855, 14539), (871, 14617), (886, 14665), (888, 14677), (901, 14737), (922, 14854), (927, 14881), (932, 14899), (948, 14977), (949, 14983), (950, 14992), (954, 15019), (967, 15112), (973, 15151), (979, 15193), (998, 15346), (1006, 15379), (1008, 15382), (1023, 15439), (1024, 15448), (1026, 15460), (1028, 15481), (1035, 15502), (1074, 15694), (1082, 15733), (1098, 15802), (1105, 15856), (1142, 16009),

Gene: ShawBrad_18 Start: 9931, Stop: 15516, Start Num: 28

Candidate Starts for ShawBrad_18:

(Start: 17 @9886 has 14 MA's), (Start: 28 @9931 has 2 MA's), (32, 9952), (37, 9973), (46, 10018), (Start: 50 @10033 has 1 MA's), (60, 10117), (68, 10159), (69, 10171), (82, 10234), (85, 10249), (88, 10258), (92, 10276), (94, 10282), (110, 10330), (140, 10465), (177, 10615), (183, 10645), (249, 10939), (256, 10969), (294, 11173), (304, 11215), (305, 11218), (307, 11224), (312, 11245), (326, 11326), (345, 11392), (353, 11419), (356, 11431), (359, 11449), (360, 11461), (367, 11485), (370, 11497), (377, 11536), (378, 11539), (380, 11548), (387, 11578), (404, 11623), (422, 11683), (427, 11698), (435, 11728), (439, 11740), (452, 11785), (455, 11791), (457, 11803), (458, 11806), (463, 11827), (470, 11857), (471, 11860), (485, 11923), (493, 11950), (494, 11953), (495, 11956), (497, 11962), (505, 11986), (506, 11989), (508, 11995), (510, 12001), (512, 12016), (517, 12034), (532, 12115), (542, 12163), (543, 12169), (551, 12196), (576, 12289), (583, 12322), (588, 12352), (602, 12415), (609, 12433), (618, 12460), (656, 12631), (669, 12694), (676, 12727), (685, 12802), (692, 12826), (694, 12838), (697, 12871), (704, 12934), (709, 12970), (715, 13000), (727, 13078), (728, 13081), (729, 13090), (754, 13201), (762, 13246), (763, 13249), (765, 13264), (772, 13309), (774, 13318), (775, 13327), (776, 13330), (804, 13435), (818, 13483), (820, 13489), (837, 13588), (838, 13591), (841, 13603), (860, 13720), (867, 13753), (874, 13804), (882, 13834), (891, 13894), (905, 13975), (908, 13996), (916, 14029), (928, 14092), (933, 14110), (953, 14224), (958, 14254), (960, 14263), (962, 14302), (963, 14305), (970, 14335), (971, 14356), (996, 14554), (1012, 14617), (1013, 14623), (1022, 14674), (1048, 14866), (1063, 14953), (1071, 14980), (1072, 14983), (1089, 15058), (1093, 15082), (1101, 15121), (1106, 15157), (1111, 15178), (1131, 15265), (1142, 15307), (1150, 15340), (1153, 15352), (1166, 15496),

Gene: SheckWes_15 Start: 9372, Stop: 14465, Start Num: 25

Candidate Starts for SheckWes_15:

(Start: 25 @9372 has 41 MA's), (54, 9528), (68, 9633), (72, 9657), (82, 9708), (85, 9723), (94, 9756), (110, 9804), (112, 9813), (119, 9855), (121, 9861), (122, 9864), (133, 9900), (137, 9924), (143, 9951), (163, 10038), (174, 10077), (176, 10083), (180, 10098), (183, 10119), (194, 10173), (218, 10290), (234, 10353), (247, 10398), (256, 10437), (266, 10479), (294, 10641), (296, 10650), (301, 10674), (305, 10686), (312, 10713), (314, 10725), (321, 10770), (329, 10800), (332, 10812), (358, 10914), (359, 10917), (377, 11004), (384, 11031), (404, 11091), (414, 11121), (419, 11142), (427, 11166), (442, 11217), (455, 11259), (458, 11274), (459, 11283), (463, 11295), (471, 11328), (481, 11370), (497, 11430), (498, 11433), (499, 11436), (501, 11442), (507, 11460), (512, 11484), (529, 11568), (533, 11589), (548, 11637), (567, 11697), (568, 11700), (576, 11736), (588, 11802), (590, 11817), (598, 11847), (603, 11868), (604, 11871), (605, 11874), (627, 11952), (632, 11976), (634, 11982), (662, 12108), (668, 12138), (676, 12177), (688, 12225), (694, 12246), (695, 12249), (696, 12255), (705, 12321), (714, 12366), (718, 12399), (720, 12420), (730, 12474), (765, 12624), (766, 12633), (782, 12720), (825, 12897), (855, 13038), (861, 13068), (886, 13206), (902, 13287), (931, 13440), (938, 13470), (985, 13686), (986, 13695), (988, 13701), (999, 13737), (1032, 13854), (1034, 13860), (1040, 13902), (1044, 13920), (1066, 14043), (1074, 14067), (1077, 14082), (1083, 14112), (1088, 14139), (1090, 14145), (1098, 14178), (1108, 14247), (1109, 14250), (1116, 14286), (1136, 14358), (1137, 14361), (1140, 14376),

Gene: SketchMex_15 Start: 9616, Stop: 14415, Start Num: 100

Candidate Starts for SketchMex_15:

(Start: 100 @9616 has 16 MA's), (Start: 107 @9643 has 1 MA's), (136, 9772), (160, 9874), (171, 9919), (175, 9931), (180, 9949), (185, 9976), (187, 9979), (190, 9994), (200, 10045), (201, 10048), (212, 10105), (213, 10108), (223, 10150), (229, 10168), (240, 10213), (254, 10249), (261, 10282), (270, 10315), (272, 10327), (285, 10381), (290, 10420), (293, 10435), (295, 10444), (303, 10471), (315, 10522), (323, 10564), (329, 10582), (332, 10591), (346, 10645), (363, 10708), (367, 10723), (380, 10786), (416, 10876), (426, 10903), (452, 10996), (455, 11002), (458, 11017), (468, 11056), (485, 11134), (495, 11167), (508, 11206), (511, 11224), (512, 11227), (519, 11254), (529, 11311), (533, 11332), (546, 11395), (558, 11431), (562, 11443), (568, 11464), (576, 11500), (585, 11542), (586, 11554), (588, 11566), (598, 11611), (599, 11614), (603, 11632), (604, 11635), (605, 11638), (626, 11713), (628, 11719), (634, 11746), (647, 11806), (650, 11821), (662, 11872), (663, 11875), (664, 11878), (666, 11896), (690, 11995), (694, 12010), (695, 12013), (718, 12163), (720, 12184), (729, 12226), (737, 12253), (738, 12259), (764, 12391), (766, 12403), (782, 12490), (791, 12532), (804, 12568), (821, 12643), (830, 12694), (842, 12733), (852, 12811), (862, 12862), (872, 12919), (899, 13057), (908, 13132), (938, 13276), (945, 13297), (972, 13474), (973, 13480), (1032, 13804), (1034, 13810), (1044, 13870), (1046, 13888), (1053, 13921), (1066, 13993), (1077, 14032), (1083, 14062), (1098, 14128), (1104, 14176), (1116, 14236), (1140, 14326), (1155, 14386),

Gene: Socotra_17 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Socotra_17:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247, 10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377, 11258), (385, 11291), (418, 11393), (419, 11396), (427, 11420), (455, 11513), (458, 11528), (468, 11567), (480, 11621), (490, 11663), (494, 11675), (504, 11705), (511, 11735), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (586, 12065), (588, 12077), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (721, 12698), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1058, 14300), (1066, 14345), (1075, 14375), (1077, 14384),

(1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: Soilmate_17 Start: 10172, Stop: 15763, Start Num: 4

Candidate Starts for Soilmate_17:

(Start: 4 @10172 has 39 MA's), (Start: 6 @10187 has 1 MA's), (Start: 9 @10223 has 1 MA's), (10, 10232), (11, 10235), (13, 10277), (Start: 39 @10388 has 25 MA's), (42, 10409), (Start: 59 @10529 has 7 MA's), (79, 10637), (82, 10655), (87, 10676), (88, 10679), (92, 10697), (122, 10811), (133, 10847), (135, 10862), (137, 10871), (178, 11039), (183, 11066), (206, 11183), (249, 11354), (256, 11384), (294, 11588), (305, 11633), (345, 11807), (353, 11834), (359, 11864), (363, 11885), (377, 11951), (378, 11954), (387, 11993), (411, 12056), (427, 12113), (439, 12155), (452, 12200), (455, 12206), (457, 12218), (458, 12221), (471, 12275), (480, 12314), (484, 12335), (485, 12338), (490, 12356), (499, 12383), (506, 12404), (508, 12410), (512, 12431), (519, 12458), (528, 12506), (533, 12536), (579, 12692), (583, 12716), (585, 12725), (587, 12746), (608, 12827), (633, 12923), (634, 12926), (635, 12932), (643, 12974), (644, 12977), (649, 12998), (663, 13058), (664, 13061), (670, 13094), (676, 13124), (697, 13214), (743, 13481), (754, 13529), (762, 13574), (763, 13577), (765, 13592), (772, 13637), (774, 13646), (775, 13655), (786, 13706), (809, 13778), (816, 13796), (820, 13817), (837, 13916), (838, 13919), (844, 13952), (853, 14018), (857, 14036), (860, 14051), (867, 14084), (874, 14135), (885, 14186), (892, 14234), (925, 14429), (926, 14432), (942, 14504), (943, 14507), (952, 14573), (953, 14576), (955, 14594), (961, 14654), (974, 14729), (984, 14813), (987, 14828), (1025, 15041), (1036, 15098), (1038, 15113), (1045, 15161), (1056, 15206), (1086, 15326), (1087, 15335), (1096, 15374), (1110, 15446), (1125, 15515), (1144, 15578), (1147, 15596), (1161, 15653), (1165, 15746),

Gene: Sopespian_16 Start: 9630, Stop: 14768, Start Num: 25

Candidate Starts for Sopespian_16:

(Start: 18 @9606 has 2 MA's), (Start: 25 @9630 has 41 MA's), (29, 9657), (54, 9786), (62, 9861), (94, 10014), (95, 10017), (119, 10113), (122, 10122), (131, 10152), (133, 10158), (135, 10173), (136, 10176), (140, 10197), (157, 10269), (162, 10290), (180, 10356), (183, 10377), (206, 10494), (247, 10656), (256, 10695), (273, 10770), (301, 10929), (305, 10941), (312, 10968), (319, 11013), (321, 11025), (345, 11115), (350, 11133), (356, 11154), (360, 11184), (367, 11208), (370, 11220), (377, 11259), (385, 11292), (418, 11394), (419, 11397), (427, 11421), (455, 11514), (458, 11529), (468, 11568), (503, 11703), (504, 11706), (512, 11739), (534, 11847), (535, 11850), (544, 11901), (568, 11976), (586, 12066), (588, 12078), (598, 12123), (603, 12144), (604, 12147), (605, 12150), (626, 12225), (634, 12258), (637, 12279), (644, 12309), (656, 12357), (658, 12363), (664, 12390), (695, 12525), (714, 12642), (718, 12675), (720, 12696), (737, 12765), (738, 12771), (741, 12786), (765, 12906), (766, 12915), (782, 12999), (855, 13320), (896, 13539), (902, 13575), (945, 13788), (986, 13980), (999, 14028), (1003, 14049), (1032, 14157), (1044, 14223), (1046, 14241), (1066, 14346), (1075, 14376), (1077, 14385), (1083, 14415), (1098, 14481), (1104, 14529), (1116, 14589), (1138, 14676), (1155, 14739),

Gene: Spooky_18 Start: 9874, Stop: 15489, Start Num: 17

Candidate Starts for Spooky_18:

(Start: 17 @9874 has 14 MA's), (Start: 28 @9919 has 2 MA's), (32, 9940), (37, 9961), (46, 10006), (88, 10246), (115, 10339), (117, 10351), (121, 10375), (122, 10378), (137, 10438), (139, 10447), (140, 10453), (157, 10525), (177, 10603), (180, 10612), (183, 10633), (279, 11053), (294, 11161), (301, 11194), (305, 11206), (312, 11233), (345, 11380), (353, 11407), (359, 11437), (367, 11473), (377, 11524), (378, 11527), (380, 11536), (390, 11572), (413, 11638), (427, 11686), (451, 11770), (452, 11773), (455, 11779), (457, 11791), (458, 11794), (470, 11845), (471, 11848), (480, 11887), (508, 11983), (512, 12004), (558, 12208), (567, 12238), (585, 12319), (588, 12343), (589, 12355), (599, 12391), (618, 12451), (626, 12490), (628, 12496), (629, 12499), (633, 12520), (634, 12523), (656, 12622), (665, 12661), (669, 12685), (676, 12718), (683, 12763), (692, 12817), (694, 12829), (700, 12904), (704, 12925), (709, 12961), (715, 12991), (728, 13072), (729, 13081), (734, 13105), (752, 13186), (754, 13192), (762, 13237), (763, 13240), (765, 13255), (772, 13300), (774, 13309), (775,

13318), (804, 13426), (816, 13459), (818, 13474), (820, 13480), (837, 13579), (838, 13582), (839, 13585), (841, 13594), (860, 13711), (867, 13744), (873, 13792), (874, 13795), (882, 13825), (891, 13885), (905, 13966), (908, 13987), (909, 13990), (928, 14083), (929, 14092), (950, 14194), (953, 14215), (958, 14245), (960, 14254), (962, 14293), (963, 14296), (964, 14299), (970, 14326), (976, 14380), (989, 14497), (1004, 14581), (1009, 14593), (1012, 14605), (1013, 14611), (1017, 14638), (1022, 14662), (1048, 14839), (1063, 14926), (1069, 14944), (1071, 14953), (1089, 15031), (1092, 15049), (1108, 15139), (1111, 15151), (1131, 15238), (1142, 15280), (1150, 15313), (1153, 15325), (1166, 15469),

Gene: Sprinklemunch_16 Start: 9983, Stop: 15025, Start Num: 39

Candidate Starts for Sprinklemunch_16:

(Start: 39 @9983 has 25 MA's), (46, 10019), (48, 10028), (56, 10079), (62, 10142), (84, 10256), (144, 10520), (162, 10583), (169, 10613), (171, 10619), (191, 10706), (196, 10739), (205, 10787), (213, 10823), (214, 10826), (230, 10880), (236, 10910), (250, 10958), (263, 11015), (265, 11021), (271, 11045), (277, 11072), (280, 11087), (285, 11111), (292, 11174), (317, 11285), (336, 11363), (340, 11381), (341, 11384), (351, 11420), (354, 11441), (369, 11507), (383, 11576), (395, 11612), (397, 11618), (399, 11621), (409, 11651), (418, 11687), (428, 11717), (429, 11720), (439, 11756), (446, 11780), (461, 11837), (479, 11912), (487, 11936), (505, 11993), (525, 12077), (531, 12119), (558, 12200), (592, 12314), (600, 12347), (603, 12359), (605, 12365), (607, 12371), (651, 12557), (674, 12635), (696, 12731), (712, 12833), (716, 12854), (726, 12926), (727, 12929), (732, 12959), (733, 12962), (748, 13028), (753, 13052), (756, 13070), (770, 13154), (771, 13160), (773, 13169), (817, 13337), (858, 13571), (860, 13577), (869, 13631), (875, 13658), (1076, 14591), (1094, 14684), (1095, 14690), (1103, 14735), (1110, 14780), (1113, 14801), (1122, 14840), (1148, 14954), (1154, 14975), (1162, 15014),

Gene: Squiddly_20 Start: 11289, Stop: 16901, Start Num: 17

Candidate Starts for Squiddly_20:

(Start: 17 @11289 has 14 MA's), (23, 11307), (26, 11316), (Start: 28 @11334 has 2 MA's), (32, 11355), (34, 11367), (46, 11421), (Start: 50 @11436 has 1 MA's), (75, 11604), (77, 11613), (82, 11637), (88, 11661), (92, 11679), (106, 11724), (121, 11790), (122, 11793), (137, 11853), (177, 12018), (183, 12048), (213, 12204), (249, 12342), (253, 12357), (279, 12468), (294, 12576), (304, 12618), (305, 12621), (307, 12627), (312, 12648), (314, 12660), (345, 12795), (353, 12822), (359, 12852), (362, 12870), (377, 12939), (380, 12951), (413, 13053), (427, 13101), (439, 13143), (452, 13188), (455, 13194), (457, 13206), (458, 13209), (463, 13230), (470, 13260), (471, 13263), (479, 13299), (480, 13302), (501, 13377), (508, 13398), (512, 13419), (529, 13503), (548, 13593), (585, 13734), (589, 13770), (598, 13803), (599, 13806), (603, 13824), (618, 13866), (626, 13905), (628, 13911), (629, 13914), (633, 13935), (634, 13938), (656, 14037), (665, 14076), (676, 14133), (685, 14208), (694, 14244), (704, 14340), (709, 14376), (715, 14406), (727, 14484), (728, 14487), (729, 14496), (734, 14520), (739, 14544), (746, 14577), (752, 14601), (754, 14607), (760, 14640), (762, 14652), (763, 14655), (765, 14670), (768, 14688), (772, 14715), (774, 14724), (775, 14733), (776, 14736), (804, 14841), (818, 14889), (820, 14895), (838, 14997), (841, 15009), (860, 15126), (867, 15159), (874, 15210), (878, 15222), (882, 15240), (891, 15300), (905, 15381), (908, 15402), (928, 15498), (933, 15516), (937, 15540), (950, 15609), (953, 15630), (958, 15660), (960, 15669), (962, 15708), (963, 15711), (964, 15714), (970, 15741), (976, 15795), (989, 15912), (1004, 15996), (1009, 16008), (1012, 16020), (1013, 16026), (1017, 16053), (1022, 16077), (1048, 16254), (1063, 16341), (1069, 16359), (1071, 16368), (1089, 16446), (1091, 16461), (1093, 16470), (1106, 16545), (1108, 16554), (1111, 16566), (1131, 16653), (1142, 16695), (1150, 16728), (1153, 16740), (1163, 16815), (1166, 16881),

Gene: Starburst_17 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Starburst_17:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247,

10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377, 11258), (385, 11291), (418, 11393), (419, 11396), (427, 11420), (429, 11426), (455, 11513), (458, 11528), (468, 11567), (504, 11705), (511, 11735), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (588, 12077), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1058, 14300), (1066, 14345), (1075, 14375), (1077, 14384), (1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: SteamedHams_18 Start: 9646, Stop: 14433, Start Num: 100

Candidate Starts for SteamedHams_18:

(Start: 100 @9646 has 16 MA's), (Start: 107 @9673 has 1 MA's), (124, 9751), (136, 9802), (156, 9889), (160, 9904), (175, 9961), (180, 9979), (185, 10006), (187, 10009), (201, 10078), (212, 10135), (223, 10180), (229, 10198), (240, 10243), (254, 10279), (261, 10312), (274, 10360), (275, 10363), (285, 10411), (290, 10450), (293, 10465), (326, 10606), (342, 10657), (346, 10675), (360, 10729), (416, 10906), (426, 10933), (452, 11026), (455, 11032), (458, 11047), (468, 11086), (470, 11098), (485, 11164), (508, 11236), (511, 11254), (512, 11257), (519, 11284), (576, 11530), (588, 11596), (598, 11641), (603, 11662), (604, 11665), (605, 11668), (618, 11704), (626, 11743), (628, 11749), (634, 11776), (663, 11905), (664, 11908), (666, 11926), (696, 12049), (698, 12064), (718, 12193), (720, 12214), (729, 12256), (737, 12283), (738, 12289), (764, 12421), (766, 12433), (782, 12520), (791, 12562), (804, 12598), (830, 12724), (842, 12763), (862, 12892), (872, 12949), (881, 12991), (899, 13084), (908, 13159), (920, 13222), (938, 13303), (945, 13324), (972, 13501), (973, 13507), (1014, 13726), (1027, 13804), (1032, 13822), (1034, 13828), (1044, 13888), (1046, 13906), (1053, 13939), (1066, 14011), (1077, 14050), (1083, 14080), (1098, 14146), (1104, 14194), (1116, 14254), (1140, 14344), (1155, 14404),

Gene: SummitAcademy_15 Start: 9452, Stop: 14545, Start Num: 25

Candidate Starts for SummitAcademy_15:

(Start: 25 @9452 has 41 MA's), (54, 9608), (72, 9737), (78, 9767), (94, 9836), (98, 9848), (110, 9884), (119, 9935), (122, 9944), (133, 9980), (137, 10004), (150, 10064), (163, 10118), (174, 10157), (176, 10163), (180, 10178), (183, 10199), (218, 10370), (234, 10433), (247, 10478), (266, 10559), (294, 10718), (301, 10751), (305, 10763), (312, 10790), (321, 10847), (329, 10877), (332, 10889), (358, 10991), (359, 10994), (377, 11081), (390, 11129), (427, 11243), (455, 11336), (458, 11351), (463, 11372), (471, 11405), (477, 11435), (481, 11447), (490, 11486), (498, 11510), (499, 11513), (507, 11537), (512, 11561), (533, 11666), (558, 11744), (567, 11774), (568, 11777), (576, 11813), (585, 11855), (588, 11879), (590, 11894), (594, 11909), (598, 11924), (604, 11948), (618, 11987), (620, 12002), (621, 12008), (627, 12029), (632, 12053), (634, 12059), (662, 12185), (668, 12215), (677, 12266), (688, 12302), (694, 12323), (695, 12326), (705, 12398), (714, 12443), (718, 12476), (720, 12497), (730, 12551), (751, 12626), (766, 12710), (782, 12797), (855, 13115), (861, 13145), (886, 13283), (898, 13334), (902, 13364), (931, 13529), (938, 13559), (981, 13739), (988, 13790), (999, 13817), (1003, 13838), (1032, 13934), (1040, 13982), (1044, 14000), (1066, 14123), (1074, 14147), (1077, 14162), (1083, 14192), (1088, 14219), (1090, 14225), (1098, 14258), (1108, 14327), (1109, 14330), (1116, 14366), (1140, 14456),

Gene: Survivors_18 Start: 10474, Stop: 15597, Start Num: 25

Candidate Starts for Survivors_18:

(19, 10453), (Start: 25 @10474 has 41 MA's), (29, 10501), (54, 10630), (66, 10726), (75, 10777), (89, 10834), (96, 10867), (98, 10870), (119, 10957), (123, 10969), (135, 11017), (136, 11020), (137, 11026), (148, 11080), (150, 11086), (162, 11134), (180, 11200), (183, 11221), (273, 11614), (274, 11617), (290, 11719), (305, 11785), (307, 11791), (312, 11812), (359, 12016), (362, 12034), (364,

12040), (367, 12052), (370, 12064), (377, 12103), (380, 12115), (390, 12151), (411, 12208), (416, 12232), (418, 12238), (455, 12358), (458, 12373), (468, 12412), (484, 12487), (494, 12520), (499, 12535), (501, 12541), (503, 12547), (512, 12583), (534, 12691), (551, 12763), (567, 12817), (598, 12967), (604, 12991), (621, 13051), (625, 13063), (626, 13069), (632, 13096), (633, 13099), (634, 13102), (654, 13195), (656, 13201), (666, 13252), (678, 13321), (691, 13354), (695, 13369), (696, 13375), (704, 13432), (706, 13444), (713, 13483), (714, 13486), (717, 13507), (718, 13519), (720, 13540), (721, 13543), (729, 13582), (730, 13594), (737, 13609), (765, 13750), (782, 13846), (801, 13912), (806, 13933), (808, 13939), (855, 14176), (861, 14206), (868, 14245), (892, 14380), (899, 14410), (902, 14431), (927, 14569), (938, 14617), (994, 14848), (999, 14854), (1032, 14983), (1044, 15049), (1053, 15100), (1066, 15172), (1077, 15211), (1083, 15241), (1090, 15274), (1098, 15307), (1109, 15379), (1125, 15451), (1138, 15505), (1141, 15511), (1155, 15568),

Gene: SweatNTears_18 Start: 10127, Stop: 14926, Start Num: 100

Candidate Starts for SweatNTears_18:

(Start: 100 @10127 has 16 MA's), (Start: 107 @10154 has 1 MA's), (110, 10160), (136, 10283), (160, 10385), (171, 10430), (175, 10442), (180, 10460), (185, 10487), (187, 10490), (190, 10505), (200, 10556), (201, 10559), (212, 10616), (213, 10619), (223, 10661), (229, 10679), (240, 10724), (254, 10760), (261, 10793), (270, 10826), (272, 10838), (285, 10892), (290, 10931), (293, 10946), (295, 10955), (303, 10982), (315, 11033), (329, 11093), (332, 11102), (346, 11156), (363, 11219), (367, 11234), (380, 11297), (416, 11387), (426, 11414), (448, 11495), (452, 11507), (455, 11513), (458, 11528), (465, 11558), (468, 11567), (485, 11645), (495, 11678), (508, 11717), (511, 11735), (512, 11738), (519, 11765), (529, 11822), (533, 11843), (562, 11954), (568, 11975), (576, 12011), (585, 12053), (586, 12065), (588, 12077), (598, 12122), (599, 12125), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (647, 12317), (662, 12383), (663, 12386), (664, 12389), (666, 12407), (690, 12506), (694, 12521), (695, 12524), (718, 12674), (720, 12695), (729, 12737), (737, 12764), (738, 12770), (764, 12902), (766, 12914), (782, 13001), (791, 13043), (804, 13079), (821, 13154), (830, 13205), (842, 13244), (847, 13268), (862, 13373), (872, 13430), (899, 13568), (908, 13643), (938, 13787), (945, 13808), (972, 13985), (973, 13991), (1032, 14315), (1034, 14321), (1044, 14381), (1046, 14399), (1053, 14432), (1066, 14504), (1077, 14543), (1083, 14573), (1098, 14639), (1104, 14687), (1116, 14747), (1140, 14837), (1155, 14897),

Gene: Tarnish_16 Start: 9751, Stop: 14835, Start Num: 25

Candidate Starts for Tarnish_16:

(Start: 25 @9751 has 41 MA's), (54, 9907), (72, 10036), (78, 10066), (94, 10135), (98, 10147), (110, 10183), (119, 10234), (122, 10243), (133, 10279), (137, 10303), (150, 10363), (163, 10417), (174, 10456), (180, 10477), (183, 10498), (215, 10657), (218, 10669), (234, 10732), (247, 10777), (266, 10858), (294, 11017), (301, 11050), (305, 11062), (312, 11089), (321, 11146), (329, 11176), (332, 11188), (358, 11290), (359, 11293), (377, 11380), (390, 11428), (427, 11542), (455, 11635), (458, 11650), (463, 11671), (471, 11704), (477, 11734), (481, 11746), (490, 11785), (498, 11809), (499, 11812), (507, 11836), (512, 11860), (533, 11965), (548, 12013), (558, 12043), (563, 12058), (567, 12073), (576, 12112), (585, 12154), (588, 12178), (594, 12208), (598, 12223), (604, 12247), (618, 12286), (620, 12301), (621, 12307), (627, 12328), (632, 12352), (634, 12358), (662, 12484), (668, 12514), (676, 12553), (688, 12601), (694, 12622), (695, 12625), (705, 12697), (714, 12742), (718, 12775), (720, 12796), (730, 12850), (751, 12925), (766, 13009), (782, 13096), (829, 13282), (855, 13414), (861, 13444), (886, 13582), (898, 13633), (902, 13663), (919, 13768), (931, 13819), (938, 13849), (981, 14029), (988, 14080), (999, 14107), (1003, 14128), (1032, 14224), (1040, 14272), (1044, 14290), (1066, 14413), (1074, 14437), (1077, 14452), (1083, 14482), (1088, 14509), (1090, 14515), (1098, 14548), (1108, 14617), (1109, 14620), (1116, 14656), (1140, 14746),

Gene: TaronosaurusRx_17 Start: 10940, Stop: 16063, Start Num: 21

Candidate Starts for TaronosaurusRx_17:

(Start: 21 @10940 has 14 MA's), (24, 10946), (69, 11219), (71, 11228), (80, 11267), (92, 11324), (112, 11387), (134, 11480), (137, 11498), (174, 11651), (183, 11693), (201, 11780), (247, 11972), (248,

11975), (256, 12011), (268, 12059), (294, 12212), (301, 12245), (304, 12254), (307, 12263), (314, 12296), (316, 12308), (320, 12332), (331, 12377), (333, 12386), (345, 12431), (353, 12458), (356, 12470), (359, 12488), (400, 12647), (407, 12671), (411, 12680), (412, 12683), (452, 12824), (453, 12827), (455, 12830), (457, 12842), (458, 12845), (471, 12899), (480, 12938), (508, 13034), (512, 13055), (516, 13070), (519, 13082), (532, 13154), (579, 13316), (611, 13373), (622, 13385), (624, 13388), (634, 13421), (654, 13514), (656, 13520), (658, 13526), (662, 13547), (663, 13550), (664, 13553), (667, 13574), (673, 13604), (679, 13652), (682, 13658), (684, 13667), (691, 13691), (694, 13706), (695, 13709), (696, 13715), (700, 13760), (702, 13769), (718, 13868), (725, 13910), (730, 13943), (743, 13988), (749, 14012), (758, 14057), (761, 14075), (786, 14213), (792, 14234), (797, 14252), (799, 14255), (801, 14264), (849, 14495), (851, 14513), (856, 14537), (886, 14681), (890, 14705), (901, 14756), (927, 14900), (932, 14918), (940, 14957), (948, 14996), (949, 15002), (950, 15011), (956, 15053), (967, 15131), (973, 15170), (990, 15305), (1006, 15398), (1008, 15401), (1023, 15458), (1024, 15467), (1026, 15479), (1028, 15500), (1074, 15713), (1082, 15752), (1098, 15821), (1105, 15875), (1142, 16025),

Gene: Tarzan_16 Start: 9953, Stop: 14116, Start Num: 39

Candidate Starts for Tarzan_16:

(Start: 39 @9953 has 25 MA's), (44, 9980), (45, 9986), (49, 9998), (57, 10040), (62, 10088), (147, 10424), (203, 10646), (237, 10778), (245, 10799), (251, 10817), (281, 10946), (282, 10949), (309, 11078), (375, 11288), (381, 11312), (435, 11441), (446, 11477), (456, 11498), (466, 11537), (482, 11597), (486, 11618), (492, 11624), (544, 11705), (547, 11714), (576, 11807), (595, 11840), (644, 11900), (646, 11903), (677, 11993), (684, 12017), (695, 12053), (696, 12059), (698, 12074), (704, 12116), (713, 12167), (718, 12203), (727, 12254), (777, 12455), (779, 12464), (789, 12515), (792, 12539), (798, 12566), (803, 12584), (805, 12593), (815, 12632), (825, 12701), (855, 12842), (886, 13010), (890, 13034), (894, 13058), (911, 13151), (935, 13265), (936, 13268), (940, 13286), (1044, 13562), (1066, 13682), (1083, 13748), (1098, 13814), (1123, 13943),

Gene: Toast_17 Start: 10235, Stop: 15886, Start Num: 3

Candidate Starts for Toast_17:

(Start: 3 @10235 has 1 MA's), (Start: 4 @10271 has 39 MA's), (Start: 7 @10292 has 1 MA's), (10, 10331), (13, 10376), (33, 10466), (36, 10475), (Start: 39 @10487 has 25 MA's), (42, 10508), (53, 10565), (60, 10637), (63, 10658), (71, 10700), (72, 10703), (77, 10730), (81, 10751), (82, 10754), (87, 10775), (92, 10796), (109, 10847), (110, 10850), (122, 10910), (165, 11093), (183, 11165), (222, 11351), (249, 11453), (253, 11468), (256, 11483), (269, 11540), (305, 11732), (331, 11852), (353, 11933), (359, 11963), (367, 11999), (377, 12050), (418, 12185), (419, 12188), (427, 12212), (442, 12263), (452, 12299), (455, 12305), (458, 12320), (471, 12374), (480, 12413), (485, 12437), (490, 12455), (506, 12503), (508, 12509), (511, 12527), (512, 12530), (516, 12545), (519, 12557), (528, 12605), (567, 12743), (585, 12824), (588, 12848), (589, 12860), (590, 12863), (599, 12896), (627, 12998), (632, 13025), (633, 13028), (634, 13031), (635, 13037), (644, 13082), (648, 13094), (650, 13106), (656, 13130), (660, 13145), (663, 13160), (664, 13163), (668, 13187), (673, 13214), (694, 13295), (707, 13379), (723, 13484), (729, 13517), (743, 13583), (745, 13592), (754, 13631), (760, 13664), (762, 13676), (763, 13679), (765, 13694), (766, 13703), (772, 13739), (774, 13748), (775, 13757), (818, 13913), (819, 13916), (820, 13919), (821, 13940), (838, 14021), (848, 14063), (860, 14150), (867, 14183), (868, 14192), (874, 14234), (898, 14348), (924, 14513), (942, 14597), (943, 14600), (947, 14630), (948, 14633), (952, 14666), (953, 14669), (961, 14747), (971, 14804), (987, 14921), (993, 14972), (1019, 15074), (1025, 15107), (1033, 15173), (1043, 15239), (1044, 15245), (1046, 15263), (1053, 15296), (1066, 15368), (1078, 15410), (1080, 15416), (1083, 15434), (1085, 15440), (1088, 15461), (1098, 15500), (1125, 15641), (1144, 15704), (1161, 15779), (1165, 15872),

Gene: Tolls_18 Start: 9649, Stop: 14436, Start Num: 100

Candidate Starts for Tolls_18:

(Start: 100 @9649 has 16 MA's), (Start: 107 @9676 has 1 MA's), (124, 9754), (136, 9805), (156, 9892), (160, 9907), (175, 9964), (180, 9982), (185, 10009), (187, 10012), (201, 10081), (212, 10138), (223,

10183), (229, 10201), (240, 10246), (246, 10261), (254, 10282), (261, 10315), (274, 10363), (275, 10366), (285, 10414), (290, 10453), (293, 10468), (342, 10660), (346, 10678), (368, 10762), (416, 10909), (426, 10936), (452, 11029), (455, 11035), (458, 11050), (468, 11089), (470, 11101), (485, 11167), (508, 11239), (511, 11257), (512, 11260), (519, 11287), (576, 11533), (588, 11599), (598, 11644), (603, 11665), (604, 11668), (605, 11671), (618, 11707), (626, 11746), (628, 11752), (634, 11779), (663, 11908), (664, 11911), (666, 11929), (696, 12052), (698, 12067), (718, 12196), (720, 12217), (729, 12259), (737, 12286), (738, 12292), (764, 12424), (766, 12436), (782, 12523), (791, 12565), (804, 12601), (830, 12727), (842, 12766), (862, 12895), (872, 12952), (881, 12994), (899, 13087), (908, 13162), (920, 13225), (938, 13306), (945, 13327), (972, 13504), (973, 13510), (1014, 13729), (1027, 13807), (1032, 13825), (1034, 13831), (1044, 13891), (1046, 13909), (1053, 13942), (1066, 14014), (1077, 14053), (1083, 14083), (1098, 14149), (1104, 14197), (1116, 14257), (1140, 14347), (1155, 14407),

Gene: Trine_16 Start: 9668, Stop: 13906, Start Num: 39

Candidate Starts for Trine_16:

(Start: 39 @9668 has 25 MA's), (49, 9719), (66, 9842), (88, 9950), (132, 10094), (145, 10160), (162, 10214), (168, 10235), (176, 10262), (199, 10382), (210, 10436), (217, 10466), (249, 10580), (252, 10592), (274, 10682), (286, 10763), (329, 10961), (333, 10976), (343, 11012), (360, 11042), (372, 11072), (434, 11237), (473, 11327), (477, 11348), (491, 11360), (492, 11363), (493, 11366), (495, 11372), (503, 11390), (522, 11426), (545, 11468), (557, 11501), (567, 11534), (571, 11546), (596, 11600), (615, 11621), (616, 11624), (648, 11666), (655, 11678), (693, 11801), (694, 11804), (698, 11828), (704, 11870), (717, 11945), (718, 11957), (720, 11978), (730, 12032), (737, 12047), (741, 12068), (753, 12122), (779, 12209), (782, 12224), (789, 12260), (792, 12281), (855, 12527), (893, 12740), (918, 12884), (936, 12971), (940, 12989), (951, 13019), (1021, 13223), (1036, 13289), (1043, 13331), (1044, 13337), (1053, 13388), (1058, 13415), (1066, 13463), (1083, 13529), (1098, 13595), (1100, 13616), (1115, 13700), (1123, 13724), (1124, 13727), (1128, 13745), (1143, 13805),

Gene: Troje_16 Start: 9601, Stop: 14397, Start Num: 100

Candidate Starts for Troje_16:

(Start: 100 @9601 has 16 MA's), (Start: 107 @9628 has 1 MA's), (110, 9634), (136, 9757), (160, 9859), (171, 9904), (175, 9916), (180, 9934), (185, 9961), (187, 9964), (190, 9979), (200, 10030), (201, 10033), (212, 10090), (213, 10093), (223, 10135), (229, 10153), (240, 10198), (254, 10234), (261, 10267), (270, 10300), (272, 10312), (285, 10366), (290, 10405), (293, 10420), (295, 10429), (303, 10456), (315, 10507), (329, 10567), (332, 10576), (346, 10630), (363, 10693), (367, 10708), (416, 10861), (426, 10888), (448, 10969), (452, 10981), (455, 10987), (458, 11002), (468, 11041), (485, 11119), (495, 11152), (508, 11191), (511, 11209), (512, 11212), (519, 11239), (529, 11296), (533, 11317), (546, 11380), (562, 11428), (568, 11449), (576, 11485), (585, 11527), (588, 11551), (598, 11596), (599, 11599), (603, 11617), (604, 11620), (605, 11623), (626, 11698), (628, 11704), (634, 11731), (647, 11791), (662, 11857), (663, 11860), (664, 11863), (666, 11881), (690, 11980), (694, 11995), (695, 11998), (718, 12148), (720, 12169), (729, 12211), (737, 12238), (738, 12244), (766, 12388), (782, 12475), (791, 12517), (804, 12553), (821, 12628), (830, 12679), (842, 12718), (852, 12796), (862, 12847), (872, 12904), (899, 13042), (908, 13114), (938, 13258), (945, 13279), (972, 13456), (973, 13462), (1032, 13786), (1034, 13792), (1044, 13852), (1046, 13870), (1053, 13903), (1066, 13975), (1077, 14014), (1083, 14044), (1098, 14110), (1099, 14128), (1104, 14158), (1116, 14218), (1140, 14308), (1155, 14368),

Gene: Typhonomachy_16 Start: 9629, Stop: 14767, Start Num: 25

Candidate Starts for Typhonomachy_16:

(Start: 18 @9605 has 2 MA's), (Start: 25 @9629 has 41 MA's), (29, 9656), (54, 9785), (62, 9860), (94, 10013), (95, 10016), (119, 10112), (122, 10121), (131, 10151), (133, 10157), (135, 10172), (136, 10175), (140, 10196), (157, 10268), (162, 10289), (180, 10355), (183, 10376), (206, 10493), (247, 10655), (256, 10694), (273, 10769), (301, 10928), (305, 10940), (312, 10967), (319, 11012), (321, 11024), (345, 11114), (350, 11132), (356, 11153), (360, 11183), (367, 11207), (370, 11219), (377,

11258), (385, 11291), (389, 11303), (418, 11393), (419, 11396), (427, 11420), (455, 11513), (458, 11528), (468, 11567), (480, 11621), (490, 11663), (504, 11705), (511, 11735), (512, 11738), (534, 11846), (535, 11849), (544, 11900), (568, 11975), (586, 12065), (588, 12077), (596, 12116), (598, 12122), (603, 12143), (604, 12146), (605, 12149), (626, 12224), (634, 12257), (637, 12278), (644, 12308), (656, 12356), (658, 12362), (664, 12389), (695, 12524), (714, 12641), (718, 12674), (720, 12695), (737, 12764), (738, 12770), (741, 12785), (765, 12905), (766, 12914), (782, 12998), (855, 13319), (896, 13538), (902, 13574), (945, 13787), (986, 13979), (999, 14027), (1003, 14048), (1032, 14156), (1044, 14222), (1046, 14240), (1066, 14345), (1075, 14375), (1077, 14384), (1083, 14414), (1098, 14480), (1104, 14528), (1116, 14588), (1138, 14675), (1155, 14738),

Gene: UmaThurman_17 Start: 10381, Stop: 15924, Start Num: 4

Candidate Starts for UmaThurman_17:

(Start: 4 @10381 has 39 MA's), (Start: 6 @10396 has 1 MA's), (Start: 7 @10402 has 1 MA's), (Start: 9 @10432 has 1 MA's), (10, 10441), (11, 10444), (13, 10486), (Start: 39 @10597 has 25 MA's), (42, 10618), (79, 10846), (82, 10864), (85, 10879), (87, 10885), (88, 10888), (92, 10906), (101, 10930), (120, 11014), (121, 11017), (133, 11056), (135, 11071), (137, 11080), (178, 11248), (183, 11275), (256, 11593), (294, 11797), (305, 11842), (307, 11848), (312, 11869), (314, 11881), (333, 11971), (345, 12016), (353, 12043), (359, 12073), (377, 12160), (378, 12163), (387, 12202), (427, 12322), (439, 12364), (452, 12409), (455, 12415), (458, 12430), (471, 12484), (480, 12523), (484, 12544), (485, 12547), (490, 12565), (493, 12574), (506, 12613), (508, 12619), (512, 12640), (519, 12667), (567, 12874), (593, 12940), (606, 12979), (616, 12994), (633, 13024), (634, 13027), (644, 13078), (663, 13159), (664, 13162), (670, 13195), (676, 13225), (678, 13249), (743, 13582), (754, 13630), (762, 13675), (763, 13678), (765, 13693), (772, 13738), (774, 13747), (775, 13756), (786, 13807), (809, 13879), (816, 13897), (820, 13918), (837, 14017), (838, 14020), (844, 14053), (853, 14119), (857, 14137), (860, 14152), (867, 14185), (874, 14236), (885, 14287), (892, 14335), (925, 14530), (926, 14533), (942, 14605), (943, 14608), (952, 14674), (953, 14677), (955, 14695), (961, 14755), (971, 14812), (974, 14830), (983, 14911), (984, 14914), (987, 14929), (1015, 15088), (1025, 15142), (1033, 15208), (1042, 15262), (1043, 15274), (1044, 15280), (1066, 15403), (1074, 15427), (1078, 15445), (1083, 15469), (1085, 15475), (1088, 15496), (1098, 15535), (1125, 15676), (1129, 15688), (1144, 15739), (1147, 15757), (1165, 15907),

Gene: Upyo_16 Start: 9799, Stop: 14112, Start Num: 39

Candidate Starts for Upyo_16:

(Start: 39 @9799 has 25 MA's), (55, 9883), (69, 9994), (144, 10297), (182, 10438), (194, 10504), (197, 10522), (199, 10534), (208, 10582), (214, 10603), (229, 10663), (231, 10669), (252, 10750), (266, 10810), (267, 10813), (272, 10840), (327, 11122), (337, 11152), (343, 11176), (381, 11260), (386, 11281), (398, 11311), (428, 11362), (438, 11395), (441, 11401), (466, 11488), (483, 11554), (484, 11563), (518, 11683), (520, 11689), (530, 11743), (532, 11755), (538, 11779), (539, 11791), (548, 11824), (561, 11863), (567, 11884), (568, 11887), (576, 11923), (695, 12037), (696, 12043), (698, 12058), (703, 12097), (704, 12100), (717, 12175), (718, 12187), (721, 12211), (736, 12274), (757, 12373), (775, 12442), (785, 12490), (790, 12508), (795, 12532), (855, 12796), (923, 13165), (925, 13177), (936, 13222), (969, 13321), (1028, 13486), (1030, 13492), (1040, 13534), (1044, 13558), (1066, 13678), (1079, 13726), (1083, 13744), (1085, 13750), (1098, 13810), (1114, 13912), (1123, 13939), (1124, 13942), (1130, 13963), (1144, 14014),

Gene: Utz_17 Start: 10248, Stop: 15791, Start Num: 4

Candidate Starts for Utz_17:

(Start: 4 @10248 has 39 MA's), (Start: 6 @10263 has 1 MA's), (Start: 7 @10269 has 1 MA's), (Start: 9 @10299 has 1 MA's), (10, 10308), (11, 10311), (13, 10353), (Start: 39 @10464 has 25 MA's), (42, 10485), (Start: 59 @10605 has 7 MA's), (66, 10647), (79, 10713), (82, 10731), (87, 10752), (88, 10755), (92, 10773), (101, 10797), (120, 10881), (121, 10884), (133, 10923), (135, 10938), (137, 10947), (178, 11115), (183, 11142), (206, 11259), (249, 11430), (256, 11460), (294, 11664), (305, 11709), (312, 11736), (314, 11748), (333, 11838), (353, 11910), (359, 11940), (377, 12027), (378,

12030), (387, 12069), (427, 12189), (439, 12231), (452, 12276), (455, 12282), (457, 12294), (458, 12297), (471, 12351), (480, 12390), (484, 12411), (485, 12414), (490, 12432), (506, 12480), (508, 12486), (512, 12507), (519, 12534), (593, 12807), (606, 12846), (616, 12861), (633, 12891), (634, 12894), (644, 12945), (663, 13026), (664, 13029), (670, 13062), (676, 13092), (678, 13116), (697, 13182), (743, 13449), (747, 13467), (754, 13497), (762, 13542), (763, 13545), (765, 13560), (766, 13569), (772, 13605), (774, 13614), (775, 13623), (786, 13674), (809, 13746), (816, 13764), (820, 13785), (837, 13884), (838, 13887), (844, 13920), (853, 13986), (857, 14004), (860, 14019), (867, 14052), (874, 14103), (885, 14154), (925, 14397), (926, 14400), (942, 14472), (943, 14475), (952, 14541), (953, 14544), (955, 14562), (961, 14622), (971, 14679), (974, 14697), (983, 14778), (984, 14781), (987, 14796), (1025, 15009), (1033, 15075), (1043, 15141), (1044, 15147), (1066, 15270), (1074, 15294), (1078, 15312), (1083, 15336), (1085, 15342), (1088, 15363), (1098, 15402), (1125, 15543), (1144, 15606), (1147, 15624), (1156, 15651), (1161, 15681), (1165, 15774),

Gene: VanLee_18 Start: 10919, Stop: 15565, Start Num: 59

Candidate Starts for VanLee_18:

(Start: 59 @10919 has 7 MA's), (65, 10952), (90, 11063), (91, 11069), (145, 11249), (146, 11252), (158, 11288), (159, 11291), (173, 11342), (181, 11381), (213, 11528), (265, 11735), (271, 11759), (307, 11948), (324, 12044), (337, 12086), (361, 12164), (380, 12251), (437, 12431), (446, 12452), (489, 12596), (668, 13094), (671, 13112), (725, 13388), (735, 13430), (769, 13583), (781, 13655), (786, 13682), (794, 13730), (823, 13856), (832, 13904), (838, 13925), (840, 13940), (843, 13964), (845, 13967), (870, 14114), (881, 14174), (885, 14192), (939, 14480), (997, 14819), (1000, 14834), (1046, 15080), (1057, 15137), (1062, 15164), (1072, 15203), (1074, 15209), (1081, 15236), (1102, 15347), (1112, 15398), (1118, 15434), (1126, 15470), (1135, 15503), (1145, 15542), (1146, 15545),

Gene: Vine_17 Start: 10381, Stop: 15480, Start Num: 25

Candidate Starts for Vine_17:

(Start: 25 @10381 has 41 MA's), (54, 10537), (72, 10666), (78, 10696), (94, 10765), (98, 10777), (110, 10813), (112, 10822), (119, 10864), (122, 10873), (133, 10909), (137, 10933), (150, 10993), (163, 11047), (174, 11086), (180, 11107), (183, 11128), (215, 11287), (218, 11299), (234, 11362), (247, 11407), (266, 11488), (294, 11647), (301, 11680), (305, 11692), (312, 11719), (321, 11776), (329, 11806), (332, 11818), (358, 11920), (359, 11923), (377, 12010), (389, 12055), (390, 12058), (427, 12172), (455, 12265), (458, 12280), (463, 12301), (471, 12334), (477, 12364), (481, 12376), (490, 12415), (498, 12439), (499, 12442), (507, 12466), (512, 12490), (533, 12595), (558, 12673), (567, 12703), (568, 12706), (576, 12742), (585, 12784), (588, 12808), (590, 12823), (594, 12838), (598, 12853), (604, 12877), (618, 12916), (620, 12931), (621, 12937), (627, 12958), (632, 12982), (634, 12988), (662, 13114), (668, 13144), (677, 13195), (688, 13231), (694, 13252), (695, 13255), (705, 13327), (714, 13372), (718, 13405), (720, 13426), (730, 13480), (751, 13555), (766, 13639), (782, 13726), (829, 13912), (855, 14044), (861, 14074), (886, 14212), (898, 14263), (902, 14293), (919, 14398), (931, 14449), (938, 14479), (981, 14659), (988, 14710), (999, 14752), (1003, 14773), (1032, 14869), (1040, 14917), (1044, 14935), (1066, 15058), (1074, 15082), (1077, 15097), (1083, 15127), (1088, 15154), (1090, 15160), (1098, 15193), (1108, 15262), (1109, 15265), (1116, 15301), (1140, 15391),

Gene: Wallaby_20 Start: 10618, Stop: 15741, Start Num: 25

Candidate Starts for Wallaby_20:

(19, 10597), (Start: 25 @10618 has 41 MA's), (29, 10645), (54, 10774), (66, 10870), (75, 10921), (89, 10978), (96, 11011), (98, 11014), (119, 11101), (123, 11113), (135, 11161), (136, 11164), (137, 11170), (148, 11224), (150, 11230), (162, 11278), (180, 11344), (183, 11365), (273, 11758), (274, 11761), (290, 11863), (305, 11929), (307, 11935), (312, 11956), (359, 12160), (362, 12178), (364, 12184), (367, 12196), (370, 12208), (377, 12247), (380, 12259), (390, 12295), (411, 12352), (416, 12376), (455, 12502), (458, 12517), (468, 12556), (484, 12631), (494, 12664), (499, 12679), (501, 12685), (503, 12691), (512, 12727), (534, 12835), (551, 12907), (567, 12961), (598, 13111), (604, 13135), (621, 13195), (625, 13207), (626, 13213), (632, 13240), (633, 13243), (634, 13246), (654,

13339), (656, 13345), (666, 13396), (678, 13465), (691, 13498), (695, 13513), (696, 13519), (704, 13576), (706, 13588), (713, 13627), (714, 13630), (717, 13651), (718, 13663), (720, 13684), (721, 13687), (729, 13726), (730, 13738), (737, 13753), (765, 13894), (782, 13990), (801, 14056), (806, 14077), (808, 14083), (855, 14320), (861, 14350), (899, 14554), (902, 14575), (927, 14713), (938, 14761), (994, 14992), (999, 14998), (1032, 15127), (1044, 15193), (1053, 15244), (1066, 15316), (1077, 15355), (1083, 15385), (1090, 15418), (1098, 15451), (1109, 15523), (1125, 15595), (1138, 15649), (1141, 15655), (1155, 15712),

Gene: Walrus_18 Start: 10497, Stop: 16019, Start Num: 7

Candidate Starts for Walrus_18:

(Start: 4 @10476 has 39 MA's), (Start: 6 @10491 has 1 MA's), (Start: 7 @10497 has 1 MA's), (Start: 9 @10527 has 1 MA's), (10, 10536), (11, 10539), (13, 10581), (Start: 39 @10692 has 25 MA's), (42, 10713), (Start: 59 @10833 has 7 MA's), (79, 10941), (82, 10959), (88, 10983), (92, 11001), (101, 11025), (120, 11109), (122, 11115), (133, 11151), (135, 11166), (137, 11175), (140, 11190), (150, 11235), (155, 11256), (178, 11343), (183, 11370), (191, 11403), (206, 11487), (218, 11541), (229, 11583), (249, 11658), (256, 11688), (294, 11892), (305, 11937), (345, 12111), (353, 12138), (359, 12168), (377, 12255), (378, 12258), (387, 12297), (390, 12303), (411, 12360), (427, 12417), (439, 12459), (452, 12504), (455, 12510), (458, 12525), (471, 12579), (480, 12618), (484, 12639), (485, 12642), (490, 12660), (499, 12687), (506, 12708), (508, 12714), (512, 12735), (532, 12834), (593, 13035), (597, 13050), (606, 13074), (616, 13089), (633, 13119), (634, 13122), (644, 13173), (663, 13254), (664, 13257), (670, 13290), (676, 13320), (678, 13344), (697, 13410), (743, 13677), (754, 13725), (762, 13770), (763, 13773), (765, 13788), (768, 13806), (772, 13833), (774, 13842), (775, 13851), (786, 13902), (809, 13974), (816, 13992), (820, 14013), (837, 14112), (838, 14115), (844, 14148), (853, 14214), (857, 14232), (860, 14247), (867, 14280), (874, 14331), (885, 14382), (925, 14625), (926, 14628), (942, 14700), (943, 14703), (952, 14769), (953, 14772), (955, 14790), (961, 14850), (971, 14907), (974, 14925), (983, 15006), (984, 15009), (987, 15024), (1015, 15183), (1025, 15237), (1033, 15303), (1034, 15309), (1043, 15369), (1044, 15375), (1066, 15498), (1074, 15522), (1078, 15540), (1083, 15564), (1085, 15570), (1088, 15591), (1098, 15630), (1125, 15771), (1129, 15783), (1144, 15834), (1147, 15852), (1164, 15981), (1165, 16002),

Gene: WheatThin_20 Start: 11504, Stop: 16288, Start Num: 40

Candidate Starts for WheatThin_20:

(38, 11492), (Start: 39 @11495 has 25 MA's), (Start: 40 @11504 has 15 MA's), (46, 11537), (56, 11597), (82, 11765), (144, 12038), (157, 12080), (178, 12161), (196, 12227), (232, 12353), (250, 12386), (269, 12431), (285, 12491), (287, 12524), (325, 12665), (330, 12674), (365, 12806), (374, 12851), (413, 12962), (428, 13013), (445, 13070), (463, 13112), (466, 13118), (497, 13232), (498, 13235), (525, 13340), (540, 13415), (545, 13427), (554, 13451), (607, 13634), (628, 13709), (632, 13730), (639, 13766), (669, 13874), (676, 13907), (678, 13934), (680, 13940), (685, 13952), (696, 13994), (701, 14030), (710, 14087), (716, 14117), (727, 14192), (733, 14225), (753, 14315), (759, 14345), (771, 14423), (773, 14432), (796, 14540), (836, 14711), (858, 14840), (884, 14978), (936, 15287), (941, 15308), (961, 15416), (1004, 15506), (1067, 15818), (1068, 15821), (1095, 15950), (1103, 15995), (1113, 16061), (1122, 16100), (1134, 16151), (1152, 16226), (1160, 16271),

Gene: Whitney_19 Start: 10672, Stop: 16305, Start Num: 18

Candidate Starts for Whitney_19:

(Start: 18 @10672 has 2 MA's), (Start: 28 @10717 has 2 MA's), (32, 10738), (37, 10759), (46, 10804), (Start: 50 @10819 has 1 MA's), (60, 10903), (68, 10945), (69, 10957), (82, 11020), (85, 11035), (88, 11044), (92, 11062), (94, 11068), (110, 11116), (140, 11251), (177, 11401), (183, 11431), (229, 11650), (249, 11725), (256, 11755), (294, 11959), (305, 12004), (307, 12010), (312, 12031), (316, 12055), (326, 12112), (345, 12178), (353, 12205), (356, 12217), (359, 12235), (360, 12247), (367, 12271), (370, 12283), (377, 12322), (378, 12325), (380, 12334), (387, 12364), (404, 12409), (422, 12469), (427, 12484), (435, 12514), (439, 12526), (452, 12571), (455, 12577), (458, 12592), (465, 12622), (470, 12643), (471, 12646), (485, 12709), (493, 12736), (494, 12739), (495, 12742), (497,

12748), (505, 12772), (506, 12775), (508, 12781), (510, 12787), (512, 12802), (517, 12820), (526, 12865), (542, 12949), (543, 12955), (551, 12982), (576, 13075), (579, 13084), (588, 13141), (589, 13153), (599, 13189), (600, 13195), (615, 13237), (618, 13249), (626, 13288), (628, 13294), (629, 13297), (632, 13315), (633, 13318), (634, 13321), (638, 13345), (656, 13420), (665, 13459), (669, 13483), (676, 13516), (694, 13627), (697, 13660), (704, 13723), (709, 13759), (715, 13789), (727, 13867), (728, 13870), (729, 13879), (734, 13903), (754, 13990), (762, 14035), (763, 14038), (765, 14053), (772, 14098), (774, 14107), (775, 14116), (776, 14119), (804, 14224), (818, 14272), (820, 14278), (837, 14377), (838, 14380), (841, 14392), (860, 14509), (867, 14542), (874, 14593), (882, 14623), (891, 14683), (905, 14764), (908, 14785), (909, 14788), (916, 14818), (928, 14881), (929, 14890), (933, 14899), (953, 15013), (958, 15043), (962, 15091), (963, 15094), (970, 15124), (971, 15145), (996, 15343), (1012, 15406), (1013, 15412), (1022, 15463), (1048, 15655), (1063, 15742), (1071, 15769), (1072, 15772), (1089, 15847), (1093, 15871), (1101, 15910), (1106, 15946), (1111, 15967), (1131, 16054), (1142, 16096), (1150, 16129), (1153, 16141), (1166, 16285),

Gene: Widow_16 Start: 9677, Stop: 14296, Start Num: 39

Candidate Starts for Widow_16:

(Start: 39 @9677 has 25 MA's), (142, 10145), (153, 10187), (161, 10223), (172, 10262), (193, 10352), (194, 10364), (198, 10385), (199, 10394), (210, 10448), (224, 10505), (231, 10526), (233, 10538), (234, 10541), (241, 10571), (249, 10592), (252, 10604), (286, 10775), (297, 10829), (321, 10943), (329, 10973), (343, 11024), (360, 11054), (373, 11090), (421, 11222), (424, 11231), (428, 11243), (443, 11294), (461, 11360), (475, 11420), (478, 11432), (503, 11519), (512, 11555), (521, 11597), (523, 11603), (535, 11666), (536, 11669), (545, 11708), (554, 11732), (559, 11747), (569, 11780), (577, 11804), (594, 11831), (625, 11873), (627, 11882), (631, 11897), (634, 11912), (638, 11936), (651, 11996), (661, 12029), (663, 12041), (667, 12065), (668, 12068), (678, 12128), (694, 12173), (698, 12197), (704, 12239), (717, 12314), (718, 12326), (720, 12347), (721, 12350), (753, 12491), (754, 12494), (783, 12623), (787, 12644), (789, 12653), (800, 12707), (802, 12713), (855, 12971), (887, 13142), (890, 13160), (914, 13307), (919, 13349), (1030, 13664), (1044, 13730), (1053, 13781), (1058, 13808), (1066, 13856), (1074, 13880), (1079, 13904), (1083, 13922), (1098, 13988), (1115, 14093), (1123, 14117), (1124, 14120), (1128, 14138), (1130, 14141), (1151, 14228),

Gene: William_17 Start: 10217, Stop: 15835, Start Num: 4

Candidate Starts for William_17:

(Start: 3 @10181 has 1 MA's), (Start: 4 @10217 has 39 MA's), (Start: 7 @10238 has 1 MA's), (11, 10280), (13, 10322), (33, 10412), (36, 10421), (Start: 39 @10433 has 25 MA's), (42, 10454), (54, 10520), (60, 10583), (63, 10604), (71, 10646), (72, 10649), (77, 10676), (81, 10697), (82, 10700), (87, 10721), (92, 10742), (109, 10793), (110, 10796), (122, 10856), (165, 11039), (183, 11111), (222, 11297), (249, 11399), (253, 11414), (256, 11429), (269, 11486), (305, 11678), (331, 11798), (353, 11879), (359, 11909), (367, 11945), (377, 11996), (418, 12131), (419, 12134), (427, 12158), (442, 12209), (452, 12245), (455, 12251), (458, 12266), (471, 12320), (480, 12359), (485, 12383), (490, 12401), (506, 12449), (508, 12455), (511, 12473), (512, 12476), (516, 12491), (519, 12503), (528, 12551), (567, 12689), (585, 12770), (588, 12794), (589, 12806), (590, 12809), (599, 12842), (627, 12944), (632, 12971), (633, 12974), (634, 12977), (635, 12983), (648, 13040), (650, 13052), (656, 13076), (660, 13091), (663, 13106), (664, 13109), (668, 13133), (673, 13160), (694, 13241), (707, 13325), (723, 13430), (729, 13463), (743, 13529), (745, 13538), (754, 13577), (760, 13610), (762, 13622), (763, 13625), (765, 13640), (766, 13649), (772, 13685), (774, 13694), (775, 13703), (818, 13859), (819, 13862), (820, 13865), (821, 13886), (838, 13967), (848, 14009), (860, 14096), (867, 14129), (868, 14138), (874, 14180), (898, 14294), (942, 14543), (943, 14546), (947, 14576), (948, 14579), (951, 14603), (952, 14612), (953, 14615), (961, 14693), (971, 14750), (987, 14867), (993, 14918), (1025, 15056), (1033, 15122), (1043, 15188), (1044, 15194), (1046, 15212), (1064, 15305), (1066, 15317), (1080, 15365), (1083, 15383), (1085, 15389), (1088, 15410), (1098, 15449), (1125, 15590), (1144, 15653), (1161, 15728), (1165, 15821),

Gene: Wisp_16 Start: 10014, Stop: 15509, Start Num: 4

Candidate Starts for Wisp_16:

(Start: 4 @10014 has 39 MA's), (Start: 6 @10029 has 1 MA's), (Start: 7 @10035 has 1 MA's), (Start: 9 @10065 has 1 MA's), (10, 10074), (11, 10077), (13, 10119), (Start: 39 @10230 has 25 MA's), (42, 10251), (Start: 59 @10371 has 7 MA's), (66, 10413), (72, 10446), (79, 10479), (82, 10497), (85, 10512), (87, 10518), (88, 10521), (92, 10539), (101, 10563), (120, 10647), (133, 10689), (135, 10704), (137, 10713), (178, 10881), (183, 10908), (206, 11025), (249, 11196), (256, 11226), (294, 11430), (305, 11475), (312, 11502), (314, 11514), (333, 11604), (345, 11649), (353, 11676), (359, 11706), (377, 11793), (378, 11796), (387, 11835), (411, 11898), (427, 11955), (439, 11997), (452, 12042), (455, 12048), (457, 12060), (458, 12063), (471, 12117), (480, 12156), (484, 12177), (485, 12180), (490, 12198), (499, 12225), (506, 12246), (508, 12252), (511, 12270), (512, 12273), (513, 12279), (519, 12300), (593, 12573), (601, 12600), (606, 12612), (616, 12627), (633, 12657), (634, 12660), (663, 12792), (664, 12795), (670, 12828), (676, 12858), (678, 12882), (697, 12948), (743, 13215), (754, 13263), (762, 13308), (763, 13311), (765, 13326), (772, 13371), (774, 13380), (775, 13389), (786, 13440), (809, 13512), (816, 13530), (820, 13551), (837, 13650), (838, 13653), (844, 13686), (853, 13752), (857, 13770), (860, 13785), (867, 13818), (874, 13869), (885, 13920), (925, 14163), (926, 14166), (942, 14238), (943, 14241), (952, 14307), (953, 14310), (955, 14328), (961, 14388), (983, 14544), (984, 14547), (987, 14562), (1015, 14733), (1025, 14787), (1036, 14844), (1038, 14859), (1045, 14907), (1056, 14952), (1086, 15072), (1087, 15081), (1096, 15120), (1110, 15192), (1125, 15261), (1129, 15273), (1144, 15324), (1147, 15342), (1161, 15399), (1165, 15492),

Gene: Wocket_18 Start: 10497, Stop: 15983, Start Num: 4

Candidate Starts for Wocket_18:

(Start: 4 @10497 has 39 MA's), (Start: 6 @10512 has 1 MA's), (Start: 9 @10548 has 1 MA's), (10, 10557), (11, 10560), (13, 10602), (Start: 39 @10713 has 25 MA's), (42, 10734), (Start: 59 @10854 has 7 MA's), (79, 10962), (82, 10980), (87, 11001), (88, 11004), (92, 11022), (101, 11046), (110, 11076), (120, 11130), (122, 11136), (133, 11172), (135, 11187), (137, 11196), (178, 11364), (183, 11391), (218, 11562), (229, 11604), (249, 11679), (256, 11709), (294, 11913), (305, 11958), (307, 11964), (312, 11985), (314, 11997), (333, 12087), (345, 12132), (353, 12159), (359, 12189), (377, 12276), (387, 12318), (413, 12390), (427, 12438), (439, 12480), (452, 12525), (455, 12531), (458, 12546), (471, 12600), (480, 12639), (484, 12660), (485, 12663), (490, 12681), (499, 12708), (506, 12729), (508, 12735), (512, 12756), (519, 12783), (606, 13095), (616, 13110), (633, 13140), (634, 13143), (644, 13194), (663, 13275), (664, 13278), (670, 13311), (676, 13341), (678, 13365), (697, 13431), (743, 13698), (752, 13740), (754, 13746), (760, 13779), (762, 13791), (763, 13794), (765, 13809), (768, 13827), (772, 13854), (774, 13863), (775, 13872), (804, 13980), (818, 14028), (819, 14031), (820, 14034), (821, 14055), (838, 14136), (839, 14139), (860, 14265), (867, 14298), (873, 14346), (874, 14349), (879, 14364), (885, 14400), (926, 14646), (942, 14718), (943, 14721), (952, 14787), (953, 14790), (955, 14808), (961, 14868), (983, 15024), (987, 15042), (1015, 15207), (1025, 15261), (1036, 15318), (1038, 15333), (1045, 15381), (1056, 15426), (1086, 15546), (1087, 15555), (1096, 15594), (1110, 15666), (1125, 15735), (1144, 15798), (1147, 15816), (1157, 15846),

Gene: Wolfwood_18 Start: 10618, Stop: 15741, Start Num: 25

Candidate Starts for Wolfwood_18:

(19, 10597), (Start: 25 @10618 has 41 MA's), (29, 10645), (54, 10774), (66, 10870), (75, 10921), (89, 10978), (96, 11011), (98, 11014), (119, 11101), (123, 11113), (135, 11161), (136, 11164), (137, 11170), (138, 11173), (148, 11224), (150, 11230), (162, 11278), (180, 11344), (183, 11365), (273, 11758), (274, 11761), (290, 11863), (302, 11920), (304, 11926), (305, 11929), (307, 11935), (312, 11956), (333, 12058), (340, 12085), (359, 12160), (362, 12178), (367, 12196), (370, 12208), (377, 12247), (390, 12295), (411, 12352), (416, 12376), (418, 12382), (455, 12502), (458, 12517), (468, 12556), (484, 12631), (494, 12664), (499, 12679), (501, 12685), (503, 12691), (512, 12727), (534, 12835), (551, 12907), (567, 12961), (588, 13066), (598, 13111), (604, 13135), (621, 13195), (625, 13207), (626, 13213), (632, 13240), (633, 13243), (634, 13246), (654, 13339), (656, 13345), (666, 13396), (678, 13465), (691, 13498), (695, 13513), (696, 13519), (704, 13576), (706, 13588), (713, 13627), (714, 13630), (717, 13651), (718, 13663), (720, 13684), (721, 13687), (729, 13726), (730,

13738), (737, 13753), (765, 13894), (782, 13990), (801, 14056), (806, 14077), (808, 14083), (855, 14320), (861, 14350), (892, 14524), (899, 14554), (902, 14575), (927, 14713), (938, 14761), (994, 14992), (999, 14998), (1032, 15127), (1044, 15193), (1053, 15244), (1066, 15316), (1077, 15355), (1083, 15385), (1090, 15418), (1098, 15451), (1125, 15595), (1138, 15649), (1141, 15655), (1155, 15712),

Gene: WorMMAs_16 Start: 9596, Stop: 13747, Start Num: 39

Candidate Starts for WorMMAs_16:

(Start: 39 @9596 has 25 MA's), (66, 9770), (69, 9791), (78, 9833), (93, 9899), (125, 10001), (162, 10142), (168, 10163), (171, 10175), (172, 10178), (194, 10280), (195, 10289), (199, 10310), (214, 10379), (217, 10394), (221, 10409), (227, 10430), (234, 10457), (252, 10520), (286, 10691), (329, 10889), (333, 10904), (343, 10940), (360, 10970), (372, 11000), (391, 11072), (473, 11255), (478, 11279), (479, 11282), (493, 11294), (496, 11303), (545, 11396), (550, 11408), (554, 11420), (559, 11435), (564, 11450), (569, 11468), (571, 11474), (577, 11492), (597, 11531), (651, 11600), (676, 11663), (694, 11732), (698, 11756), (704, 11798), (714, 11852), (717, 11873), (718, 11885), (721, 11909), (775, 12122), (779, 12137), (782, 12152), (788, 12185), (789, 12188), (793, 12212), (829, 12320), (833, 12338), (855, 12452), (863, 12503), (871, 12545), (893, 12662), (936, 12878), (953, 12938), (975, 12995), (1030, 13118), (1040, 13160), (1044, 13184), (1066, 13310), (1074, 13334), (1079, 13358), (1083, 13376), (1098, 13442), (1124, 13574), (1128, 13592), (1130, 13595), (1143, 13646),

Gene: Yarn_15 Start: 9639, Stop: 14426, Start Num: 100

Candidate Starts for Yarn_15:

(Start: 100 @9639 has 16 MA's), (Start: 107 @9666 has 1 MA's), (124, 9744), (136, 9795), (156, 9882), (160, 9897), (175, 9954), (180, 9972), (185, 9999), (187, 10002), (201, 10071), (212, 10128), (223, 10173), (229, 10191), (240, 10236), (254, 10272), (261, 10305), (274, 10353), (275, 10356), (285, 10404), (290, 10443), (293, 10458), (342, 10650), (346, 10668), (368, 10752), (416, 10899), (426, 10926), (452, 11019), (455, 11025), (458, 11040), (468, 11079), (470, 11091), (485, 11157), (508, 11229), (511, 11247), (512, 11250), (519, 11277), (576, 11523), (588, 11589), (598, 11634), (603, 11655), (604, 11658), (605, 11661), (618, 11697), (626, 11736), (628, 11742), (634, 11769), (663, 11898), (664, 11901), (666, 11919), (696, 12042), (698, 12057), (718, 12186), (720, 12207), (729, 12249), (737, 12276), (738, 12282), (764, 12414), (766, 12426), (782, 12513), (791, 12555), (804, 12591), (830, 12717), (842, 12756), (862, 12885), (872, 12942), (881, 12984), (899, 13077), (908, 13152), (920, 13215), (938, 13296), (945, 13317), (972, 13494), (973, 13500), (1014, 13719), (1027, 13797), (1032, 13815), (1034, 13821), (1044, 13881), (1046, 13899), (1053, 13932), (1066, 14004), (1077, 14043), (1083, 14073), (1098, 14139), (1104, 14187), (1116, 14247), (1140, 14337), (1155, 14397),

Gene: Yucky_16 Start: 10241, Stop: 15340, Start Num: 25

Candidate Starts for Yucky_16:

(Start: 25 @10241 has 41 MA's), (54, 10397), (78, 10556), (94, 10625), (110, 10673), (119, 10724), (122, 10733), (133, 10769), (137, 10793), (150, 10853), (163, 10907), (174, 10946), (176, 10952), (180, 10967), (183, 10988), (215, 11147), (218, 11159), (234, 11222), (247, 11267), (266, 11348), (294, 11507), (301, 11540), (305, 11552), (312, 11579), (321, 11636), (329, 11666), (332, 11678), (358, 11780), (359, 11783), (377, 11870), (389, 11915), (390, 11918), (427, 12032), (455, 12125), (458, 12140), (463, 12161), (471, 12194), (477, 12224), (481, 12236), (490, 12275), (498, 12299), (499, 12302), (507, 12326), (512, 12350), (533, 12455), (548, 12503), (558, 12533), (563, 12548), (567, 12563), (576, 12602), (585, 12644), (588, 12668), (590, 12683), (594, 12698), (598, 12713), (604, 12737), (618, 12776), (620, 12791), (621, 12797), (627, 12818), (632, 12842), (634, 12848), (662, 12974), (668, 13004), (675, 13040), (676, 13043), (688, 13091), (694, 13112), (695, 13115), (705, 13187), (714, 13232), (718, 13265), (720, 13286), (730, 13340), (751, 13415), (766, 13499), (782, 13586), (829, 13772), (855, 13904), (861, 13934), (886, 14072), (898, 14123), (902, 14153), (919, 14258), (931, 14309), (938, 14339), (981, 14519), (988, 14570), (999, 14612), (1003, 14633),

(1032, 14729), (1040, 14777), (1044, 14795), (1066, 14918), (1074, 14942), (1077, 14957), (1083, 14987), (1088, 15014), (1090, 15020), (1098, 15053), (1108, 15122), (1109, 15125), (1116, 15161), (1140, 15251),

Gene: Yummy_17 Start: 9515, Stop: 14311, Start Num: 100

Candidate Starts for Yummy_17:

(Start: 100 @9515 has 16 MA's), (Start: 107 @9542 has 1 MA's), (110, 9548), (136, 9671), (160, 9773), (171, 9818), (175, 9830), (180, 9848), (185, 9875), (187, 9878), (190, 9893), (200, 9944), (201, 9947), (212, 10004), (213, 10007), (214, 10010), (223, 10049), (229, 10067), (240, 10112), (254, 10148), (261, 10181), (270, 10214), (272, 10226), (285, 10280), (290, 10319), (293, 10334), (295, 10343), (303, 10370), (315, 10421), (329, 10481), (332, 10490), (346, 10544), (363, 10607), (367, 10622), (380, 10685), (416, 10775), (426, 10802), (452, 10895), (455, 10901), (458, 10916), (468, 10955), (485, 11033), (495, 11066), (508, 11105), (511, 11123), (512, 11126), (519, 11153), (529, 11210), (533, 11231), (562, 11342), (568, 11363), (576, 11399), (585, 11441), (586, 11453), (588, 11465), (598, 11510), (599, 11513), (603, 11531), (604, 11534), (605, 11537), (626, 11612), (634, 11645), (647, 11705), (662, 11771), (663, 11774), (664, 11777), (666, 11795), (690, 11894), (694, 11909), (695, 11912), (718, 12062), (720, 12083), (729, 12125), (737, 12152), (738, 12158), (764, 12290), (766, 12302), (782, 12389), (791, 12431), (804, 12467), (813, 12503), (821, 12542), (830, 12593), (842, 12632), (852, 12710), (862, 12761), (872, 12818), (899, 12956), (908, 13028), (938, 13172), (945, 13193), (972, 13370), (973, 13376), (1032, 13700), (1034, 13706), (1044, 13766), (1046, 13784), (1053, 13817), (1066, 13889), (1077, 13928), (1083, 13958), (1098, 14024), (1099, 14042), (1104, 14072), (1116, 14132), (1140, 14222), (1155, 14282),

Gene: ZAYM_17 Start: 10932, Stop: 16055, Start Num: 21

Candidate Starts for ZAYM_17:

(Start: 21 @10932 has 14 MA's), (24, 10938), (69, 11211), (71, 11220), (80, 11259), (92, 11316), (112, 11379), (134, 11472), (137, 11490), (174, 11643), (183, 11685), (201, 11772), (247, 11964), (248, 11967), (256, 12003), (268, 12051), (294, 12204), (301, 12237), (304, 12246), (307, 12255), (314, 12288), (316, 12300), (320, 12324), (331, 12369), (333, 12378), (353, 12450), (356, 12462), (359, 12480), (400, 12639), (407, 12663), (411, 12672), (412, 12675), (452, 12816), (453, 12819), (455, 12822), (458, 12837), (471, 12891), (480, 12930), (508, 13026), (512, 13047), (516, 13062), (519, 13074), (532, 13146), (579, 13308), (611, 13365), (622, 13377), (624, 13380), (634, 13413), (654, 13506), (656, 13512), (658, 13518), (662, 13539), (663, 13542), (664, 13545), (667, 13566), (673, 13596), (679, 13644), (682, 13650), (684, 13659), (691, 13683), (694, 13698), (695, 13701), (696, 13707), (700, 13752), (702, 13761), (718, 13860), (725, 13902), (730, 13935), (743, 13980), (749, 14004), (758, 14049), (761, 14067), (786, 14205), (792, 14226), (797, 14244), (799, 14247), (801, 14256), (849, 14487), (851, 14505), (856, 14529), (886, 14673), (890, 14697), (901, 14748), (927, 14892), (932, 14910), (940, 14949), (948, 14988), (949, 14994), (950, 15003), (956, 15045), (967, 15123), (973, 15162), (990, 15297), (1006, 15390), (1008, 15393), (1023, 15450), (1024, 15459), (1026, 15471), (1028, 15492), (1074, 15705), (1082, 15744), (1098, 15813), (1105, 15867), (1142, 16017),

Gene: Zarbodnamra_17 Start: 10273, Stop: 15795, Start Num: 4

Candidate Starts for Zarbodnamra_17:

(Start: 4 @10273 has 39 MA's), (Start: 6 @10288 has 1 MA's), (Start: 7 @10294 has 1 MA's), (Start: 9 @10324 has 1 MA's), (10, 10333), (11, 10336), (13, 10378), (Start: 39 @10489 has 25 MA's), (42, 10510), (79, 10738), (82, 10756), (85, 10771), (87, 10777), (88, 10780), (92, 10798), (101, 10822), (120, 10906), (121, 10909), (133, 10948), (135, 10963), (137, 10972), (178, 11140), (183, 11167), (249, 11455), (256, 11485), (294, 11689), (305, 11734), (312, 11761), (314, 11773), (333, 11863), (345, 11908), (353, 11935), (359, 11965), (377, 12052), (378, 12055), (387, 12094), (415, 12178), (427, 12214), (439, 12256), (452, 12301), (455, 12307), (457, 12319), (458, 12322), (471, 12376), (480, 12415), (484, 12436), (485, 12439), (490, 12457), (493, 12466), (499, 12484), (506, 12505), (508, 12511), (512, 12532), (519, 12559), (533, 12637), (597, 12826), (606, 12850), (615, 12862),

(616, 12865), (630, 12880), (633, 12895), (634, 12898), (644, 12949), (663, 13030), (664, 13033), (670, 13066), (676, 13096), (678, 13120), (743, 13453), (754, 13501), (762, 13546), (763, 13549), (765, 13564), (772, 13609), (774, 13618), (775, 13627), (786, 13678), (809, 13750), (816, 13768), (820, 13789), (837, 13888), (838, 13891), (844, 13924), (853, 13990), (857, 14008), (860, 14023), (867, 14056), (874, 14107), (885, 14158), (925, 14401), (926, 14404), (942, 14476), (943, 14479), (952, 14545), (953, 14548), (955, 14566), (961, 14626), (971, 14683), (974, 14701), (983, 14782), (984, 14785), (987, 14800), (1015, 14959), (1025, 15013), (1033, 15079), (1034, 15085), (1043, 15145), (1044, 15151), (1066, 15274), (1074, 15298), (1078, 15316), (1083, 15340), (1085, 15346), (1088, 15367), (1098, 15406), (1125, 15547), (1129, 15559), (1144, 15610), (1147, 15628), (1165, 15778),

Gene: Zareef_18 Start: 10620, Stop: 15749, Start Num: 25

Candidate Starts for Zareef_18:

(19, 10599), (Start: 25 @10620 has 41 MA's), (29, 10647), (54, 10776), (66, 10872), (75, 10923), (89, 10980), (96, 11013), (98, 11016), (119, 11103), (123, 11115), (135, 11163), (136, 11166), (137, 11172), (138, 11175), (148, 11226), (150, 11232), (162, 11280), (180, 11346), (183, 11367), (273, 11760), (274, 11763), (290, 11865), (302, 11922), (304, 11928), (305, 11931), (307, 11937), (312, 11958), (333, 12060), (340, 12087), (359, 12162), (362, 12180), (367, 12198), (370, 12210), (377, 12249), (390, 12297), (411, 12354), (416, 12378), (418, 12384), (455, 12504), (458, 12519), (468, 12558), (484, 12633), (494, 12666), (499, 12681), (501, 12687), (503, 12693), (512, 12729), (534, 12837), (551, 12909), (567, 12963), (588, 13068), (598, 13113), (604, 13137), (616, 13167), (621, 13197), (625, 13209), (626, 13215), (632, 13242), (634, 13248), (654, 13341), (656, 13347), (666, 13398), (678, 13467), (691, 13500), (695, 13515), (696, 13521), (704, 13578), (714, 13632), (717, 13653), (718, 13665), (720, 13686), (721, 13689), (737, 13755), (765, 13896), (782, 13992), (789, 14025), (801, 14058), (806, 14079), (808, 14085), (855, 14322), (861, 14352), (892, 14526), (899, 14556), (902, 14577), (938, 14769), (940, 14778), (965, 14859), (994, 15000), (999, 15006), (1032, 15135), (1044, 15201), (1053, 15252), (1066, 15324), (1077, 15363), (1078, 15366), (1083, 15393), (1090, 15426), (1098, 15459), (1109, 15531), (1125, 15603), (1138, 15657), (1141, 15663), (1155, 15720),

Gene: ZiggyZoo_16 Start: 10043, Stop: 15586, Start Num: 4

Candidate Starts for ZiggyZoo_16:

(Start: 4 @10043 has 39 MA's), (Start: 6 @10058 has 1 MA's), (Start: 7 @10064 has 1 MA's), (Start: 9 @10094 has 1 MA's), (10, 10103), (11, 10106), (13, 10148), (Start: 39 @10259 has 25 MA's), (42, 10280), (79, 10508), (82, 10526), (85, 10541), (87, 10547), (88, 10550), (92, 10568), (101, 10592), (120, 10676), (122, 10682), (133, 10718), (135, 10733), (137, 10742), (178, 10910), (183, 10937), (206, 11054), (218, 11108), (249, 11225), (256, 11255), (294, 11459), (305, 11504), (312, 11531), (314, 11543), (333, 11633), (345, 11678), (353, 11705), (359, 11735), (377, 11822), (378, 11825), (387, 11864), (427, 11984), (439, 12026), (452, 12071), (455, 12077), (457, 12089), (458, 12092), (471, 12146), (480, 12185), (484, 12206), (485, 12209), (490, 12227), (499, 12254), (506, 12275), (508, 12281), (512, 12302), (519, 12329), (532, 12401), (567, 12536), (597, 12617), (606, 12641), (616, 12656), (633, 12686), (634, 12689), (644, 12740), (663, 12821), (664, 12824), (670, 12857), (676, 12887), (678, 12911), (697, 12977), (743, 13244), (747, 13262), (754, 13292), (762, 13337), (763, 13340), (765, 13355), (766, 13364), (772, 13400), (774, 13409), (775, 13418), (786, 13469), (809, 13541), (816, 13559), (820, 13580), (837, 13679), (838, 13682), (844, 13715), (853, 13781), (857, 13799), (860, 13814), (867, 13847), (874, 13898), (885, 13949), (925, 14192), (926, 14195), (942, 14267), (943, 14270), (952, 14336), (953, 14339), (955, 14357), (961, 14417), (971, 14474), (974, 14492), (983, 14573), (984, 14576), (987, 14591), (1015, 14750), (1025, 14804), (1033, 14870), (1034, 14876), (1043, 14936), (1044, 14942), (1053, 14993), (1066, 15065), (1074, 15089), (1078, 15107), (1083, 15131), (1085, 15137), (1088, 15158), (1098, 15197), (1125, 15338), (1129, 15350), (1144, 15401), (1147, 15419), (1165, 15569),

Gene: Zilla_17 Start: 10324, Stop: 15813, Start Num: 4

Candidate Starts for Zilla_17:

(Start: 4 @10324 has 39 MA's), (Start: 6 @10339 has 1 MA's), (Start: 7 @10345 has 1 MA's), (Start: 9 @10375 has 1 MA's), (10, 10384), (11, 10387), (13, 10429), (Start: 39 @10540 has 25 MA's), (42, 10561), (Start: 59 @10681 has 7 MA's), (66, 10723), (79, 10789), (82, 10807), (87, 10828), (88, 10831), (92, 10849), (101, 10873), (120, 10957), (133, 10999), (135, 11014), (137, 11023), (178, 11191), (183, 11218), (206, 11335), (249, 11506), (256, 11536), (294, 11740), (305, 11785), (312, 11812), (314, 11824), (316, 11836), (333, 11914), (345, 11959), (353, 11986), (359, 12016), (377, 12103), (378, 12106), (387, 12145), (427, 12265), (439, 12307), (455, 12358), (458, 12373), (471, 12427), (480, 12466), (484, 12487), (485, 12490), (490, 12508), (499, 12535), (506, 12556), (508, 12562), (512, 12583), (517, 12601), (519, 12610), (593, 12883), (616, 12937), (633, 12967), (634, 12970), (644, 13021), (663, 13102), (664, 13105), (670, 13138), (676, 13168), (678, 13192), (697, 13258), (743, 13525), (754, 13573), (760, 13606), (762, 13618), (763, 13621), (772, 13681), (774, 13690), (775, 13699), (786, 13750), (809, 13822), (816, 13840), (820, 13861), (837, 13960), (838, 13963), (844, 13996), (853, 14062), (857, 14080), (860, 14095), (867, 14128), (874, 14179), (885, 14230), (898, 14299), (925, 14473), (926, 14476), (942, 14548), (943, 14551), (952, 14617), (953, 14620), (955, 14638), (961, 14698), (971, 14755), (974, 14773), (983, 14854), (984, 14857), (987, 14872), (1015, 15043), (1025, 15097), (1038, 15169), (1040, 15178), (1045, 15214), (1060, 15274), (1063, 15292), (1069, 15310), (1081, 15355), (1087, 15388), (1110, 15499), (1125, 15568), (1144, 15631), (1147, 15649), (1165, 15799),

Gene: Zodiariah_16 Start: 9944, Stop: 15100, Start Num: 39

Candidate Starts for Zodiariah_16:

(Start: 39 @9944 has 25 MA's), (46, 9980), (48, 9989), (56, 10040), (62, 10103), (78, 10187), (162, 10544), (169, 10574), (171, 10580), (177, 10601), (191, 10667), (196, 10700), (213, 10784), (214, 10787), (230, 10841), (236, 10871), (250, 10919), (263, 10976), (265, 10982), (271, 11006), (277, 11033), (285, 11072), (292, 11135), (317, 11246), (336, 11324), (340, 11342), (341, 11345), (351, 11381), (354, 11402), (369, 11468), (382, 11531), (383, 11537), (395, 11573), (397, 11579), (399, 11582), (409, 11612), (428, 11678), (444, 11735), (461, 11798), (479, 11873), (505, 11954), (517, 12002), (525, 12038), (531, 12080), (540, 12113), (545, 12125), (592, 12275), (600, 12308), (603, 12320), (605, 12326), (607, 12332), (651, 12518), (674, 12596), (696, 12692), (701, 12728), (712, 12794), (716, 12815), (726, 12887), (727, 12890), (732, 12920), (733, 12923), (748, 12989), (753, 13013), (756, 13031), (770, 13115), (771, 13121), (773, 13130), (817, 13298), (858, 13532), (869, 13592), (875, 13619), (980, 14123), (995, 14252), (1039, 14501), (1049, 14552), (1094, 14759), (1095, 14765), (1103, 14810), (1110, 14855), (1113, 14876), (1122, 14915), (1152, 15038), (1154, 15050), (1162, 15089),