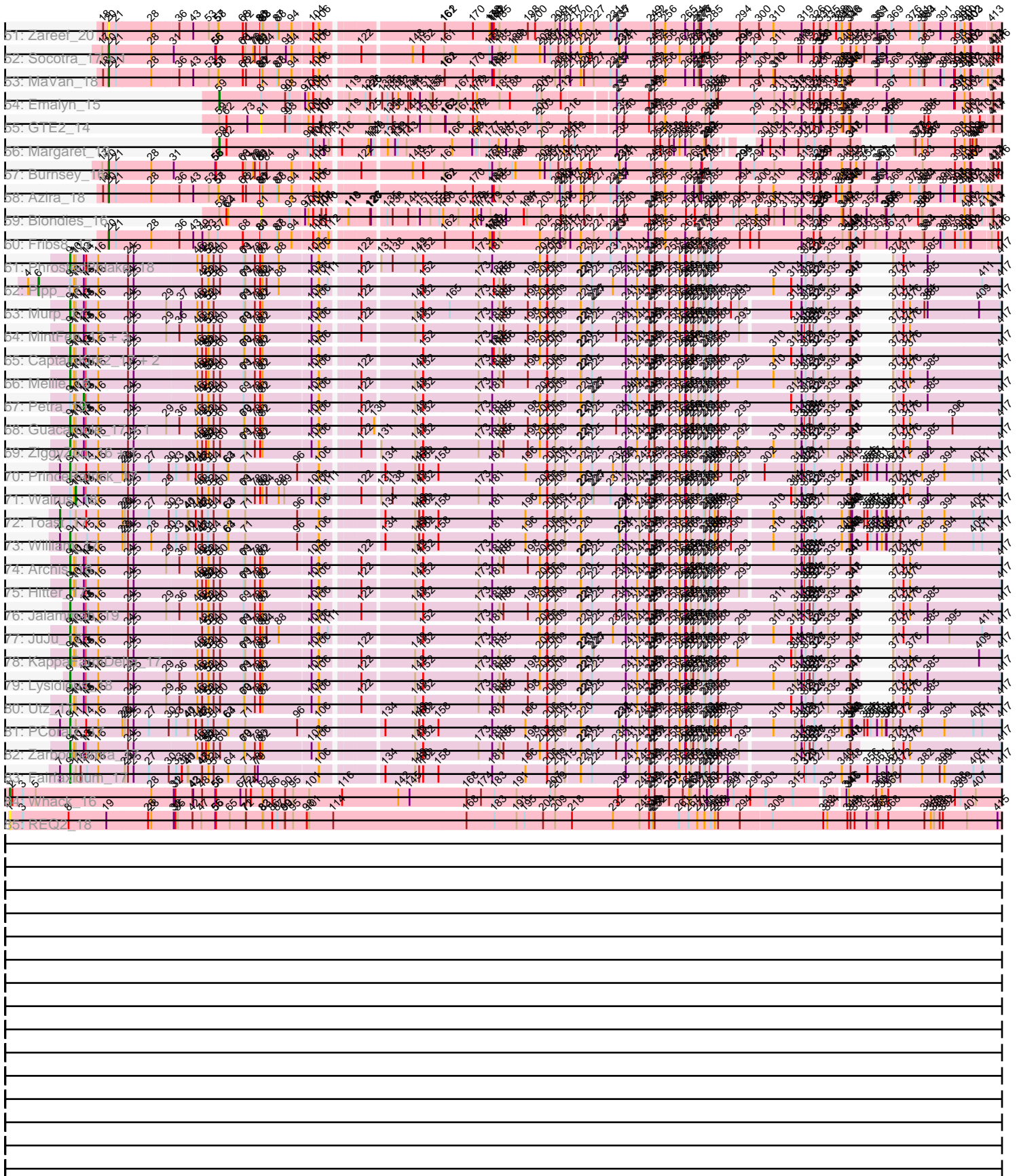


Zoomed Pham 216027

1. AikoCarson_16	20	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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Zoomed Pham 216027



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 216027 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216027 has 102 members, 18 are drafts.

Phages represented in each track:

- Track 1 : AikoCarson_15
- Track 2 : Agatha_16
- Track 3 : Bavidard_16
- Track 4 : Nodigi_18
- Track 5 : Cozz_16
- Track 6 : Quasar_16
- Track 7 : ChocoMunchkin_16, Yarn_15, CanesSauce_16, AndPeggy_15
- Track 8 : Elliott_16, PsychoKiller_16
- Track 9 : SteamedHams_18
- Track 10 : Feastonyeet_15, BigChungus_15
- Track 11 : Amok_15
- Track 12 : Mayweather_17
- Track 13 : GiKK_19
- Track 14 : Vine_17
- Track 15 : SweatNTears_18
- Track 16 : Nina_17
- Track 17 : Orla_18
- Track 18 : CherryonLim_17
- Track 19 : Lauer_15
- Track 20 : Buttrmilkdreams_16
- Track 21 : Yummy_17, Horseradish_17
- Track 22 : Tolls_18
- Track 23 : Button_17
- Track 24 : Hexbug_18
- Track 25 : ChickenTender_18
- Track 26 : SheckWes_15
- Track 27 : Jamzy_19
- Track 28 : Carsonalex_17
- Track 29 : KayGee_16, Elinal_17
- Track 30 : Starburst_17
- Track 31 : Biskit_17, SketchMex_15
- Track 32 : Survivors_18
- Track 33 : RanchParmCat_19
- Track 34 : GoldHunter_17
- Track 35 : SummitAcademy_15
- Track 36 : PotPie_16
- Track 37 : Dre3_16, Gibbous_16

- Track 38 : MunkgeeRoachy_16
- Track 39 : HippoPololi_18
- Track 40 : MAnor_16
- Track 41 : Cleo_16
- Track 42 : Nibbles_18
- Track 43 : BillDoor_18
- Track 44 : Sopespian_16
- Track 45 : Troje_16
- Track 46 : RedBaron_17
- Track 47 : MScarn_18
- Track 48 : Pons_16
- Track 49 : Yucky_18
- Track 50 : Typhonomachy_17
- Track 51 : Zareef_20
- Track 52 : Socotra_17, Axym_16
- Track 53 : MaVan_18
- Track 54 : Emalyn_15
- Track 55 : GTE2_14
- Track 56 : Margaret_19
- Track 57 : Burnsey_16
- Track 58 : Azira_18
- Track 59 : Blondies_16
- Track 60 : Fribs8_17
- Track 61 : PhrostedPhlake_18
- Track 62 : Pipp_17
- Track 63 : Murp_17
- Track 64 : MintFen_17, Melba_17, BlingBling_17, Barco_17
- Track 65 : CaptainKirk2_17, Delian_17, UmaThurman_17
- Track 66 : Mellie_16
- Track 67 : Petra_19
- Track 68 : Guacamole_17, JasperJr_17
- Track 69 : ZiggyZoo_16, Obliviate_16
- Track 70 : PrincePatrick_17
- Track 71 : Walrus_18
- Track 72 : Toast_17
- Track 73 : William_17
- Track 74 : Archis_18
- Track 75 : Hitter_17
- Track 76 : Jalammah_19
- Track 77 : JuJu_17
- Track 78 : KappaFarmDelta_17
- Track 79 : Lysidious_18
- Track 80 : Utz_17
- Track 81 : PCoral7_17
- Track 82 : Zarbodnamra_17
- Track 83 : Fairfaxidum_17
- Track 84 : Whack_16
- Track 85 : REQ2_18

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

The start number called the most often in the published annotations is 20, it was called in 29 of the 84 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_16, Axym_16, Azira_18, Bavidard_16, BigChungus_15, Burnsey_16, Carsonalex_17, CherryonLim_17, ChickenTender_18, Cleo_16, Cozz_16, Dre3_16, Elinal_17, Elliott_16, Feastonyeet_15, Fribs8_17, Gibbous_16, GoldHunter_17, HippoPololi_18, KayGee_16, Lauer_15, MAnor_16, MaVan_18, Mayweather_17, MunkgeeRoachy_16, Nibbles_18, Nina_17, Pons_16, PotPie_16, PsychoKiller_16, Quasar_16, RedBaron_17, SheckWes_15, Socotra_17, Sopespian_16, Starburst_17, SummitAcademy_15, Survivors_18, Typhonmacy_17, Vine_17, Yucky_18, Zareef_20,

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

-

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

- AikoCarson_15, Amok_15, AndPeggy_15, Archis_18, Barco_17, BillDoor_18, Biskit_17, BlingBling_17, Blondies_16, Button_17, Buttrmldreams_16, CanesSauce_16, CaptainKirk2_17, ChocoMunchkin_16, Delian_17, Emalyn_15, Fairfaxidum_17, GTE2_14, GiKK_19, Guacamole_17, Hexbug_18, Hitter_17, Horseradish_17, Jalammah_19, Jamzy_19, JasperJr_17, JuJu_17, KappaFarmDelta_17, Lysidious_18, MScarn_18, Margaret_19, Melba_17, Mellie_16, MintFen_17, Murp_17, Nodigi_18, Oblivate_16, Orla_18, PCoral7_17, Petra_19, PhrostedPhlake_18, Pipp_17, PrincePatrick_17, REQ2_18, RanchParmCat_19, SketchMex_15, SteamedHams_18, SweatNTears_18, Toast_17, Tolls_18, Troje_16, UmaThurman_17, Utz_17, Walrus_18, Whack_16, William_17, Yarn_15, Yummy_17, Zarbodnamra_17, ZiggyZoo_16,

Summary by start number:

Start 1:

- Found in 2 of 102 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ2_18 (singleton), Whack_16 (singleton),

Start 6:

- Found in 1 of 102 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pipp_17 (CV),

Start 7:

- Found in 5 of 102 (4.9%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Toast_17 (CV),

Start 9:

- Found in 30 of 102 (29.4%) of genes in pham

- Manual Annotations of this start: 26 of 84
- Called 86.7% of time when present
- Phage (with cluster) where this start called: Archis_18 (CV), Barco_17 (CV), BlingBling_17 (CV), CaptainKirk2_17 (CV), Delian_17 (CV), Fairfaxidum_17 (CV), Guacamole_17 (CV), Hitter_17 (CV), Jalammah_19 (CV), JasperJr_17 (CV), JuJu_17 (CV), KappaFarmDelta_17 (CV), Lysidious_18 (CV), Melba_17 (CV), Mellie_16 (CV), MintFen_17 (CV), Murp_17 (CV), Obliviate_16 (CV), PCoral7_17 (CV), PhrostedPhlake_18 (CV), PrincePatrick_17 (CV), UmaThurman_17 (CV), Utz_17 (CV), William_17 (CV), Zarbodnamra_17 (CV), ZiggyZoo_16 (CV),

Start 11:

- Found in 28 of 102 (27.5%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 3.6% of time when present
- Phage (with cluster) where this start called: Walrus_18 (CV),

Start 13:

- Found in 25 of 102 (24.5%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 4.0% of time when present
- Phage (with cluster) where this start called: Petra_19 (CV),

Start 20:

- Found in 42 of 102 (41.2%) of genes in pham
- Manual Annotations of this start: 29 of 84
- Called 100.0% 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), Burnsey_16 (CT), Carsonalex_17 (CT), CherryonLim_17 (CT), ChickenTender_18 (CT), Cleo_16 (CT), Cozz_16 (CT), Dre3_16 (CT), Elinal_17 (CT), Elliott_16 (CT), Feastonyeet_15 (CT), Fribs8_17 (CT), Gibbous_16 (CT), GoldHunter_17 (CT), HippoPololi_18 (CT), KayGee_16 (CT), Lauer_15 (CT), MAnor_16 (CT), MaVan_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), RedBaron_17 (CT), SheckWes_15 (CT), Socotra_17 (CT), Sopespian_16 (CT), Starburst_17 (CT), SummitAcademy_15 (CT), Survivors_18 (CT), Typhonmarchy_17 (CT), Vine_17 (CT), Yucky_18 (CT), Zareef_20 (CT),

Start 59:

- Found in 28 of 102 (27.5%) of genes in pham
- Manual Annotations of this start: 23 of 84
- Called 89.3% 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), ChocoMunchkin_16 (CT), Emalyn_15 (CT), GiKK_19 (CT), Hexbug_18 (CT), Horseradish_17 (CT), Jamzy_19 (CT), MScarn_18 (CT), Margaret_19 (CT), Nodigi_18 (CT), Orla_18 (CT), RanchParmCat_19 (CT), SketchMex_15 (CT), SteamedHams_18 (CT), SweatNTears_18 (CT), Tolls_18 (CT), Troje_16 (CT), Yarn_15 (CT), Yummy_17 (CT),

Start 62:

- Found in 27 of 102 (26.5%) of genes in pham
- Manual Annotations of this start: 1 of 84

- Called 3.7% of time when present
- Phage (with cluster) where this start called: Button_17 (CT),

Start 81:

- Found in 47 of 102 (46.1%) of genes in pham
- No Manual Annotations of this start.
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Blondies_16 (CT), GTE2_14 (CT),

Summary by clusters:

There are 3 clusters represented in this pham: singleton, CV, CT,

Info for manual annotations of cluster CT:

- Start number 20 was manually annotated 29 times for cluster CT.
- Start number 59 was manually annotated 23 times for cluster CT.
- Start number 62 was manually annotated 1 time for cluster CT.

Info for manual annotations of 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 26 times for cluster CV.
- Start number 11 was manually annotated 1 time for cluster CV.
- Start number 13 was manually annotated 1 time for cluster CV.

Gene Information:

Gene: Agatha_16 Start: 9629, Stop: 14767, Start Num: 20

Candidate Starts for Agatha_16:

(17, 9605), (Start: 20 @9629 has 29 MA's), (21, 9656), (28, 9785), (31, 9860), (55, 10013), (56, 10016), (68, 10112), (71, 10121), (76, 10151), (78, 10157), (80, 10172), (81, 10175), (84, 10196), (91, 10268), (94, 10289), (104, 10355), (106, 10376), (122, 10493), (148, 10655), (152, 10694), (161, 10769), (177, 10928), (181, 10940), (185, 10967), (189, 11012), (190, 11024), (202, 11114), (205, 11132), (207, 11153), (210, 11183), (215, 11207), (217, 11219), (220, 11258), (224, 11291), (237, 11393), (238, 11396), (241, 11420), (249, 11513), (252, 11528), (256, 11567), (269, 11663), (278, 11705), (284, 11735), (285, 11738), (294, 11846), (295, 11849), (297, 11900), (311, 11975), (319, 12077), (326, 12122), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (352, 12278), (354, 12308), (361, 12356), (363, 12362), (367, 12389), (383, 12524), (398, 12641), (400, 12674), (402, 12695), (403, 12698), (413, 12764), (414, 12770), (416, 12785), (433, 12905), (436, 12914), (447, 12998), (505, 13319), (529, 13538), (534, 13574), (559, 13787), (585, 13979), (594, 14027), (595, 14048), (607, 14156), (614, 14222), (615, 14240), (622, 14345), (624, 14375), (625, 14384), (628, 14414), (633, 14480), (636, 14528), (641, 14588), (652, 14675), (660, 14738),

Gene: AikoCarson_15 Start: 9357, Stop: 14072, Start Num: 59

Candidate Starts for AikoCarson_15:

(Start: 59 @9357 has 23 MA's), (Start: 62 @9384 has 1 MA's), (81, 9513), (90, 9600), (93, 9615), (97, 9660), (100, 9672), (104, 9690), (107, 9717), (119, 9789), (123, 9831), (125, 9846), (126, 9849), (132, 9873), (135, 9891), (138, 9909), (144, 9954), (146, 9963), (151, 9990), (155, 10023), (164, 10083), (167, 10122), (170, 10161), (172, 10176), (185, 10245), (188, 10272), (201, 10368), (203, 10386), (212, 10449), (235, 10617), (237, 10623), (248, 10737), (249, 10743), (252, 10758), (281, 10947), (285, 10968), (287, 10986), (288, 10995), (297, 11130), (311, 11205), (313, 11241), (316, 11280),

(317, 11283), (319, 11307), (324, 11337), (326, 11352), (330, 11376), (336, 11415), (340, 11454), (342, 11460), (367, 11619), (397, 11868), (398, 11871), (400, 11904), (402, 11925), (413, 11994), (414, 12000), (426, 12099), (436, 12144), (447, 12231), (478, 12366), (505, 12558), (515, 12627), (518, 12651), (533, 12792), (555, 13005), (559, 13026), (565, 13083), (598, 13386), (606, 13443), (607, 13461), (614, 13527), (618, 13599), (622, 13650), (623, 13674), (624, 13680), (625, 13689), (628, 13719), (633, 13785), (636, 13833), (641, 13893), (653, 13983), (660, 14043),

Gene: Amok_15 Start: 9357, Stop: 14069, Start Num: 59

Candidate Starts for Amok_15:

(Start: 59 @9357 has 23 MA's), (Start: 62 @9384 has 1 MA's), (81, 9513), (90, 9600), (93, 9615), (97, 9660), (100, 9672), (104, 9690), (107, 9717), (119, 9789), (123, 9831), (125, 9846), (126, 9849), (132, 9873), (135, 9891), (138, 9909), (142, 9930), (144, 9954), (146, 9963), (151, 9990), (155, 10023), (156, 10032), (167, 10122), (170, 10161), (172, 10176), (185, 10245), (188, 10272), (201, 10368), (203, 10386), (212, 10449), (235, 10617), (237, 10623), (248, 10737), (249, 10743), (252, 10758), (281, 10947), (285, 10968), (287, 10986), (288, 10995), (297, 11130), (306, 11184), (311, 11205), (313, 11241), (316, 11280), (317, 11283), (319, 11307), (324, 11337), (326, 11352), (330, 11376), (336, 11415), (340, 11454), (342, 11460), (361, 11586), (366, 11616), (367, 11619), (369, 11637), (370, 11640), (397, 11868), (398, 11871), (400, 11904), (402, 11925), (413, 11994), (414, 12000), (447, 12231), (478, 12366), (505, 12558), (515, 12627), (518, 12651), (533, 12792), (555, 13005), (559, 13026), (565, 13080), (598, 13383), (606, 13440), (607, 13458), (614, 13524), (618, 13596), (622, 13647), (624, 13677), (625, 13686), (628, 13716), (633, 13782), (636, 13830), (641, 13890), (653, 13980), (660, 14040),

Gene: AndPeggy_15 Start: 9645, Stop: 14432, Start Num: 59

Candidate Starts for AndPeggy_15:

(Start: 59 @9645 has 23 MA's), (Start: 62 @9672 has 1 MA's), (73, 9750), (81, 9801), (90, 9888), (93, 9903), (100, 9960), (104, 9978), (107, 10005), (108, 10008), (119, 10077), (125, 10134), (135, 10179), (138, 10197), (144, 10242), (151, 10278), (155, 10311), (162, 10359), (163, 10362), (167, 10410), (170, 10449), (172, 10464), (201, 10656), (203, 10674), (216, 10758), (235, 10905), (240, 10932), (248, 11025), (249, 11031), (252, 11046), (256, 11085), (257, 11097), (266, 11163), (281, 11235), (284, 11253), (285, 11256), (288, 11283), (313, 11529), (319, 11595), (326, 11640), (329, 11661), (330, 11664), (331, 11667), (336, 11703), (340, 11742), (342, 11748), (348, 11775), (366, 11904), (367, 11907), (369, 11925), (384, 12048), (386, 12063), (400, 12192), (402, 12213), (411, 12255), (413, 12282), (414, 12288), (431, 12420), (436, 12432), (447, 12519), (455, 12561), (467, 12597), (492, 12723), (496, 12762), (512, 12891), (519, 12948), (523, 12990), (533, 13083), (536, 13158), (543, 13221), (555, 13302), (559, 13323), (575, 13500), (576, 13506), (597, 13725), (606, 13803), (607, 13821), (608, 13827), (614, 13887), (615, 13905), (617, 13938), (622, 14010), (625, 14049), (628, 14079), (633, 14145), (636, 14193), (641, 14253), (653, 14343), (660, 14403),

Gene: Archis_18 Start: 10485, Stop: 16007, Start Num: 9

Candidate Starts for Archis_18:

(Start: 9 @10485 has 26 MA's), (10, 10500), (Start: 11 @10506 has 1 MA's), (Start: 13 @10536 has 1 MA's), (14, 10545), (15, 10548), (16, 10590), (24, 10701), (25, 10722), (29, 10842), (36, 10884), (46, 10950), (48, 10968), (51, 10989), (52, 10992), (54, 11010), (60, 11034), (69, 11118), (71, 11124), (78, 11160), (80, 11175), (82, 11184), (103, 11352), (106, 11379), (122, 11496), (149, 11667), (152, 11697), (173, 11901), (181, 11946), (185, 11973), (186, 11985), (198, 12075), (202, 12120), (206, 12147), (209, 12177), (220, 12264), (221, 12267), (225, 12306), (234, 12390), (241, 12426), (244, 12468), (248, 12513), (249, 12519), (251, 12531), (252, 12534), (258, 12588), (262, 12627), (265, 12648), (266, 12651), (269, 12669), (270, 12678), (275, 12696), (279, 12717), (281, 12723), (285, 12744), (288, 12771), (293, 12849), (317, 13038), (319, 13062), (320, 13074), (321, 13077), (324, 13092), (326, 13107), (327, 13110), (335, 13161), (347, 13242), (348, 13245), (371, 13278), (374, 13308), (376, 13332), (417, 13665), (423, 13713), (427, 13758), (428, 13761), (430, 13776), (437, 13821), (438, 13830), (439, 13839), (448, 13890), (462, 13962), (466, 13980), (473, 14001), (486,

14100), (487, 14103), (493, 14136), (501, 14202), (502, 14220), (503, 14235), (506, 14268), (514, 14319), (520, 14370), (524, 14418), (539, 14613), (540, 14616), (548, 14688), (549, 14691), (561, 14757), (562, 14760), (563, 14778), (567, 14838), (570, 14895), (573, 14913), (579, 14994), (580, 14997), (582, 15012), (595, 15171), (599, 15225), (607, 15291), (612, 15345), (613, 15357), (614, 15363), (616, 15393), (622, 15486), (623, 15510), (626, 15528), (628, 15552), (629, 15558), (631, 15579), (633, 15618), (642, 15759), (651, 15822), (654, 15840), (659, 15897), (662, 15990),

Gene: Axym_16 Start: 9629, Stop: 14767, Start Num: 20

Candidate Starts for Axym_16:

(17, 9605), (Start: 20 @9629 has 29 MA's), (21, 9656), (28, 9785), (31, 9860), (55, 10013), (56, 10016), (68, 10112), (71, 10121), (76, 10151), (78, 10157), (80, 10172), (81, 10175), (84, 10196), (91, 10268), (94, 10289), (104, 10355), (106, 10376), (122, 10493), (148, 10655), (152, 10694), (161, 10769), (177, 10928), (181, 10940), (185, 10967), (189, 11012), (190, 11024), (202, 11114), (205, 11132), (207, 11153), (210, 11183), (215, 11207), (217, 11219), (220, 11258), (224, 11291), (237, 11393), (238, 11396), (241, 11420), (249, 11513), (252, 11528), (256, 11567), (262, 11621), (269, 11663), (271, 11675), (278, 11705), (284, 11735), (285, 11738), (294, 11846), (295, 11849), (297, 11900), (311, 11975), (318, 12065), (319, 12077), (326, 12122), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (352, 12278), (354, 12308), (361, 12356), (363, 12362), (367, 12389), (383, 12524), (398, 12641), (400, 12674), (402, 12695), (403, 12698), (413, 12764), (414, 12770), (416, 12785), (433, 12905), (436, 12914), (447, 12998), (505, 13319), (529, 13538), (534, 13574), (559, 13787), (585, 13979), (594, 14027), (595, 14048), (607, 14156), (614, 14222), (615, 14240), (619, 14300), (622, 14345), (624, 14375), (625, 14384), (628, 14414), (633, 14480), (636, 14528), (641, 14588), (652, 14675), (660, 14738),

Gene: Azira_18 Start: 10619, Stop: 15748, Start Num: 20

Candidate Starts for Azira_18:

(18, 10598), (Start: 20 @10619 has 29 MA's), (21, 10646), (28, 10775), (36, 10871), (43, 10922), (53, 10979), (57, 11012), (58, 11015), (68, 11102), (72, 11114), (80, 11162), (81, 11165), (82, 11171), (87, 11225), (88, 11231), (94, 11279), (104, 11345), (106, 11366), (161, 11759), (162, 11762), (170, 11864), (181, 11930), (182, 11936), (185, 11957), (209, 12161), (211, 12179), (213, 12185), (215, 12197), (217, 12209), (220, 12248), (222, 12260), (227, 12296), (231, 12353), (235, 12377), (237, 12383), (249, 12503), (252, 12518), (256, 12557), (265, 12632), (271, 12665), (275, 12680), (276, 12686), (277, 12692), (285, 12728), (294, 12836), (300, 12908), (310, 12962), (319, 13067), (326, 13112), (330, 13136), (338, 13196), (339, 13208), (340, 13214), (346, 13241), (347, 13244), (348, 13247), (359, 13340), (361, 13346), (369, 13397), (376, 13466), (381, 13499), (383, 13514), (384, 13520), (391, 13577), (393, 13589), (397, 13628), (398, 13631), (399, 13652), (400, 13664), (402, 13685), (403, 13688), (411, 13727), (412, 13739), (413, 13754), (433, 13895), (447, 13991), (461, 14057), (469, 14078), (474, 14084), (505, 14321), (510, 14351), (515, 14390), (528, 14525), (533, 14555), (534, 14576), (551, 14735), (555, 14768), (585, 14981), (592, 14999), (594, 15005), (607, 15134), (614, 15200), (617, 15251), (622, 15323), (625, 15362), (628, 15392), (632, 15425), (633, 15458), (638, 15530), (645, 15602), (652, 15656), (655, 15662), (660, 15719),

Gene: Barco_17 Start: 10274, Stop: 15796, Start Num: 9

Candidate Starts for Barco_17:

(Start: 9 @10274 has 26 MA's), (10, 10289), (Start: 11 @10295 has 1 MA's), (Start: 13 @10325 has 1 MA's), (14, 10334), (15, 10337), (16, 10379), (24, 10490), (25, 10511), (29, 10631), (36, 10673), (46, 10739), (48, 10757), (51, 10778), (52, 10781), (54, 10799), (60, 10823), (69, 10907), (70, 10910), (78, 10949), (80, 10964), (82, 10973), (103, 11141), (106, 11168), (122, 11285), (149, 11456), (152, 11486), (173, 11690), (181, 11735), (185, 11762), (186, 11774), (198, 11864), (202, 11909), (206, 11936), (209, 11966), (220, 12053), (221, 12056), (225, 12095), (234, 12179), (241, 12215), (244, 12257), (248, 12302), (249, 12308), (251, 12320), (252, 12323), (258, 12377), (262, 12416), (265, 12437), (266, 12440), (269, 12458), (270, 12467), (275, 12485), (279, 12506), (281, 12512), (285, 12533), (288, 12560), (293, 12638), (317, 12827), (319, 12851), (320, 12863), (321, 12866), (324,

12881), (326, 12896), (327, 12899), (335, 12950), (347, 13031), (348, 13034), (371, 13067), (374, 13097), (376, 13121), (417, 13454), (423, 13502), (427, 13547), (428, 13550), (430, 13565), (437, 13610), (438, 13619), (439, 13628), (448, 13679), (462, 13751), (466, 13769), (473, 13790), (486, 13889), (487, 13892), (493, 13925), (501, 13991), (502, 14009), (503, 14024), (506, 14057), (514, 14108), (520, 14159), (524, 14207), (539, 14402), (540, 14405), (548, 14477), (549, 14480), (561, 14546), (562, 14549), (563, 14567), (567, 14627), (570, 14684), (573, 14702), (579, 14783), (580, 14786), (582, 14801), (599, 15014), (607, 15080), (612, 15134), (613, 15146), (614, 15152), (622, 15275), (623, 15299), (626, 15317), (628, 15341), (629, 15347), (631, 15368), (633, 15407), (642, 15548), (644, 15560), (651, 15611), (654, 15629), (662, 15779),

Gene: Bavilard_16 Start: 10158, Stop: 15257, Start Num: 20

Candidate Starts for Bavilard_16:

(Start: 20 @10158 has 29 MA's), (28, 10314), (41, 10443), (45, 10473), (51, 10515), (55, 10542), (64, 10590), (68, 10641), (71, 10650), (78, 10686), (82, 10710), (88, 10770), (95, 10824), (99, 10863), (101, 10869), (104, 10884), (106, 10905), (128, 11064), (131, 11076), (142, 11139), (148, 11184), (157, 11265), (173, 11424), (177, 11457), (181, 11469), (185, 11496), (190, 11553), (194, 11583), (197, 11595), (208, 11697), (209, 11700), (220, 11787), (226, 11832), (227, 11835), (241, 11949), (249, 12042), (252, 12057), (254, 12078), (258, 12111), (260, 12141), (263, 12153), (269, 12192), (274, 12216), (275, 12219), (280, 12243), (285, 12267), (293, 12372), (299, 12420), (303, 12450), (307, 12465), (310, 12480), (313, 12519), (317, 12561), (319, 12585), (321, 12600), (324, 12615), (326, 12630), (330, 12654), (336, 12693), (337, 12708), (338, 12714), (341, 12735), (346, 12759), (348, 12765), (365, 12891), (371, 12921), (373, 12957), (374, 12960), (379, 13008), (382, 13029), (383, 13032), (392, 13104), (398, 13149), (400, 13182), (402, 13203), (412, 13257), (421, 13332), (436, 13416), (447, 13503), (491, 13689), (505, 13821), (510, 13851), (527, 13989), (531, 14040), (534, 14070), (542, 14175), (551, 14226), (555, 14256), (581, 14436), (586, 14487), (594, 14529), (595, 14550), (607, 14646), (614, 14712), (622, 14835), (623, 14859), (625, 14874), (628, 14904), (631, 14931), (632, 14937), (633, 14970), (637, 15039), (638, 15042), (641, 15078), (653, 15168),

Gene: BigChungus_15 Start: 9403, Stop: 14511, Start Num: 20

Candidate Starts for BigChungus_15:

(Start: 20 @9403 has 29 MA's), (28, 9559), (41, 9688), (45, 9718), (55, 9787), (58, 9799), (64, 9835), (68, 9886), (71, 9895), (78, 9931), (82, 9955), (88, 10015), (95, 10069), (99, 10108), (101, 10114), (104, 10129), (106, 10150), (131, 10321), (142, 10384), (148, 10429), (157, 10510), (173, 10669), (177, 10702), (181, 10714), (185, 10741), (190, 10798), (194, 10828), (197, 10840), (208, 10942), (209, 10945), (220, 11032), (227, 11080), (241, 11194), (249, 11287), (252, 11302), (254, 11323), (258, 11356), (260, 11386), (263, 11398), (269, 11437), (274, 11461), (275, 11464), (280, 11488), (285, 11512), (293, 11617), (303, 11695), (310, 11725), (311, 11728), (313, 11764), (317, 11806), (319, 11830), (321, 11845), (324, 11860), (326, 11875), (330, 11899), (336, 11938), (337, 11953), (338, 11959), (346, 12004), (348, 12010), (365, 12136), (371, 12166), (373, 12202), (374, 12205), (379, 12253), (382, 12274), (383, 12277), (392, 12349), (398, 12394), (400, 12427), (402, 12448), (412, 12502), (421, 12577), (436, 12661), (447, 12748), (505, 13066), (510, 13096), (527, 13234), (531, 13285), (534, 13315), (551, 13480), (555, 13510), (581, 13690), (586, 13741), (594, 13783), (595, 13804), (607, 13900), (611, 13948), (614, 13966), (622, 14089), (623, 14113), (625, 14128), (628, 14158), (631, 14185), (632, 14191), (633, 14224), (637, 14293), (638, 14296), (641, 14332), (653, 14422),

Gene: BillDoor_18 Start: 9610, Stop: 14400, Start Num: 59

Candidate Starts for BillDoor_18:

(Start: 59 @9610 has 23 MA's), (Start: 62 @9637 has 1 MA's), (73, 9715), (81, 9766), (90, 9853), (93, 9868), (100, 9925), (104, 9943), (107, 9970), (108, 9973), (119, 10042), (125, 10099), (135, 10144), (138, 10162), (144, 10207), (151, 10243), (155, 10276), (162, 10324), (163, 10327), (167, 10375), (170, 10414), (172, 10429), (201, 10621), (203, 10639), (216, 10723), (235, 10870), (240, 10897), (248, 10990), (249, 10996), (252, 11011), (256, 11050), (257, 11062), (266, 11128), (281, 11200),

(284, 11218), (285, 11221), (288, 11248), (297, 11383), (311, 11458), (313, 11494), (319, 11560), (326, 11605), (329, 11626), (330, 11629), (331, 11632), (336, 11668), (340, 11707), (342, 11713), (348, 11740), (366, 11869), (367, 11872), (369, 11890), (384, 12013), (386, 12028), (400, 12157), (402, 12178), (411, 12220), (413, 12247), (414, 12253), (431, 12385), (436, 12397), (447, 12484), (455, 12526), (467, 12562), (492, 12688), (496, 12727), (512, 12856), (519, 12913), (523, 12958), (533, 13051), (536, 13126), (543, 13189), (555, 13270), (559, 13291), (575, 13468), (576, 13474), (597, 13693), (606, 13771), (607, 13789), (608, 13795), (614, 13855), (615, 13873), (617, 13906), (622, 13978), (625, 14017), (628, 14047), (633, 14113), (636, 14161), (641, 14221), (653, 14311), (660, 14371),

Gene: Biskit_17 Start: 9616, Stop: 14415, Start Num: 59

Candidate Starts for Biskit_17:

(Start: 59 @9616 has 23 MA's), (Start: 62 @9643 has 1 MA's), (81, 9772), (93, 9874), (97, 9919), (100, 9931), (104, 9949), (107, 9976), (108, 9979), (110, 9994), (118, 10045), (119, 10048), (125, 10105), (126, 10108), (135, 10150), (138, 10168), (144, 10213), (151, 10249), (155, 10282), (159, 10315), (160, 10327), (167, 10381), (170, 10420), (172, 10435), (175, 10444), (179, 10471), (187, 10522), (192, 10564), (194, 10582), (197, 10591), (203, 10645), (212, 10708), (215, 10723), (222, 10786), (235, 10876), (240, 10903), (248, 10996), (249, 11002), (252, 11017), (256, 11056), (266, 11134), (272, 11167), (281, 11206), (284, 11224), (285, 11227), (288, 11254), (291, 11311), (293, 11332), (298, 11395), (303, 11431), (306, 11443), (311, 11464), (313, 11500), (317, 11542), (318, 11554), (319, 11566), (326, 11611), (327, 11614), (329, 11632), (330, 11635), (331, 11638), (340, 11713), (342, 11719), (348, 11746), (355, 11806), (357, 11821), (365, 11872), (366, 11875), (367, 11878), (369, 11896), (380, 11995), (382, 12010), (383, 12013), (400, 12163), (402, 12184), (411, 12226), (413, 12253), (414, 12259), (431, 12391), (436, 12403), (447, 12490), (455, 12532), (467, 12568), (484, 12643), (492, 12694), (496, 12733), (504, 12811), (512, 12862), (519, 12919), (533, 13057), (536, 13132), (555, 13276), (559, 13297), (575, 13474), (576, 13480), (607, 13804), (608, 13810), (614, 13870), (615, 13888), (617, 13921), (622, 13993), (625, 14032), (628, 14062), (633, 14128), (636, 14176), (641, 14236), (653, 14326), (660, 14386),

Gene: BlingBling_17 Start: 10274, Stop: 15796, Start Num: 9

Candidate Starts for BlingBling_17:

(Start: 9 @10274 has 26 MA's), (10, 10289), (Start: 11 @10295 has 1 MA's), (Start: 13 @10325 has 1 MA's), (14, 10334), (15, 10337), (16, 10379), (24, 10490), (25, 10511), (29, 10631), (36, 10673), (46, 10739), (48, 10757), (51, 10778), (52, 10781), (54, 10799), (60, 10823), (69, 10907), (70, 10910), (78, 10949), (80, 10964), (82, 10973), (103, 11141), (106, 11168), (122, 11285), (149, 11456), (152, 11486), (173, 11690), (181, 11735), (185, 11762), (186, 11774), (198, 11864), (202, 11909), (206, 11936), (209, 11966), (220, 12053), (221, 12056), (225, 12095), (234, 12179), (241, 12215), (244, 12257), (248, 12302), (249, 12308), (251, 12320), (252, 12323), (258, 12377), (262, 12416), (265, 12437), (266, 12440), (269, 12458), (270, 12467), (275, 12485), (279, 12506), (281, 12512), (285, 12533), (288, 12560), (293, 12638), (317, 12827), (319, 12851), (320, 12863), (321, 12866), (324, 12881), (326, 12896), (327, 12899), (335, 12950), (347, 13031), (348, 13034), (371, 13067), (374, 13097), (376, 13121), (417, 13454), (423, 13502), (427, 13547), (428, 13550), (430, 13565), (437, 13610), (438, 13619), (439, 13628), (448, 13679), (462, 13751), (466, 13769), (473, 13790), (486, 13889), (487, 13892), (493, 13925), (501, 13991), (502, 14009), (503, 14024), (506, 14057), (514, 14108), (520, 14159), (524, 14207), (539, 14402), (540, 14405), (548, 14477), (549, 14480), (561, 14546), (562, 14549), (563, 14567), (567, 14627), (570, 14684), (573, 14702), (579, 14783), (580, 14786), (582, 14801), (599, 15014), (607, 15080), (612, 15134), (613, 15146), (614, 15152), (622, 15275), (623, 15299), (626, 15317), (628, 15341), (629, 15347), (631, 15368), (633, 15407), (642, 15548), (644, 15560), (651, 15611), (654, 15629), (662, 15779),

Gene: Blondies_16 Start: 9758, Stop: 14398, Start Num: 81

Candidate Starts for Blondies_16:

(Start: 59 @9602 has 23 MA's), (Start: 62 @9629 has 1 MA's), (64, 9635), (81, 9758), (93, 9860), (97, 9905), (100, 9917), (104, 9935), (107, 9962), (108, 9965), (110, 9980), (118, 10031), (119, 10034), (125, 10091), (126, 10094), (127, 10097), (135, 10136), (138, 10154), (144, 10199), (151, 10235), (155, 10268), (159, 10301), (160, 10313), (167, 10367), (170, 10406), (172, 10421), (175, 10430), (179, 10457), (187, 10508), (194, 10568), (197, 10577), (203, 10631), (212, 10694), (215, 10709), (222, 10772), (235, 10862), (240, 10889), (248, 10982), (249, 10988), (252, 11003), (256, 11042), (266, 11120), (272, 11153), (281, 11192), (284, 11210), (285, 11213), (288, 11240), (291, 11297), (293, 11318), (298, 11381), (306, 11429), (311, 11450), (313, 11486), (317, 11528), (319, 11552), (326, 11597), (327, 11600), (329, 11618), (330, 11621), (331, 11624), (340, 11699), (342, 11705), (348, 11732), (355, 11792), (365, 11858), (366, 11861), (367, 11864), (369, 11882), (380, 11981), (382, 11996), (383, 11999), (400, 12149), (402, 12170), (411, 12212), (413, 12239), (414, 12245), (431, 12377), (436, 12389), (447, 12476), (455, 12518), (467, 12554), (484, 12629), (492, 12680), (496, 12719), (512, 12848), (519, 12905), (533, 13043), (536, 13118), (555, 13262), (559, 13283), (575, 13457), (576, 13463), (607, 13787), (608, 13793), (614, 13853), (615, 13871), (617, 13904), (622, 13976), (625, 14015), (628, 14045), (633, 14111), (636, 14159), (641, 14219), (653, 14309), (660, 14369),

Gene: Burnsey_16 Start: 9630, Stop: 14768, Start Num: 20

Candidate Starts for Burnsey_16:

(17, 9606), (Start: 20 @9630 has 29 MA's), (21, 9657), (28, 9786), (31, 9861), (55, 10014), (56, 10017), (68, 10113), (71, 10122), (76, 10152), (78, 10158), (80, 10173), (81, 10176), (84, 10197), (94, 10290), (104, 10356), (106, 10377), (122, 10494), (148, 10656), (152, 10695), (161, 10770), (177, 10929), (181, 10941), (185, 10968), (189, 11013), (190, 11025), (202, 11115), (205, 11133), (207, 11154), (210, 11184), (215, 11208), (217, 11220), (220, 11259), (224, 11292), (237, 11394), (238, 11397), (241, 11421), (249, 11514), (252, 11529), (256, 11568), (269, 11664), (277, 11703), (278, 11706), (285, 11739), (294, 11847), (295, 11850), (297, 11901), (311, 11976), (319, 12078), (326, 12123), (329, 12144), (330, 12147), (331, 12150), (340, 12225), (348, 12258), (352, 12279), (354, 12309), (361, 12357), (363, 12363), (367, 12390), (383, 12525), (398, 12642), (400, 12675), (402, 12696), (403, 12699), (413, 12765), (414, 12771), (416, 12786), (433, 12906), (436, 12915), (447, 12999), (505, 13320), (529, 13539), (534, 13575), (559, 13788), (585, 13980), (594, 14028), (595, 14049), (607, 14157), (614, 14223), (615, 14241), (619, 14301), (622, 14346), (624, 14376), (625, 14385), (628, 14415), (633, 14481), (636, 14529), (641, 14589), (652, 14676), (660, 14739),

Gene: Button_17 Start: 9644, Stop: 13834, Start Num: 62

Candidate Starts for Button_17:

(Start: 59 @9617 has 23 MA's), (Start: 62 @9644 has 1 MA's), (95, 9890), (104, 9953), (113, 10010), (117, 10037), (120, 10079), (129, 10142), (133, 10157), (136, 10175), (138, 10193), (140, 10205), (144, 10238), (151, 10280), (153, 10295), (166, 10400), (167, 10424), (169, 10463), (175, 10487), (177, 10514), (184, 10544), (187, 10565), (193, 10619), (197, 10634), (214, 10763), (228, 10895), (230, 10904), (235, 10940), (252, 11081), (254, 11102), (258, 11135), (259, 11153), (261, 11171), (269, 11216), (281, 11270), (285, 11291), (299, 11354), (308, 11402), (310, 11414), (313, 11453), (318, 11507), (321, 11534), (323, 11540), (326, 11564), (327, 11567), (336, 11627), (339, 11660), (348, 11699), (351, 11717), (352, 11720), (374, 11762), (375, 11774), (378, 11807), (382, 11831), (386, 11855), (387, 11858), (399, 11972), (400, 11984), (404, 12014), (406, 12023), (408, 12029), (431, 12182), (442, 12242), (445, 12251), (447, 12257), (453, 12293), (490, 12425), (505, 12563), (509, 12587), (530, 12785), (532, 12788), (544, 12950), (550, 12974), (551, 12977), (577, 13079), (601, 13184), (609, 13256), (611, 13280), (613, 13292), (615, 13316), (616, 13328), (621, 13412), (622, 13418), (626, 13460), (628, 13481), (632, 13514), (633, 13547), (635, 13568), (636, 13595), (641, 13655), (644, 13682), (645, 13691), (646, 13703), (660, 13805),

Gene: Buttrmlkdreams_16 Start: 9601, Stop: 14397, Start Num: 59

Candidate Starts for Buttrmlkdreams_16:

(Start: 59 @9601 has 23 MA's), (Start: 62 @9628 has 1 MA's), (64, 9634), (81, 9757), (93, 9859), (97, 9904), (100, 9916), (104, 9934), (107, 9961), (108, 9964), (110, 9979), (118, 10030), (119, 10033), (125, 10090), (126, 10093), (135, 10135), (138, 10153), (144, 10198), (151, 10234), (155, 10267), (159, 10300), (160, 10312), (167, 10366), (170, 10405), (172, 10420), (175, 10429), (179, 10456), (187, 10507), (194, 10567), (197, 10576), (203, 10630), (212, 10693), (215, 10708), (235, 10861), (240, 10888), (246, 10969), (248, 10981), (249, 10987), (252, 11002), (255, 11032), (256, 11041), (266, 11119), (272, 11152), (281, 11191), (284, 11209), (285, 11212), (288, 11239), (291, 11296), (293, 11317), (298, 11380), (306, 11428), (311, 11449), (313, 11485), (317, 11527), (319, 11551), (326, 11596), (327, 11599), (329, 11617), (330, 11620), (331, 11623), (340, 11698), (342, 11704), (348, 11731), (355, 11791), (365, 11857), (366, 11860), (367, 11863), (369, 11881), (380, 11980), (382, 11995), (383, 11998), (400, 12148), (402, 12169), (411, 12211), (413, 12238), (414, 12244), (436, 12388), (447, 12475), (455, 12517), (467, 12553), (484, 12628), (492, 12679), (496, 12718), (512, 12847), (519, 12904), (533, 13042), (536, 13117), (555, 13261), (559, 13282), (575, 13456), (576, 13462), (607, 13786), (608, 13792), (614, 13852), (617, 13903), (622, 13975), (625, 14014), (628, 14044), (633, 14110), (636, 14158), (641, 14218), (653, 14308), (660, 14368),

Gene: CanesSauce_16 Start: 9646, Stop: 14433, Start Num: 59

Candidate Starts for CanesSauce_16:

(Start: 59 @9646 has 23 MA's), (Start: 62 @9673 has 1 MA's), (73, 9751), (81, 9802), (90, 9889), (93, 9904), (100, 9961), (104, 9979), (107, 10006), (108, 10009), (119, 10078), (125, 10135), (135, 10180), (138, 10198), (144, 10243), (151, 10279), (155, 10312), (162, 10360), (163, 10363), (167, 10411), (170, 10450), (172, 10465), (201, 10657), (203, 10675), (216, 10759), (235, 10906), (240, 10933), (248, 11026), (249, 11032), (252, 11047), (256, 11086), (257, 11098), (266, 11164), (281, 11236), (284, 11254), (285, 11257), (288, 11284), (313, 11530), (319, 11596), (326, 11641), (329, 11662), (330, 11665), (331, 11668), (336, 11704), (340, 11743), (342, 11749), (348, 11776), (366, 11905), (367, 11908), (369, 11926), (384, 12049), (386, 12064), (400, 12193), (402, 12214), (411, 12256), (413, 12283), (414, 12289), (431, 12421), (436, 12433), (447, 12520), (455, 12562), (467, 12598), (492, 12724), (496, 12763), (512, 12892), (519, 12949), (523, 12991), (533, 13084), (536, 13159), (543, 13222), (555, 13303), (559, 13324), (575, 13501), (576, 13507), (597, 13726), (606, 13804), (607, 13822), (608, 13828), (614, 13888), (615, 13906), (617, 13939), (622, 14011), (625, 14050), (628, 14080), (633, 14146), (636, 14194), (641, 14254), (653, 14344), (660, 14404),

Gene: CaptainKirk2_17 Start: 10277, Stop: 15820, Start Num: 9

Candidate Starts for CaptainKirk2_17:

(Start: 9 @10277 has 26 MA's), (10, 10292), (Start: 11 @10298 has 1 MA's), (Start: 13 @10328 has 1 MA's), (14, 10337), (15, 10340), (16, 10382), (24, 10493), (25, 10514), (46, 10742), (48, 10760), (50, 10775), (51, 10781), (52, 10784), (54, 10802), (60, 10826), (69, 10910), (70, 10913), (78, 10952), (80, 10967), (82, 10976), (103, 11144), (106, 11171), (152, 11489), (173, 11693), (181, 11738), (182, 11744), (185, 11765), (186, 11777), (198, 11867), (202, 11912), (206, 11939), (209, 11969), (220, 12056), (221, 12059), (225, 12098), (241, 12218), (244, 12260), (248, 12305), (249, 12311), (252, 12326), (258, 12380), (262, 12419), (265, 12440), (266, 12443), (269, 12461), (270, 12470), (279, 12509), (281, 12515), (285, 12536), (288, 12563), (310, 12770), (314, 12836), (319, 12875), (321, 12890), (326, 12920), (327, 12923), (335, 12974), (347, 13055), (348, 13058), (371, 13091), (374, 13121), (376, 13145), (417, 13478), (423, 13526), (427, 13571), (428, 13574), (430, 13589), (437, 13634), (438, 13643), (439, 13652), (448, 13703), (462, 13775), (466, 13793), (473, 13814), (486, 13913), (487, 13916), (493, 13949), (501, 14015), (502, 14033), (503, 14048), (506, 14081), (514, 14132), (520, 14183), (524, 14231), (539, 14426), (540, 14429), (548, 14501), (549, 14504), (561, 14570), (562, 14573), (563, 14591), (567, 14651), (570, 14708), (573, 14726), (579, 14807), (580, 14810), (582, 14825), (595, 14984), (599, 15038), (607, 15104), (612, 15158), (613, 15170), (614, 15176), (622, 15299), (623, 15323), (626, 15341), (628, 15365), (629, 15371), (631, 15392), (633, 15431), (642, 15572), (644, 15584), (651, 15635), (654, 15653), (662, 15803),

Gene: Carsonalex_17 Start: 9687, Stop: 14825, Start Num: 20

Candidate Starts for Carsonalex_17:

(17, 9663), (Start: 20 @9687 has 29 MA's), (21, 9714), (28, 9843), (31, 9918), (55, 10071), (56, 10074), (68, 10170), (71, 10179), (76, 10209), (78, 10215), (80, 10230), (81, 10233), (84, 10254), (91, 10326), (94, 10347), (104, 10413), (106, 10434), (122, 10551), (148, 10713), (152, 10752), (161, 10827), (185, 11025), (199, 11133), (207, 11211), (209, 11229), (211, 11247), (220, 11316), (222, 11328), (226, 11361), (240, 11472), (241, 11478), (249, 11571), (252, 11586), (269, 11721), (276, 11754), (285, 11796), (294, 11904), (297, 11958), (310, 12030), (311, 12033), (319, 12135), (326, 12180), (328, 12189), (329, 12201), (330, 12204), (331, 12207), (340, 12282), (341, 12285), (342, 12288), (343, 12300), (346, 12309), (348, 12315), (353, 12357), (354, 12366), (361, 12414), (367, 12447), (383, 12582), (398, 12699), (400, 12732), (402, 12753), (413, 12822), (414, 12828), (433, 12963), (436, 12972), (447, 13056), (505, 13377), (529, 13596), (534, 13632), (559, 13845), (585, 14037), (594, 14085), (595, 14106), (607, 14214), (614, 14280), (615, 14298), (619, 14358), (622, 14403), (624, 14433), (625, 14442), (628, 14472), (633, 14538), (636, 14586), (641, 14646), (652, 14733), (660, 14796),

Gene: CherryonLim_17 Start: 10133, Stop: 15220, Start Num: 20

Candidate Starts for CherryonLim_17:

(Start: 20 @10133 has 29 MA's), (28, 10289), (41, 10418), (51, 10490), (55, 10517), (64, 10565), (66, 10574), (68, 10616), (70, 10622), (71, 10625), (78, 10661), (82, 10685), (85, 10712), (95, 10799), (99, 10838), (101, 10844), (104, 10859), (106, 10880), (115, 10934), (131, 11051), (142, 11114), (148, 11159), (157, 11240), (173, 11402), (176, 11411), (177, 11435), (181, 11447), (185, 11474), (186, 11486), (190, 11531), (194, 11561), (197, 11573), (208, 11675), (209, 11678), (220, 11765), (223, 11792), (233, 11882), (238, 11903), (241, 11927), (245, 11978), (249, 12020), (252, 12035), (253, 12044), (254, 12056), (258, 12089), (263, 12131), (273, 12191), (274, 12194), (275, 12197), (276, 12203), (280, 12221), (285, 12245), (289, 12308), (291, 12329), (293, 12350), (299, 12398), (303, 12428), (309, 12455), (310, 12458), (317, 12539), (318, 12551), (319, 12563), (321, 12578), (326, 12608), (329, 12629), (330, 12632), (338, 12692), (341, 12713), (346, 12737), (348, 12743), (358, 12827), (365, 12869), (371, 12899), (374, 12938), (379, 12986), (382, 13007), (383, 13010), (384, 13016), (392, 13082), (398, 13127), (400, 13160), (402, 13181), (412, 13235), (433, 13385), (436, 13394), (447, 13481), (489, 13658), (505, 13799), (510, 13829), (527, 13967), (534, 14048), (551, 14201), (555, 14231), (584, 14441), (585, 14450), (586, 14456), (594, 14492), (607, 14609), (608, 14615), (611, 14657), (614, 14675), (622, 14798), (623, 14822), (625, 14837), (628, 14867), (631, 14894), (632, 14900), (633, 14933), (637, 15002), (638, 15005), (641, 15041), (650, 15113), (653, 15131),

Gene: ChickenTender_18 Start: 9679, Stop: 14817, Start Num: 20

Candidate Starts for ChickenTender_18:

(Start: 20 @9679 has 29 MA's), (21, 9706), (28, 9835), (31, 9910), (55, 10063), (56, 10066), (68, 10162), (71, 10171), (76, 10201), (78, 10207), (80, 10222), (81, 10225), (84, 10246), (91, 10318), (94, 10339), (104, 10405), (106, 10426), (122, 10543), (148, 10705), (152, 10744), (177, 10978), (181, 10990), (185, 11017), (202, 11164), (207, 11203), (215, 11257), (217, 11269), (220, 11308), (224, 11341), (237, 11443), (238, 11446), (241, 11470), (245, 11521), (249, 11563), (252, 11578), (256, 11617), (269, 11713), (278, 11755), (285, 11788), (294, 11896), (297, 11950), (311, 12025), (319, 12127), (326, 12172), (330, 12196), (331, 12199), (338, 12256), (340, 12274), (348, 12307), (352, 12328), (354, 12358), (361, 12406), (363, 12412), (367, 12439), (383, 12574), (398, 12691), (400, 12724), (402, 12745), (413, 12814), (414, 12820), (436, 12964), (447, 13048), (505, 13369), (529, 13588), (533, 13603), (534, 13624), (556, 13825), (559, 13837), (594, 14077), (595, 14098), (607, 14206), (614, 14272), (615, 14290), (622, 14395), (623, 14419), (624, 14425), (625, 14434), (628, 14464), (633, 14530), (636, 14578), (641, 14638), (652, 14725), (660, 14788),

Gene: ChocoMunchkin_16 Start: 9646, Stop: 14433, Start Num: 59

Candidate Starts for ChocoMunchkin_16:

(Start: 59 @9646 has 23 MA's), (Start: 62 @9673 has 1 MA's), (73, 9751), (81, 9802), (90, 9889), (93, 9904), (100, 9961), (104, 9979), (107, 10006), (108, 10009), (119, 10078), (125, 10135), (135, 10180), (138, 10198), (144, 10243), (151, 10279), (155, 10312), (162, 10360), (163, 10363), (167, 10411), (170, 10450), (172, 10465), (201, 10657), (203, 10675), (216, 10759), (235, 10906), (240, 10933), (248, 11026), (249, 11032), (252, 11047), (256, 11086), (257, 11098), (266, 11164), (281, 11236), (284, 11254), (285, 11257), (288, 11284), (313, 11530), (319, 11596), (326, 11641), (329, 11662), (330, 11665), (331, 11668), (336, 11704), (340, 11743), (342, 11749), (348, 11776), (366, 11905), (367, 11908), (369, 11926), (384, 12049), (386, 12064), (400, 12193), (402, 12214), (411, 12256), (413, 12283), (414, 12289), (431, 12421), (436, 12433), (447, 12520), (455, 12562), (467, 12598), (492, 12724), (496, 12763), (512, 12892), (519, 12949), (523, 12991), (533, 13084), (536, 13159), (543, 13222), (555, 13303), (559, 13324), (575, 13501), (576, 13507), (597, 13726), (606, 13804), (607, 13822), (608, 13828), (614, 13888), (615, 13906), (617, 13939), (622, 14011), (625, 14050), (628, 14080), (633, 14146), (636, 14194), (641, 14254), (653, 14344), (660, 14404),

Gene: Cleo_16 Start: 9909, Stop: 15023, Start Num: 20

Candidate Starts for Cleo_16:

(18, 9888), (Start: 20 @9909 has 29 MA's), (21, 9936), (28, 10065), (33, 10149), (36, 10161), (43, 10212), (49, 10245), (53, 10269), (57, 10302), (68, 10392), (80, 10452), (81, 10455), (88, 10521), (92, 10557), (94, 10569), (102, 10626), (104, 10635), (106, 10656), (154, 10995), (162, 11052), (170, 11154), (181, 11220), (182, 11226), (185, 11247), (202, 11394), (209, 11451), (211, 11469), (214, 11484), (217, 11499), (220, 11538), (231, 11643), (235, 11667), (237, 11673), (247, 11784), (249, 11793), (252, 11808), (256, 11847), (269, 11943), (275, 11970), (276, 11976), (277, 11982), (284, 12015), (285, 12018), (294, 12126), (296, 12165), (300, 12198), (304, 12228), (305, 12231), (310, 12252), (311, 12255), (319, 12357), (326, 12402), (330, 12426), (331, 12429), (346, 12531), (347, 12534), (348, 12537), (354, 12588), (361, 12636), (363, 12642), (369, 12687), (383, 12804), (384, 12810), (391, 12867), (398, 12921), (399, 12942), (400, 12954), (402, 12975), (403, 12978), (413, 13044), (414, 13050), (433, 13185), (441, 13251), (447, 13278), (467, 13356), (505, 13596), (510, 13626), (528, 13800), (533, 13830), (534, 13851), (542, 13959), (547, 13995), (555, 14043), (594, 14280), (606, 14391), (607, 14409), (614, 14475), (617, 14526), (622, 14598), (624, 14628), (625, 14637), (626, 14640), (628, 14667), (631, 14694), (633, 14733), (636, 14781), (641, 14841), (645, 14877), (652, 14931),

Gene: Cozz_16 Start: 9630, Stop: 14768, Start Num: 20

Candidate Starts for Cozz_16:

(17, 9606), (Start: 20 @9630 has 29 MA's), (21, 9657), (28, 9786), (31, 9861), (55, 10014), (56, 10017), (68, 10113), (71, 10122), (76, 10152), (78, 10158), (80, 10173), (81, 10176), (84, 10197), (91, 10269), (94, 10290), (104, 10356), (106, 10377), (122, 10494), (148, 10656), (152, 10695), (161, 10770), (177, 10929), (181, 10941), (185, 10968), (189, 11013), (190, 11025), (202, 11115), (205, 11133), (207, 11154), (210, 11184), (215, 11208), (217, 11220), (220, 11259), (224, 11292), (237, 11394), (238, 11397), (241, 11421), (249, 11514), (252, 11529), (256, 11568), (269, 11664), (277, 11703), (278, 11706), (285, 11739), (294, 11847), (295, 11850), (297, 11901), (311, 11976), (319, 12078), (326, 12123), (329, 12144), (330, 12147), (331, 12150), (340, 12225), (348, 12258), (352, 12279), (361, 12357), (363, 12363), (367, 12390), (383, 12525), (398, 12642), (400, 12675), (402, 12696), (413, 12765), (414, 12771), (416, 12786), (433, 12906), (436, 12915), (447, 12999), (505, 13320), (529, 13539), (534, 13575), (559, 13788), (585, 13980), (594, 14028), (595, 14049), (607, 14157), (614, 14223), (615, 14241), (619, 14301), (622, 14346), (624, 14376), (625, 14385), (628, 14415), (633, 14481), (636, 14529), (641, 14589), (652, 14676), (660, 14739),

Gene: Delian_17 Start: 10277, Stop: 15820, Start Num: 9

Candidate Starts for Delian_17:

(Start: 9 @10277 has 26 MA's), (10, 10292), (Start: 11 @10298 has 1 MA's), (Start: 13 @10328 has 1 MA's), (14, 10337), (15, 10340), (16, 10382), (24, 10493), (25, 10514), (46, 10742), (48, 10760), (50, 10775), (51, 10781), (52, 10784), (54, 10802), (60, 10826), (69, 10910), (70, 10913), (78, 10952), (80,

10967), (82, 10976), (103, 11144), (106, 11171), (152, 11489), (173, 11693), (181, 11738), (182, 11744), (185, 11765), (186, 11777), (198, 11867), (202, 11912), (206, 11939), (209, 11969), (220, 12056), (221, 12059), (225, 12098), (241, 12218), (244, 12260), (248, 12305), (249, 12311), (252, 12326), (258, 12380), (262, 12419), (265, 12440), (266, 12443), (269, 12461), (270, 12470), (279, 12509), (281, 12515), (285, 12536), (288, 12563), (310, 12770), (314, 12836), (319, 12875), (321, 12890), (326, 12920), (327, 12923), (335, 12974), (347, 13055), (348, 13058), (371, 13091), (374, 13121), (376, 13145), (417, 13478), (423, 13526), (427, 13571), (428, 13574), (430, 13589), (437, 13634), (438, 13643), (439, 13652), (448, 13703), (462, 13775), (466, 13793), (473, 13814), (486, 13913), (487, 13916), (493, 13949), (501, 14015), (502, 14033), (503, 14048), (506, 14081), (514, 14132), (520, 14183), (524, 14231), (539, 14426), (540, 14429), (548, 14501), (549, 14504), (561, 14570), (562, 14573), (563, 14591), (567, 14651), (570, 14708), (573, 14726), (579, 14807), (580, 14810), (582, 14825), (595, 14984), (599, 15038), (607, 15104), (612, 15158), (613, 15170), (614, 15176), (622, 15299), (623, 15323), (626, 15341), (628, 15365), (629, 15371), (631, 15392), (633, 15431), (642, 15572), (644, 15584), (651, 15635), (654, 15653), (662, 15803),

Gene: Dre3_16 Start: 9856, Stop: 14970, Start Num: 20

Candidate Starts for Dre3_16:

(18, 9835), (Start: 20 @9856 has 29 MA's), (21, 9883), (28, 10012), (33, 10096), (36, 10108), (43, 10159), (49, 10192), (53, 10216), (57, 10249), (68, 10339), (80, 10399), (81, 10402), (88, 10468), (92, 10504), (94, 10516), (102, 10573), (104, 10582), (106, 10603), (154, 10942), (162, 10999), (170, 11101), (181, 11167), (182, 11173), (185, 11194), (202, 11341), (209, 11398), (211, 11416), (214, 11431), (217, 11446), (220, 11485), (231, 11590), (235, 11614), (237, 11620), (247, 11731), (249, 11740), (252, 11755), (256, 11794), (269, 11890), (275, 11917), (276, 11923), (277, 11929), (284, 11962), (285, 11965), (294, 12073), (296, 12112), (300, 12145), (304, 12175), (305, 12178), (310, 12199), (311, 12202), (319, 12304), (326, 12349), (330, 12373), (331, 12376), (341, 12454), (346, 12478), (347, 12481), (348, 12484), (354, 12535), (361, 12583), (363, 12589), (369, 12634), (383, 12751), (384, 12757), (391, 12814), (398, 12868), (399, 12889), (400, 12901), (402, 12922), (403, 12925), (413, 12991), (414, 12997), (433, 13132), (441, 13198), (447, 13225), (467, 13303), (505, 13543), (510, 13573), (528, 13747), (533, 13777), (534, 13798), (542, 13906), (555, 13990), (594, 14227), (606, 14338), (607, 14356), (614, 14422), (617, 14473), (622, 14545), (625, 14584), (626, 14587), (628, 14614), (631, 14641), (633, 14680), (636, 14728), (641, 14788), (645, 14824), (652, 14878),

Gene: Elinal_17 Start: 9384, Stop: 14468, Start Num: 20

Candidate Starts for Elinal_17:

(Start: 20 @9384 has 29 MA's), (28, 9540), (41, 9669), (45, 9699), (55, 9768), (58, 9780), (66, 9825), (68, 9867), (71, 9876), (78, 9912), (82, 9936), (95, 10050), (99, 10089), (101, 10095), (102, 10101), (104, 10110), (106, 10131), (131, 10302), (142, 10365), (148, 10410), (157, 10491), (173, 10650), (177, 10683), (181, 10695), (185, 10722), (190, 10779), (194, 10809), (197, 10821), (208, 10923), (209, 10926), (220, 11013), (227, 11061), (241, 11175), (249, 11268), (252, 11283), (254, 11304), (258, 11337), (260, 11367), (263, 11379), (269, 11418), (274, 11442), (275, 11445), (280, 11469), (285, 11493), (293, 11598), (299, 11646), (303, 11676), (307, 11691), (310, 11706), (313, 11745), (317, 11787), (318, 11799), (319, 11811), (321, 11826), (324, 11841), (326, 11856), (330, 11880), (336, 11919), (337, 11934), (338, 11940), (341, 11961), (346, 11985), (348, 11991), (365, 12117), (371, 12147), (375, 12198), (379, 12234), (382, 12255), (383, 12258), (392, 12330), (398, 12375), (400, 12408), (402, 12429), (412, 12483), (421, 12558), (436, 12642), (447, 12729), (491, 12915), (505, 13047), (510, 13077), (527, 13215), (531, 13266), (534, 13296), (551, 13452), (555, 13482), (581, 13662), (586, 13713), (594, 13740), (595, 13761), (607, 13857), (611, 13905), (614, 13923), (622, 14046), (623, 14070), (625, 14085), (628, 14115), (631, 14142), (632, 14148), (633, 14181), (637, 14250), (638, 14253), (641, 14289), (653, 14379),

Gene: Elliott_16 Start: 9629, Stop: 14767, Start Num: 20

Candidate Starts for Elliott_16:

(17, 9605), (Start: 20 @9629 has 29 MA's), (21, 9656), (28, 9785), (31, 9860), (55, 10013), (56, 10016), (68, 10112), (71, 10121), (76, 10151), (78, 10157), (80, 10172), (81, 10175), (84, 10196), (91, 10268), (94, 10289), (104, 10355), (106, 10376), (122, 10493), (148, 10655), (152, 10694), (161, 10769), (177, 10928), (181, 10940), (185, 10967), (189, 11012), (190, 11024), (202, 11114), (205, 11132), (207, 11153), (210, 11183), (215, 11207), (217, 11219), (220, 11258), (224, 11291), (237, 11393), (238, 11396), (241, 11420), (249, 11513), (252, 11528), (256, 11567), (277, 11702), (278, 11705), (285, 11738), (294, 11846), (295, 11849), (297, 11900), (311, 11975), (319, 12077), (326, 12122), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (352, 12278), (354, 12308), (361, 12356), (363, 12362), (367, 12389), (383, 12524), (398, 12641), (400, 12674), (402, 12695), (413, 12764), (414, 12770), (416, 12785), (433, 12905), (436, 12914), (447, 12998), (505, 13319), (529, 13538), (534, 13574), (559, 13787), (585, 13979), (594, 14027), (595, 14048), (607, 14156), (614, 14222), (615, 14240), (622, 14345), (624, 14375), (625, 14384), (628, 14414), (633, 14480), (636, 14528), (641, 14588), (652, 14675), (660, 14738),

Gene: Emalyn_15 Start: 9356, Stop: 14068, Start Num: 59

Candidate Starts for Emalyn_15:

(Start: 59 @9356 has 23 MA's), (81, 9512), (90, 9599), (93, 9614), (97, 9659), (100, 9671), (104, 9689), (107, 9716), (119, 9788), (123, 9830), (125, 9845), (126, 9848), (132, 9872), (135, 9890), (138, 9908), (142, 9929), (144, 9953), (146, 9962), (151, 9989), (155, 10022), (156, 10031), (167, 10121), (170, 10160), (172, 10175), (185, 10244), (188, 10271), (201, 10367), (203, 10385), (212, 10448), (235, 10616), (237, 10622), (248, 10736), (249, 10742), (252, 10757), (281, 10946), (285, 10967), (287, 10985), (288, 10994), (297, 11129), (311, 11204), (313, 11240), (316, 11279), (317, 11282), (319, 11306), (324, 11336), (326, 11351), (330, 11375), (336, 11414), (340, 11453), (342, 11459), (367, 11618), (397, 11867), (398, 11870), (400, 11903), (402, 11924), (413, 11993), (414, 11999), (447, 12230), (478, 12365), (505, 12557), (515, 12626), (518, 12650), (533, 12791), (555, 13004), (559, 13025), (565, 13079), (598, 13382), (606, 13439), (607, 13457), (614, 13523), (618, 13595), (622, 13646), (623, 13670), (624, 13676), (625, 13685), (628, 13715), (633, 13781), (636, 13829), (641, 13889), (653, 13979), (660, 14039),

Gene: Fairfaxidum_17 Start: 10343, Stop: 15964, Start Num: 9

Candidate Starts for Fairfaxidum_17:

(Start: 7 @10307 has 1 MA's), (Start: 9 @10343 has 26 MA's), (Start: 11 @10364 has 1 MA's), (12, 10382), (15, 10406), (16, 10448), (23, 10547), (24, 10559), (25, 10580), (27, 10637), (30, 10709), (33, 10730), (38, 10751), (40, 10772), (41, 10775), (47, 10823), (48, 10826), (52, 10850), (54, 10868), (64, 10922), (71, 10982), (78, 11018), (79, 11024), (106, 11237), (134, 11423), (149, 11525), (150, 11540), (152, 11555), (158, 11612), (181, 11804), (196, 11924), (206, 12005), (209, 12035), (215, 12071), (220, 12122), (225, 12164), (241, 12284), (245, 12335), (248, 12371), (249, 12377), (252, 12392), (258, 12446), (262, 12485), (266, 12509), (269, 12527), (276, 12560), (279, 12575), (281, 12581), (284, 12599), (285, 12602), (288, 12629), (289, 12665), (317, 12896), (320, 12932), (321, 12935), (327, 12968), (340, 13070), (348, 13103), (356, 13166), (361, 13202), (367, 13238), (371, 13262), (372, 13289), (382, 13370), (390, 13436), (394, 13454), (405, 13559), (411, 13592), (417, 13658), (419, 13667), (423, 13706), (426, 13739), (427, 13751), (428, 13754), (430, 13769), (432, 13778), (437, 13814), (438, 13823), (439, 13832), (454, 13928), (470, 13988), (472, 13991), (473, 13994), (475, 14015), (487, 14096), (494, 14138), (503, 14225), (506, 14258), (507, 14267), (514, 14309), (526, 14423), (539, 14597), (548, 14672), (549, 14675), (553, 14705), (554, 14708), (557, 14732), (561, 14741), (562, 14744), (567, 14822), (570, 14879), (582, 14996), (587, 15047), (599, 15185), (607, 15251), (613, 15317), (614, 15323), (615, 15341), (620, 15434), (622, 15446), (627, 15494), (628, 15512), (629, 15518), (631, 15539), (633, 15578), (642, 15719), (651, 15782), (659, 15857), (662, 15950),

Gene: Feastonyeet_15 Start: 9403, Stop: 14511, Start Num: 20

Candidate Starts for Feastonyeet_15:

(Start: 20 @9403 has 29 MA's), (28, 9559), (41, 9688), (45, 9718), (55, 9787), (58, 9799), (64, 9835), (68, 9886), (71, 9895), (78, 9931), (82, 9955), (88, 10015), (95, 10069), (99, 10108), (101, 10114), (104, 10129), (106, 10150), (131, 10321), (142, 10384), (148, 10429), (157, 10510), (173, 10669), (177, 10702), (181, 10714), (185, 10741), (190, 10798), (194, 10828), (197, 10840), (208, 10942), (209, 10945), (220, 11032), (227, 11080), (241, 11194), (249, 11287), (252, 11302), (254, 11323), (258, 11356), (260, 11386), (263, 11398), (269, 11437), (274, 11461), (275, 11464), (280, 11488), (285, 11512), (293, 11617), (303, 11695), (310, 11725), (311, 11728), (313, 11764), (317, 11806), (319, 11830), (321, 11845), (324, 11860), (326, 11875), (330, 11899), (336, 11938), (337, 11953), (338, 11959), (346, 12004), (348, 12010), (365, 12136), (371, 12166), (373, 12202), (374, 12205), (379, 12253), (382, 12274), (383, 12277), (392, 12349), (398, 12394), (400, 12427), (402, 12448), (412, 12502), (421, 12577), (436, 12661), (447, 12748), (505, 13066), (510, 13096), (527, 13234), (531, 13285), (534, 13315), (551, 13480), (555, 13510), (581, 13690), (586, 13741), (594, 13783), (595, 13804), (607, 13900), (611, 13948), (614, 13966), (622, 14089), (623, 14113), (625, 14128), (628, 14158), (631, 14185), (632, 14191), (633, 14224), (637, 14293), (638, 14296), (641, 14332), (653, 14422),

Gene: Fribs8_17 Start: 10424, Stop: 15559, Start Num: 20

Candidate Starts for Fribs8_17:

(Start: 20 @10424 has 29 MA's), (21, 10451), (28, 10580), (36, 10676), (43, 10727), (49, 10760), (53, 10784), (57, 10817), (68, 10907), (80, 10967), (81, 10970), (87, 11030), (88, 11036), (94, 11084), (104, 11150), (106, 11171), (112, 11207), (162, 11567), (170, 11669), (177, 11723), (178, 11726), (181, 11735), (182, 11741), (185, 11762), (202, 11909), (209, 11966), (211, 11984), (215, 12002), (217, 12014), (220, 12053), (227, 12101), (231, 12158), (235, 12182), (237, 12188), (247, 12299), (249, 12308), (252, 12323), (256, 12362), (265, 12437), (275, 12485), (276, 12491), (285, 12533), (294, 12641), (296, 12680), (300, 12713), (319, 12872), (326, 12917), (330, 12941), (341, 13022), (346, 13046), (347, 13049), (348, 13052), (351, 13070), (354, 13103), (359, 13145), (367, 13184), (372, 13235), (383, 13319), (384, 13325), (391, 13382), (393, 13394), (398, 13436), (399, 13457), (400, 13469), (402, 13490), (403, 13493), (413, 13559), (416, 13580), (433, 13700), (441, 13766), (447, 13793), (456, 13838), (461, 13859), (469, 13880), (505, 14123), (510, 14153), (515, 14192), (528, 14327), (533, 14357), (534, 14378), (555, 14570), (585, 14783), (591, 14801), (594, 14816), (606, 14927), (607, 14945), (614, 15011), (617, 15062), (620, 15122), (622, 15134), (625, 15173), (626, 15176), (628, 15203), (632, 15236), (633, 15269), (652, 15467), (655, 15473), (660, 15530),

Gene: GTE2_14 Start: 9463, Stop: 14106, Start Num: 81

Candidate Starts for GTE2_14:

(Start: 59 @9307 has 23 MA's), (Start: 62 @9334 has 1 MA's), (73, 9412), (81, 9463), (90, 9550), (93, 9565), (100, 9622), (104, 9640), (107, 9667), (108, 9670), (119, 9739), (125, 9796), (135, 9841), (138, 9859), (144, 9904), (151, 9940), (155, 9973), (162, 10021), (163, 10024), (167, 10072), (170, 10111), (172, 10126), (201, 10318), (203, 10336), (216, 10420), (235, 10567), (240, 10594), (248, 10687), (249, 10693), (252, 10708), (256, 10747), (266, 10825), (281, 10897), (284, 10915), (285, 10918), (297, 11080), (311, 11155), (313, 11191), (319, 11257), (326, 11302), (329, 11323), (330, 11326), (331, 11329), (336, 11365), (340, 11404), (342, 11410), (346, 11431), (348, 11437), (355, 11497), (366, 11566), (367, 11569), (369, 11587), (384, 11710), (386, 11725), (400, 11854), (402, 11875), (410, 11908), (413, 11944), (414, 11950), (431, 12082), (436, 12094), (447, 12181), (484, 12334), (492, 12385), (496, 12424), (512, 12553), (519, 12610), (523, 12655), (533, 12748), (536, 12823), (543, 12886), (555, 12967), (559, 12988), (575, 13174), (576, 13180), (597, 13399), (606, 13477), (607, 13495), (608, 13501), (614, 13561), (615, 13579), (617, 13612), (622, 13684), (625, 13723), (628, 13753), (633, 13819), (636, 13867), (641, 13927), (653, 14017), (660, 14077),

Gene: GiKK_19 Start: 9920, Stop: 14137, Start Num: 59

Candidate Starts for GiKK_19:

(Start: 59 @9920 has 23 MA's), (Start: 62 @9947 has 1 MA's), (95, 10193), (104, 10256), (113, 10313), (117, 10340), (120, 10382), (129, 10445), (133, 10460), (136, 10478), (138, 10496), (140, 10508),

(144, 10541), (151, 10583), (153, 10598), (165, 10694), (166, 10703), (169, 10766), (171, 10781), (177, 10817), (187, 10868), (191, 10901), (192, 10910), (203, 10991), (213, 11057), (214, 11066), (216, 11075), (219, 11096), (233, 11231), (235, 11243), (252, 11384), (254, 11405), (258, 11438), (259, 11456), (261, 11474), (269, 11519), (281, 11573), (283, 11579), (285, 11594), (299, 11657), (308, 11705), (311, 11720), (313, 11756), (318, 11810), (321, 11837), (322, 11840), (323, 11843), (326, 11867), (327, 11870), (336, 11930), (347, 11999), (348, 12002), (351, 12020), (372, 12053), (377, 12104), (382, 12134), (386, 12158), (387, 12161), (400, 12287), (402, 12308), (404, 12317), (406, 12326), (408, 12332), (431, 12485), (445, 12554), (447, 12560), (453, 12596), (489, 12725), (505, 12866), (509, 12890), (515, 12935), (530, 13088), (532, 13091), (551, 13283), (555, 13313), (601, 13487), (609, 13559), (613, 13595), (615, 13619), (616, 13631), (618, 13673), (621, 13715), (622, 13721), (623, 13745), (626, 13763), (628, 13784), (631, 13811), (632, 13817), (633, 13850), (635, 13871), (636, 13898), (638, 13922), (641, 13958), (646, 14006), (660, 14108),

Gene: Gibbous_16 Start: 9856, Stop: 14970, Start Num: 20

Candidate Starts for Gibbous_16:

(18, 9835), (Start: 20 @9856 has 29 MA's), (21, 9883), (28, 10012), (33, 10096), (36, 10108), (43, 10159), (49, 10192), (53, 10216), (57, 10249), (68, 10339), (80, 10399), (81, 10402), (88, 10468), (92, 10504), (94, 10516), (102, 10573), (104, 10582), (106, 10603), (154, 10942), (162, 10999), (170, 11101), (181, 11167), (182, 11173), (185, 11194), (202, 11341), (209, 11398), (211, 11416), (214, 11431), (217, 11446), (220, 11485), (231, 11590), (235, 11614), (237, 11620), (247, 11731), (249, 11740), (252, 11755), (256, 11794), (269, 11890), (275, 11917), (276, 11923), (277, 11929), (284, 11962), (285, 11965), (294, 12073), (296, 12112), (300, 12145), (304, 12175), (305, 12178), (310, 12199), (311, 12202), (319, 12304), (326, 12349), (330, 12373), (331, 12376), (341, 12454), (346, 12478), (347, 12481), (348, 12484), (354, 12535), (361, 12583), (363, 12589), (369, 12634), (383, 12751), (384, 12757), (391, 12814), (398, 12868), (399, 12889), (400, 12901), (402, 12922), (403, 12925), (413, 12991), (414, 12997), (433, 13132), (441, 13198), (447, 13225), (467, 13303), (505, 13543), (510, 13573), (528, 13747), (533, 13777), (534, 13798), (542, 13906), (555, 13990), (594, 14227), (606, 14338), (607, 14356), (614, 14422), (617, 14473), (622, 14545), (625, 14584), (626, 14587), (628, 14614), (631, 14641), (633, 14680), (636, 14728), (641, 14788), (645, 14824), (652, 14878),

Gene: GoldHunter_17 Start: 9630, Stop: 14768, Start Num: 20

Candidate Starts for GoldHunter_17:

(17, 9606), (Start: 20 @9630 has 29 MA's), (21, 9657), (28, 9786), (31, 9861), (55, 10014), (56, 10017), (68, 10113), (71, 10122), (76, 10152), (78, 10158), (80, 10173), (81, 10176), (84, 10197), (91, 10269), (94, 10290), (104, 10356), (106, 10377), (122, 10494), (148, 10656), (152, 10695), (161, 10770), (177, 10929), (181, 10941), (185, 10968), (189, 11013), (190, 11025), (202, 11115), (205, 11133), (207, 11154), (210, 11184), (215, 11208), (217, 11220), (220, 11259), (224, 11292), (237, 11394), (238, 11397), (241, 11421), (249, 11514), (252, 11529), (256, 11568), (262, 11622), (269, 11664), (278, 11706), (284, 11736), (285, 11739), (294, 11847), (295, 11850), (297, 11901), (311, 11976), (318, 12066), (319, 12078), (326, 12123), (329, 12144), (330, 12147), (331, 12150), (340, 12225), (348, 12258), (352, 12279), (354, 12309), (361, 12357), (363, 12363), (367, 12390), (383, 12525), (398, 12642), (400, 12675), (402, 12696), (403, 12699), (413, 12765), (414, 12771), (416, 12786), (433, 12906), (436, 12915), (447, 12999), (505, 13320), (529, 13539), (534, 13575), (559, 13788), (585, 13980), (594, 14028), (595, 14049), (607, 14157), (614, 14223), (615, 14241), (619, 14301), (622, 14346), (624, 14376), (625, 14385), (628, 14415), (633, 14481), (636, 14529), (641, 14589), (652, 14676), (660, 14739),

Gene: Guacamole_17 Start: 10278, Stop: 15800, Start Num: 9

Candidate Starts for Guacamole_17:

(Start: 9 @10278 has 26 MA's), (10, 10293), (Start: 11 @10299 has 1 MA's), (Start: 13 @10329 has 1 MA's), (14, 10338), (15, 10341), (16, 10383), (24, 10494), (25, 10515), (29, 10635), (36, 10677), (46, 10743), (48, 10761), (51, 10782), (52, 10785), (54, 10803), (60, 10827), (69, 10911), (70, 10914), (78,

10953), (80, 10968), (82, 10977), (103, 11145), (106, 11172), (122, 11289), (130, 11337), (149, 11460), (152, 11490), (173, 11694), (181, 11739), (185, 11766), (186, 11778), (198, 11868), (202, 11913), (206, 11940), (209, 11970), (220, 12057), (221, 12060), (225, 12099), (234, 12183), (241, 12219), (244, 12261), (248, 12306), (249, 12312), (251, 12324), (252, 12327), (258, 12381), (262, 12420), (265, 12441), (266, 12444), (269, 12462), (270, 12471), (275, 12489), (279, 12510), (281, 12516), (285, 12537), (288, 12564), (293, 12642), (317, 12831), (319, 12855), (320, 12867), (321, 12870), (324, 12885), (326, 12900), (327, 12903), (335, 12954), (347, 13035), (348, 13038), (371, 13071), (374, 13101), (376, 13125), (396, 13284), (417, 13458), (423, 13506), (427, 13551), (428, 13554), (430, 13569), (437, 13614), (438, 13623), (439, 13632), (448, 13683), (462, 13755), (466, 13773), (473, 13794), (486, 13893), (487, 13896), (493, 13929), (501, 13995), (502, 14013), (503, 14028), (506, 14061), (514, 14112), (520, 14163), (524, 14211), (539, 14406), (540, 14409), (548, 14481), (549, 14484), (561, 14550), (562, 14553), (563, 14571), (567, 14631), (570, 14688), (573, 14706), (579, 14787), (580, 14790), (582, 14805), (599, 15018), (607, 15084), (612, 15138), (613, 15150), (614, 15156), (622, 15279), (623, 15303), (626, 15321), (628, 15345), (629, 15351), (631, 15372), (633, 15411), (642, 15552), (644, 15564), (651, 15615), (654, 15633), (662, 15783),

Gene: Hexbug_18 Start: 10603, Stop: 14823, Start Num: 59

Candidate Starts for Hexbug_18:

(Start: 59 @10603 has 23 MA's), (Start: 62 @10630 has 1 MA's), (104, 10939), (113, 10996), (116, 11020), (120, 11065), (121, 11068), (124, 11110), (129, 11128), (133, 11143), (136, 11161), (137, 11170), (144, 11224), (153, 11281), (163, 11362), (167, 11410), (169, 11449), (171, 11464), (175, 11473), (177, 11500), (184, 11530), (185, 11533), (187, 11551), (203, 11674), (213, 11740), (220, 11803), (230, 11890), (241, 11959), (251, 12064), (252, 12067), (254, 12088), (258, 12121), (259, 12139), (261, 12157), (265, 12181), (269, 12202), (270, 12211), (281, 12256), (282, 12259), (285, 12277), (308, 12388), (310, 12400), (311, 12403), (313, 12439), (317, 12481), (318, 12493), (321, 12520), (327, 12553), (337, 12628), (347, 12682), (348, 12685), (351, 12703), (374, 12748), (377, 12787), (378, 12793), (382, 12817), (385, 12838), (386, 12841), (387, 12844), (400, 12970), (402, 12991), (404, 13000), (406, 13009), (408, 13015), (431, 13168), (441, 13213), (445, 13237), (447, 13243), (453, 13279), (464, 13312), (471, 13336), (481, 13387), (490, 13432), (505, 13570), (510, 13600), (551, 13981), (601, 14173), (609, 14245), (613, 14281), (615, 14305), (616, 14317), (618, 14359), (622, 14407), (628, 14470), (632, 14503), (633, 14536), (635, 14557), (636, 14584), (638, 14608), (641, 14644), (644, 14671), (645, 14680), (646, 14692), (660, 14794),

Gene: HippoPololi_18 Start: 10513, Stop: 15630, Start Num: 20

Candidate Starts for HippoPololi_18:

(18, 10492), (Start: 20 @10513 has 29 MA's), (21, 10540), (28, 10669), (33, 10753), (39, 10792), (43, 10816), (53, 10873), (56, 10900), (57, 10906), (68, 10996), (80, 11056), (81, 11059), (88, 11125), (94, 11173), (104, 11239), (106, 11260), (154, 11599), (161, 11653), (162, 11656), (170, 11758), (178, 11815), (180, 11821), (181, 11824), (182, 11830), (185, 11851), (198, 11953), (209, 12055), (211, 12073), (220, 12142), (227, 12190), (231, 12247), (235, 12271), (237, 12277), (249, 12397), (252, 12412), (256, 12451), (265, 12526), (269, 12547), (275, 12574), (276, 12580), (284, 12619), (285, 12622), (294, 12730), (300, 12802), (310, 12856), (319, 12961), (326, 13006), (330, 13030), (341, 13111), (347, 13138), (348, 13141), (354, 13192), (361, 13240), (363, 13246), (369, 13291), (383, 13408), (384, 13414), (391, 13471), (398, 13525), (399, 13546), (400, 13558), (402, 13579), (403, 13582), (413, 13648), (414, 13654), (433, 13789), (436, 13798), (441, 13855), (447, 13882), (474, 13975), (505, 14203), (507, 14224), (510, 14233), (528, 14407), (533, 14437), (534, 14458), (555, 14650), (574, 14740), (594, 14887), (595, 14908), (607, 15016), (610, 15049), (614, 15082), (617, 15133), (622, 15205), (625, 15244), (626, 15247), (628, 15274), (632, 15307), (633, 15340), (635, 15361), (636, 15388), (645, 15484), (652, 15538),

Gene: Hitter_17 Start: 10274, Stop: 15796, Start Num: 9

Candidate Starts for Hitter_17:

(Start: 9 @10274 has 26 MA's), (10, 10289), (Start: 11 @10295 has 1 MA's), (Start: 13 @10325 has 1 MA's), (14, 10334), (15, 10337), (16, 10379), (24, 10490), (25, 10511), (46, 10739), (48, 10757), (50, 10772), (51, 10778), (52, 10781), (54, 10799), (60, 10823), (69, 10907), (71, 10913), (78, 10949), (80, 10964), (82, 10973), (103, 11141), (106, 11168), (122, 11285), (149, 11456), (152, 11486), (173, 11690), (181, 11735), (202, 11909), (206, 11936), (209, 11966), (220, 12053), (225, 12095), (234, 12179), (241, 12215), (244, 12257), (248, 12302), (249, 12308), (251, 12320), (252, 12323), (258, 12377), (262, 12416), (265, 12437), (266, 12440), (269, 12458), (270, 12467), (275, 12485), (279, 12506), (281, 12512), (285, 12533), (288, 12560), (293, 12638), (317, 12827), (319, 12851), (320, 12863), (321, 12866), (324, 12881), (326, 12896), (327, 12899), (335, 12950), (347, 13031), (348, 13034), (371, 13067), (374, 13097), (376, 13121), (417, 13454), (423, 13502), (427, 13547), (428, 13550), (430, 13565), (437, 13610), (438, 13619), (439, 13628), (448, 13679), (462, 13751), (466, 13769), (473, 13790), (486, 13889), (487, 13892), (493, 13925), (501, 13991), (502, 14009), (503, 14024), (506, 14057), (514, 14108), (520, 14159), (539, 14402), (540, 14405), (548, 14477), (549, 14480), (561, 14546), (562, 14549), (563, 14567), (567, 14627), (570, 14684), (573, 14702), (579, 14783), (580, 14786), (582, 14801), (599, 15014), (607, 15080), (608, 15086), (613, 15146), (614, 15152), (622, 15275), (623, 15299), (626, 15317), (628, 15341), (629, 15347), (631, 15368), (633, 15407), (642, 15548), (644, 15560), (651, 15611), (654, 15629), (662, 15779),

Gene: Horseradish_17 Start: 9515, Stop: 14311, Start Num: 59

Candidate Starts for Horseradish_17:

(Start: 59 @9515 has 23 MA's), (Start: 62 @9542 has 1 MA's), (64, 9548), (81, 9671), (93, 9773), (97, 9818), (100, 9830), (104, 9848), (107, 9875), (108, 9878), (110, 9893), (118, 9944), (119, 9947), (125, 10004), (126, 10007), (127, 10010), (135, 10049), (138, 10067), (144, 10112), (151, 10148), (155, 10181), (159, 10214), (160, 10226), (167, 10280), (170, 10319), (172, 10334), (175, 10343), (179, 10370), (187, 10421), (194, 10481), (197, 10490), (203, 10544), (212, 10607), (215, 10622), (222, 10685), (235, 10775), (240, 10802), (248, 10895), (249, 10901), (252, 10916), (256, 10955), (266, 11033), (272, 11066), (281, 11105), (284, 11123), (285, 11126), (288, 11153), (291, 11210), (293, 11231), (306, 11342), (311, 11363), (313, 11399), (317, 11441), (318, 11453), (319, 11465), (326, 11510), (327, 11513), (329, 11531), (330, 11534), (331, 11537), (340, 11612), (348, 11645), (355, 11705), (365, 11771), (366, 11774), (367, 11777), (369, 11795), (380, 11894), (382, 11909), (383, 11912), (400, 12062), (402, 12083), (411, 12125), (413, 12152), (414, 12158), (431, 12290), (436, 12302), (447, 12389), (455, 12431), (467, 12467), (476, 12503), (484, 12542), (492, 12593), (496, 12632), (504, 12710), (512, 12761), (519, 12818), (533, 12956), (536, 13028), (555, 13172), (559, 13193), (575, 13370), (576, 13376), (607, 13700), (608, 13706), (614, 13766), (615, 13784), (617, 13817), (622, 13889), (625, 13928), (628, 13958), (633, 14024), (634, 14042), (636, 14072), (641, 14132), (653, 14222), (660, 14282),

Gene: Jalammah_19 Start: 11050, Stop: 16590, Start Num: 9

Candidate Starts for Jalammah_19:

(Start: 9 @11050 has 26 MA's), (Start: 13 @11101 has 1 MA's), (14, 11110), (15, 11113), (16, 11155), (24, 11266), (25, 11287), (29, 11407), (36, 11449), (46, 11515), (48, 11533), (51, 11554), (52, 11557), (54, 11575), (60, 11599), (69, 11683), (78, 11725), (80, 11740), (82, 11749), (103, 11917), (106, 11944), (122, 12061), (149, 12232), (152, 12262), (173, 12466), (181, 12511), (185, 12538), (186, 12550), (198, 12640), (202, 12685), (206, 12712), (209, 12742), (220, 12829), (221, 12832), (225, 12871), (234, 12955), (241, 12991), (244, 13033), (248, 13078), (249, 13084), (251, 13096), (252, 13099), (258, 13153), (262, 13192), (265, 13213), (266, 13216), (269, 13234), (275, 13261), (279, 13282), (281, 13288), (285, 13309), (288, 13336), (311, 13546), (317, 13624), (319, 13648), (320, 13660), (321, 13663), (324, 13678), (326, 13693), (327, 13696), (335, 13747), (347, 13828), (348, 13831), (371, 13864), (374, 13894), (376, 13918), (385, 13984), (417, 14251), (423, 14299), (427, 14344), (428, 14347), (430, 14362), (437, 14407), (438, 14416), (439, 14425), (448, 14476), (462, 14548), (466, 14566), (473, 14587), (486, 14686), (487, 14689), (493, 14722), (501, 14788), (502, 14806), (503, 14821), (506, 14854), (514, 14905), (520, 14956), (539, 15199), (540, 15202), (548, 15274), (549, 15277), (561, 15343), (562, 15346), (563, 15364), (567, 15424), (570, 15481), (573,

15499), (579, 15580), (580, 15583), (582, 15598), (595, 15757), (599, 15811), (607, 15877), (608, 15883), (613, 15943), (614, 15949), (616, 15979), (622, 16072), (623, 16096), (626, 16114), (628, 16138), (629, 16144), (631, 16165), (633, 16204), (642, 16345), (644, 16357), (651, 16408), (654, 16426), (662, 16576),

Gene: Jamzy_19 Start: 9930, Stop: 14147, Start Num: 59

Candidate Starts for Jamzy_19:

(Start: 59 @9930 has 23 MA's), (Start: 62 @9957 has 1 MA's), (95, 10203), (104, 10266), (113, 10323), (117, 10350), (120, 10392), (129, 10455), (133, 10470), (136, 10488), (138, 10506), (140, 10518), (144, 10551), (151, 10593), (153, 10608), (165, 10704), (166, 10713), (169, 10776), (171, 10791), (177, 10827), (187, 10878), (191, 10911), (192, 10920), (203, 11001), (213, 11067), (214, 11076), (216, 11085), (219, 11106), (233, 11241), (235, 11253), (252, 11394), (254, 11415), (258, 11448), (259, 11466), (261, 11484), (269, 11529), (281, 11583), (285, 11604), (299, 11667), (308, 11715), (311, 11730), (313, 11766), (318, 11820), (321, 11847), (323, 11853), (326, 11877), (327, 11880), (336, 11940), (339, 11973), (348, 12012), (351, 12030), (352, 12033), (374, 12075), (375, 12087), (378, 12120), (379, 12123), (382, 12144), (386, 12168), (387, 12171), (398, 12264), (399, 12285), (400, 12297), (402, 12318), (404, 12327), (406, 12336), (408, 12342), (431, 12495), (442, 12555), (445, 12564), (447, 12570), (453, 12606), (490, 12738), (505, 12876), (509, 12900), (530, 13098), (532, 13101), (544, 13263), (550, 13287), (551, 13290), (577, 13392), (601, 13497), (609, 13569), (611, 13593), (613, 13605), (615, 13629), (616, 13641), (621, 13725), (622, 13731), (626, 13773), (628, 13794), (632, 13827), (633, 13860), (635, 13881), (636, 13908), (641, 13968), (644, 13995), (645, 14004), (646, 14016), (660, 14118),

Gene: JasperJr_17 Start: 10278, Stop: 15800, Start Num: 9

Candidate Starts for JasperJr_17:

(Start: 9 @10278 has 26 MA's), (10, 10293), (Start: 11 @10299 has 1 MA's), (Start: 13 @10329 has 1 MA's), (14, 10338), (15, 10341), (16, 10383), (24, 10494), (25, 10515), (29, 10635), (36, 10677), (46, 10743), (48, 10761), (51, 10782), (52, 10785), (54, 10803), (60, 10827), (69, 10911), (70, 10914), (78, 10953), (80, 10968), (82, 10977), (103, 11145), (106, 11172), (122, 11289), (130, 11337), (149, 11460), (152, 11490), (173, 11694), (181, 11739), (185, 11766), (186, 11778), (198, 11868), (202, 11913), (206, 11940), (209, 11970), (220, 12057), (221, 12060), (225, 12099), (234, 12183), (241, 12219), (244, 12261), (248, 12306), (249, 12312), (251, 12324), (252, 12327), (258, 12381), (262, 12420), (265, 12441), (266, 12444), (269, 12462), (270, 12471), (275, 12489), (279, 12510), (281, 12516), (285, 12537), (288, 12564), (293, 12642), (317, 12831), (319, 12855), (320, 12867), (321, 12870), (324, 12885), (326, 12900), (327, 12903), (335, 12954), (347, 13035), (348, 13038), (371, 13071), (374, 13101), (376, 13125), (396, 13284), (417, 13458), (423, 13506), (427, 13551), (428, 13554), (430, 13569), (437, 13614), (438, 13623), (439, 13632), (448, 13683), (462, 13755), (466, 13773), (473, 13794), (486, 13893), (487, 13896), (493, 13929), (501, 13995), (502, 14013), (503, 14028), (506, 14061), (514, 14112), (520, 14163), (524, 14211), (539, 14406), (540, 14409), (548, 14481), (549, 14484), (561, 14550), (562, 14553), (563, 14571), (567, 14631), (570, 14688), (573, 14706), (579, 14787), (580, 14790), (582, 14805), (599, 15018), (607, 15084), (612, 15138), (613, 15150), (614, 15156), (622, 15279), (623, 15303), (626, 15321), (628, 15345), (629, 15351), (631, 15372), (633, 15411), (642, 15552), (644, 15564), (651, 15615), (654, 15633), (662, 15783),

Gene: JuJu_17 Start: 10202, Stop: 15721, Start Num: 9

Candidate Starts for JuJu_17:

(Start: 9 @10202 has 26 MA's), (10, 10217), (Start: 11 @10223 has 1 MA's), (Start: 13 @10253 has 1 MA's), (14, 10262), (15, 10265), (16, 10307), (24, 10418), (25, 10439), (48, 10685), (51, 10706), (52, 10709), (54, 10727), (60, 10751), (69, 10835), (71, 10841), (78, 10877), (80, 10892), (82, 10901), (84, 10916), (88, 10961), (103, 11069), (106, 11096), (111, 11129), (152, 11414), (173, 11618), (181, 11663), (202, 11837), (206, 11864), (209, 11894), (220, 11981), (225, 12023), (232, 12095), (241, 12143), (244, 12185), (248, 12230), (249, 12236), (251, 12248), (252, 12251), (258, 12305), (262, 12344), (265, 12365), (266, 12368), (269, 12386), (270, 12395), (275, 12413), (279, 12434), (281,

12440), (285, 12461), (288, 12488), (293, 12566), (310, 12674), (314, 12740), (319, 12779), (326, 12824), (327, 12827), (335, 12878), (347, 12959), (348, 12962), (371, 12995), (374, 13025), (385, 13115), (395, 13196), (411, 13316), (417, 13382), (423, 13430), (427, 13475), (428, 13478), (430, 13493), (432, 13502), (437, 13538), (438, 13547), (439, 13556), (462, 13679), (473, 13718), (486, 13817), (487, 13820), (501, 13919), (502, 13937), (503, 13952), (506, 13985), (514, 14036), (520, 14087), (526, 14156), (539, 14330), (540, 14333), (546, 14399), (548, 14405), (549, 14408), (561, 14474), (562, 14477), (563, 14495), (567, 14555), (570, 14612), (573, 14630), (579, 14711), (582, 14729), (587, 14780), (595, 14888), (599, 14942), (607, 15008), (612, 15062), (613, 15074), (614, 15080), (616, 15110), (622, 15203), (623, 15227), (626, 15245), (628, 15269), (629, 15275), (631, 15296), (633, 15335), (642, 15476), (651, 15539), (654, 15557), (659, 15614), (662, 15707),

Gene: KappaFarmDelta_17 Start: 10424, Stop: 15964, Start Num: 9

Candidate Starts for KappaFarmDelta_17:

(Start: 9 @10424 has 26 MA's), (10, 10439), (Start: 11 @10445 has 1 MA's), (Start: 13 @10475 has 1 MA's), (14, 10484), (15, 10487), (16, 10529), (24, 10640), (25, 10661), (46, 10889), (48, 10907), (51, 10928), (52, 10931), (54, 10949), (60, 10973), (69, 11057), (71, 11063), (78, 11099), (80, 11114), (82, 11123), (103, 11291), (106, 11318), (122, 11435), (149, 11606), (152, 11636), (173, 11840), (181, 11885), (185, 11912), (202, 12059), (206, 12086), (209, 12116), (220, 12203), (221, 12206), (225, 12245), (227, 12251), (241, 12365), (244, 12407), (248, 12452), (249, 12458), (251, 12470), (252, 12473), (258, 12527), (262, 12566), (265, 12587), (266, 12590), (269, 12608), (275, 12635), (279, 12656), (281, 12662), (285, 12683), (288, 12710), (292, 12782), (314, 12983), (317, 12998), (319, 13022), (321, 13037), (326, 13067), (327, 13070), (335, 13121), (348, 13205), (371, 13238), (376, 13292), (409, 13547), (417, 13625), (423, 13673), (426, 13706), (427, 13718), (428, 13721), (430, 13736), (432, 13745), (437, 13781), (438, 13790), (439, 13799), (458, 13907), (470, 13955), (472, 13958), (473, 13961), (475, 13982), (487, 14063), (488, 14066), (503, 14192), (506, 14225), (513, 14273), (514, 14276), (516, 14291), (520, 14327), (539, 14570), (540, 14573), (548, 14645), (549, 14648), (561, 14714), (562, 14717), (563, 14735), (567, 14795), (570, 14852), (573, 14870), (579, 14951), (582, 14969), (599, 15182), (607, 15248), (613, 15314), (614, 15320), (616, 15350), (622, 15443), (623, 15467), (628, 15509), (631, 15536), (633, 15575), (642, 15716), (651, 15779), (654, 15797), (659, 15854),

Gene: KayGee_16 Start: 9384, Stop: 14468, Start Num: 20

Candidate Starts for KayGee_16:

(Start: 20 @9384 has 29 MA's), (28, 9540), (41, 9669), (45, 9699), (55, 9768), (58, 9780), (66, 9825), (68, 9867), (71, 9876), (78, 9912), (82, 9936), (95, 10050), (99, 10089), (101, 10095), (102, 10101), (104, 10110), (106, 10131), (131, 10302), (142, 10365), (148, 10410), (157, 10491), (173, 10650), (177, 10683), (181, 10695), (185, 10722), (190, 10779), (194, 10809), (197, 10821), (208, 10923), (209, 10926), (220, 11013), (227, 11061), (241, 11175), (249, 11268), (252, 11283), (254, 11304), (258, 11337), (260, 11367), (263, 11379), (269, 11418), (274, 11442), (275, 11445), (280, 11469), (285, 11493), (293, 11598), (299, 11646), (303, 11676), (307, 11691), (310, 11706), (313, 11745), (317, 11787), (318, 11799), (319, 11811), (321, 11826), (324, 11841), (326, 11856), (330, 11880), (336, 11919), (337, 11934), (338, 11940), (341, 11961), (346, 11985), (348, 11991), (365, 12117), (371, 12147), (375, 12198), (379, 12234), (382, 12255), (383, 12258), (392, 12330), (398, 12375), (400, 12408), (402, 12429), (412, 12483), (421, 12558), (436, 12642), (447, 12729), (491, 12915), (505, 13047), (510, 13077), (527, 13215), (531, 13266), (534, 13296), (551, 13452), (555, 13482), (581, 13662), (586, 13713), (594, 13740), (595, 13761), (607, 13857), (611, 13905), (614, 13923), (622, 14046), (623, 14070), (625, 14085), (628, 14115), (631, 14142), (632, 14148), (633, 14181), (637, 14250), (638, 14253), (641, 14289), (653, 14379),

Gene: Lauer_15 Start: 9433, Stop: 14517, Start Num: 20

Candidate Starts for Lauer_15:

(Start: 20 @9433 has 29 MA's), (28, 9589), (41, 9718), (45, 9748), (55, 9817), (58, 9829), (68, 9916), (71, 9925), (78, 9961), (82, 9985), (88, 10045), (95, 10099), (99, 10138), (101, 10144), (104, 10159),

(106, 10180), (131, 10351), (142, 10414), (148, 10459), (157, 10540), (173, 10699), (177, 10732), (181, 10744), (185, 10771), (190, 10828), (194, 10858), (197, 10870), (208, 10972), (209, 10975), (220, 11062), (227, 11110), (241, 11224), (249, 11317), (252, 11332), (254, 11353), (258, 11386), (260, 11416), (263, 11428), (269, 11467), (274, 11491), (275, 11494), (280, 11518), (285, 11542), (293, 11647), (303, 11725), (310, 11755), (311, 11758), (313, 11794), (317, 11836), (319, 11860), (321, 11875), (324, 11890), (326, 11905), (330, 11929), (336, 11968), (337, 11983), (338, 11989), (341, 12010), (346, 12034), (348, 12040), (365, 12166), (371, 12196), (374, 12235), (379, 12283), (382, 12304), (383, 12307), (392, 12379), (398, 12424), (400, 12457), (402, 12478), (412, 12532), (421, 12607), (436, 12691), (447, 12778), (491, 12964), (505, 13096), (510, 13126), (527, 13264), (531, 13315), (534, 13345), (551, 13501), (555, 13531), (581, 13711), (586, 13762), (594, 13789), (595, 13810), (607, 13906), (611, 13954), (614, 13972), (622, 14095), (623, 14119), (625, 14134), (628, 14164), (631, 14191), (632, 14197), (633, 14230), (637, 14299), (638, 14302), (641, 14338), (653, 14428),

Gene: Lysidious_18 Start: 10777, Stop: 16320, Start Num: 9

Candidate Starts for Lysidious_18:

(Start: 9 @10777 has 26 MA's), (Start: 13 @10828 has 1 MA's), (14, 10837), (15, 10840), (16, 10882), (24, 10993), (25, 11014), (29, 11134), (36, 11176), (46, 11242), (48, 11260), (51, 11281), (52, 11284), (54, 11302), (60, 11326), (69, 11410), (71, 11416), (78, 11452), (80, 11467), (82, 11476), (103, 11644), (106, 11671), (122, 11788), (149, 11959), (152, 11989), (173, 12193), (181, 12238), (185, 12265), (186, 12277), (198, 12367), (202, 12412), (206, 12439), (209, 12469), (220, 12556), (221, 12559), (225, 12598), (241, 12718), (244, 12760), (248, 12805), (249, 12811), (251, 12823), (252, 12826), (258, 12880), (262, 12919), (265, 12940), (266, 12943), (269, 12961), (270, 12970), (275, 12988), (279, 13009), (281, 13015), (285, 13036), (288, 13063), (310, 13270), (317, 13351), (319, 13375), (320, 13387), (321, 13390), (324, 13405), (326, 13420), (327, 13423), (335, 13474), (347, 13555), (348, 13558), (371, 13591), (374, 13621), (376, 13645), (385, 13711), (417, 13978), (423, 14026), (427, 14071), (428, 14074), (430, 14089), (437, 14134), (438, 14143), (439, 14152), (448, 14203), (462, 14275), (466, 14293), (473, 14314), (486, 14413), (487, 14416), (493, 14449), (501, 14515), (502, 14533), (503, 14548), (506, 14581), (514, 14632), (520, 14683), (539, 14926), (540, 14929), (548, 15001), (549, 15004), (561, 15070), (562, 15073), (563, 15091), (567, 15151), (570, 15208), (573, 15226), (579, 15307), (580, 15310), (582, 15325), (595, 15484), (599, 15538), (607, 15604), (608, 15610), (613, 15670), (614, 15676), (622, 15799), (623, 15823), (626, 15841), (628, 15865), (629, 15871), (631, 15892), (633, 15931), (642, 16072), (644, 16084), (651, 16135), (654, 16153), (659, 16210), (662, 16303),

Gene: MAnor_16 Start: 9376, Stop: 14475, Start Num: 20

Candidate Starts for MAnor_16:

(Start: 20 @9376 has 29 MA's), (28, 9532), (38, 9637), (41, 9661), (48, 9712), (55, 9760), (64, 9808), (66, 9817), (68, 9859), (70, 9865), (71, 9868), (78, 9904), (82, 9928), (85, 9955), (95, 10042), (99, 10081), (101, 10087), (104, 10102), (106, 10123), (131, 10294), (142, 10357), (148, 10402), (152, 10441), (157, 10483), (173, 10645), (176, 10654), (177, 10678), (181, 10690), (185, 10717), (186, 10729), (190, 10774), (194, 10804), (197, 10816), (208, 10918), (209, 10921), (220, 11008), (223, 11035), (229, 11095), (233, 11125), (238, 11146), (241, 11170), (249, 11263), (252, 11278), (253, 11287), (254, 11299), (258, 11332), (263, 11374), (273, 11434), (274, 11437), (275, 11440), (276, 11446), (280, 11464), (285, 11488), (293, 11593), (310, 11701), (311, 11704), (313, 11740), (319, 11806), (321, 11821), (324, 11836), (326, 11851), (329, 11872), (330, 11875), (331, 11878), (336, 11914), (337, 11929), (338, 11935), (341, 11956), (346, 11980), (348, 11986), (365, 12112), (371, 12142), (374, 12181), (379, 12229), (382, 12250), (383, 12253), (384, 12259), (392, 12325), (398, 12370), (400, 12403), (402, 12424), (412, 12478), (433, 12628), (436, 12637), (447, 12724), (489, 12901), (505, 13042), (510, 13072), (527, 13210), (534, 13291), (551, 13444), (555, 13474), (584, 13696), (585, 13705), (586, 13711), (594, 13747), (607, 13864), (611, 13912), (614, 13930), (622, 14053), (623, 14077), (625, 14092), (628, 14122), (631, 14149), (632, 14155), (633, 14188), (637, 14257), (638, 14260), (641, 14296), (650, 14368), (651, 14371), (653, 14386),

Gene: MScarn_18 Start: 9601, Stop: 14400, Start Num: 59

Candidate Starts for MScarn_18:

(Start: 59 @9601 has 23 MA's), (Start: 62 @9628 has 1 MA's), (64, 9634), (81, 9757), (93, 9859), (97, 9904), (100, 9916), (104, 9934), (107, 9961), (108, 9964), (110, 9979), (118, 10030), (119, 10033), (125, 10090), (126, 10093), (135, 10135), (138, 10153), (144, 10198), (151, 10234), (155, 10267), (159, 10300), (160, 10312), (167, 10366), (170, 10405), (172, 10420), (175, 10429), (179, 10456), (187, 10507), (194, 10567), (197, 10576), (203, 10630), (212, 10693), (215, 10708), (235, 10861), (240, 10888), (248, 10981), (249, 10987), (252, 11002), (256, 11041), (266, 11119), (272, 11152), (281, 11191), (284, 11209), (285, 11212), (288, 11239), (291, 11296), (293, 11317), (306, 11428), (311, 11449), (313, 11485), (317, 11527), (318, 11539), (319, 11551), (326, 11596), (327, 11599), (329, 11617), (330, 11620), (331, 11623), (340, 11698), (348, 11731), (355, 11791), (365, 11857), (366, 11860), (367, 11863), (369, 11881), (380, 11980), (382, 11995), (383, 11998), (400, 12148), (402, 12169), (411, 12211), (413, 12238), (414, 12244), (436, 12388), (447, 12475), (455, 12517), (467, 12553), (484, 12628), (492, 12679), (496, 12718), (498, 12742), (512, 12847), (519, 12904), (533, 13042), (536, 13117), (555, 13261), (559, 13282), (575, 13459), (576, 13465), (607, 13789), (608, 13795), (614, 13855), (617, 13906), (622, 13978), (625, 14017), (628, 14047), (633, 14113), (636, 14161), (641, 14221), (653, 14311), (660, 14371),

Gene: MaVan_18 Start: 10619, Stop: 15748, Start Num: 20

Candidate Starts for MaVan_18:

(18, 10598), (Start: 20 @10619 has 29 MA's), (21, 10646), (28, 10775), (36, 10871), (43, 10922), (53, 10979), (57, 11012), (58, 11015), (68, 11102), (72, 11114), (80, 11162), (81, 11165), (82, 11171), (87, 11225), (88, 11231), (94, 11279), (104, 11345), (106, 11366), (161, 11759), (162, 11762), (170, 11864), (181, 11930), (182, 11936), (185, 11957), (209, 12161), (211, 12179), (215, 12197), (217, 12209), (220, 12248), (222, 12260), (227, 12296), (231, 12353), (235, 12377), (237, 12383), (249, 12503), (252, 12518), (256, 12557), (265, 12632), (271, 12665), (275, 12680), (276, 12686), (277, 12692), (285, 12728), (294, 12836), (300, 12908), (310, 12962), (312, 12968), (326, 13112), (330, 13136), (338, 13196), (339, 13208), (340, 13214), (346, 13241), (347, 13244), (348, 13247), (359, 13340), (361, 13346), (369, 13397), (376, 13466), (381, 13499), (383, 13514), (384, 13520), (391, 13577), (393, 13589), (397, 13628), (398, 13631), (399, 13652), (400, 13664), (402, 13685), (403, 13688), (411, 13727), (412, 13739), (413, 13754), (433, 13895), (447, 13991), (461, 14057), (469, 14078), (474, 14084), (505, 14321), (510, 14351), (515, 14390), (528, 14525), (533, 14555), (534, 14576), (551, 14735), (555, 14768), (585, 14981), (592, 14999), (594, 15005), (607, 15134), (614, 15200), (617, 15251), (622, 15323), (625, 15362), (628, 15392), (632, 15425), (633, 15458), (638, 15530), (645, 15602), (652, 15656), (655, 15662), (660, 15719),

Gene: Margaret_19 Start: 10311, Stop: 14516, Start Num: 59

Candidate Starts for Margaret_19:

(Start: 59 @10311 has 23 MA's), (Start: 62 @10338 has 1 MA's), (99, 10626), (104, 10647), (105, 10653), (109, 10686), (113, 10704), (116, 10728), (124, 10818), (127, 10827), (129, 10836), (136, 10869), (139, 10896), (141, 10905), (143, 10929), (166, 11082), (169, 11145), (171, 11160), (177, 11196), (184, 11226), (187, 11247), (192, 11289), (203, 11370), (214, 11445), (216, 11454), (219, 11475), (235, 11622), (252, 11763), (254, 11784), (258, 11817), (259, 11835), (262, 11856), (265, 11877), (269, 11898), (280, 11949), (281, 11952), (282, 11955), (285, 11973), (301, 12054), (308, 12084), (313, 12135), (318, 12189), (321, 12216), (327, 12249), (336, 12309), (347, 12378), (348, 12381), (377, 12483), (378, 12489), (382, 12513), (386, 12537), (387, 12540), (398, 12633), (400, 12666), (402, 12687), (404, 12696), (406, 12705), (408, 12711), (431, 12864), (445, 12933), (447, 12939), (453, 12975), (489, 13104), (505, 13245), (509, 13269), (515, 13314), (530, 13467), (532, 13470), (551, 13659), (555, 13689), (601, 13866), (609, 13938), (611, 13962), (613, 13974), (615, 13998), (616, 14010), (621, 14094), (622, 14100), (626, 14142), (628, 14163), (632, 14196), (633, 14229), (635, 14250), (636, 14277), (638, 14301), (641, 14337), (646, 14385), (660, 14487),

Gene: Mayweather_17 Start: 10006, Stop: 15090, Start Num: 20

Candidate Starts for Mayweather_17:

(Start: 20 @10006 has 29 MA's), (28, 10162), (41, 10291), (45, 10321), (55, 10390), (58, 10402), (61, 10417), (64, 10438), (66, 10447), (68, 10489), (71, 10498), (78, 10534), (82, 10558), (88, 10618), (95, 10672), (99, 10711), (101, 10717), (104, 10732), (106, 10753), (131, 10924), (142, 10987), (148, 11032), (157, 11113), (173, 11272), (177, 11305), (181, 11317), (185, 11344), (190, 11401), (194, 11431), (197, 11443), (208, 11545), (209, 11548), (220, 11635), (227, 11683), (241, 11797), (249, 11890), (252, 11905), (254, 11926), (258, 11959), (263, 12001), (269, 12040), (274, 12064), (275, 12067), (276, 12073), (280, 12091), (285, 12115), (293, 12220), (299, 12268), (310, 12328), (311, 12331), (313, 12367), (319, 12433), (321, 12448), (326, 12478), (329, 12499), (330, 12502), (336, 12541), (338, 12562), (341, 12583), (346, 12607), (348, 12613), (365, 12739), (371, 12769), (374, 12808), (379, 12856), (382, 12877), (383, 12880), (392, 12952), (398, 12997), (400, 13030), (402, 13051), (412, 13105), (421, 13180), (436, 13264), (447, 13351), (505, 13669), (510, 13699), (527, 13837), (531, 13888), (534, 13918), (551, 14071), (555, 14101), (584, 14311), (585, 14320), (586, 14326), (594, 14362), (607, 14479), (608, 14485), (611, 14527), (614, 14545), (622, 14668), (623, 14692), (625, 14707), (628, 14737), (631, 14764), (632, 14770), (633, 14803), (637, 14872), (638, 14875), (641, 14911), (650, 14983), (653, 15001),

Gene: Melba_17 Start: 10274, Stop: 15796, Start Num: 9

Candidate Starts for Melba_17:

(Start: 9 @10274 has 26 MA's), (10, 10289), (Start: 11 @10295 has 1 MA's), (Start: 13 @10325 has 1 MA's), (14, 10334), (15, 10337), (16, 10379), (24, 10490), (25, 10511), (29, 10631), (36, 10673), (46, 10739), (48, 10757), (51, 10778), (52, 10781), (54, 10799), (60, 10823), (69, 10907), (70, 10910), (78, 10949), (80, 10964), (82, 10973), (103, 11141), (106, 11168), (122, 11285), (149, 11456), (152, 11486), (173, 11690), (181, 11735), (185, 11762), (186, 11774), (198, 11864), (202, 11909), (206, 11936), (209, 11966), (220, 12053), (221, 12056), (225, 12095), (234, 12179), (241, 12215), (244, 12257), (248, 12302), (249, 12308), (251, 12320), (252, 12323), (258, 12377), (262, 12416), (265, 12437), (266, 12440), (269, 12458), (270, 12467), (275, 12485), (279, 12506), (281, 12512), (285, 12533), (288, 12560), (293, 12638), (317, 12827), (319, 12851), (320, 12863), (321, 12866), (324, 12881), (326, 12896), (327, 12899), (335, 12950), (347, 13031), (348, 13034), (371, 13067), (374, 13097), (376, 13121), (417, 13454), (423, 13502), (427, 13547), (428, 13550), (430, 13565), (437, 13610), (438, 13619), (439, 13628), (448, 13679), (462, 13751), (466, 13769), (473, 13790), (486, 13889), (487, 13892), (493, 13925), (501, 13991), (502, 14009), (503, 14024), (506, 14057), (514, 14108), (520, 14159), (524, 14207), (539, 14402), (540, 14405), (548, 14477), (549, 14480), (561, 14546), (562, 14549), (563, 14567), (567, 14627), (570, 14684), (573, 14702), (579, 14783), (580, 14786), (582, 14801), (599, 15014), (607, 15080), (612, 15134), (613, 15146), (614, 15152), (622, 15275), (623, 15299), (626, 15317), (628, 15341), (629, 15347), (631, 15368), (633, 15407), (642, 15548), (644, 15560), (651, 15611), (654, 15629), (662, 15779),

Gene: Mellie_16 Start: 10014, Stop: 15557, Start Num: 9

Candidate Starts for Mellie_16:

(Start: 9 @10014 has 26 MA's), (10, 10029), (Start: 11 @10035 has 1 MA's), (Start: 13 @10065 has 1 MA's), (14, 10074), (15, 10077), (16, 10119), (24, 10230), (25, 10251), (46, 10479), (48, 10497), (50, 10512), (51, 10518), (52, 10521), (54, 10539), (60, 10563), (69, 10647), (71, 10653), (78, 10689), (80, 10704), (82, 10713), (103, 10881), (106, 10908), (122, 11025), (149, 11196), (152, 11226), (173, 11430), (181, 11475), (185, 11502), (186, 11514), (198, 11604), (206, 11676), (209, 11706), (220, 11793), (221, 11796), (225, 11835), (241, 11955), (244, 11997), (248, 12042), (249, 12048), (251, 12060), (252, 12063), (258, 12117), (262, 12156), (265, 12177), (266, 12180), (269, 12198), (279, 12246), (281, 12252), (285, 12273), (288, 12300), (292, 12372), (310, 12507), (317, 12588), (319, 12612), (321, 12627), (326, 12657), (327, 12660), (335, 12711), (347, 12792), (348, 12795), (371, 12828), (374, 12858), (376, 12882), (385, 12948), (417, 13215), (420, 13233), (423, 13263), (427, 13308), (428, 13311), (430, 13326), (432, 13335), (437, 13371), (438, 13380), (439, 13389), (448, 13440), (462, 13512), (466, 13530), (473, 13551), (486, 13650), (487, 13653), (493, 13686), (501,

13752), (502, 13770), (503, 13785), (506, 13818), (514, 13869), (520, 13920), (539, 14163), (540, 14166), (548, 14238), (549, 14241), (561, 14307), (562, 14310), (563, 14328), (567, 14388), (570, 14445), (573, 14463), (579, 14544), (580, 14547), (582, 14562), (599, 14775), (607, 14841), (608, 14847), (613, 14907), (614, 14913), (622, 15036), (623, 15060), (626, 15078), (628, 15102), (629, 15108), (631, 15129), (633, 15168), (642, 15309), (644, 15321), (651, 15372), (654, 15390), (662, 15540),

Gene: MintFen_17 Start: 10274, Stop: 15796, Start Num: 9

Candidate Starts for MintFen_17:

(Start: 9 @10274 has 26 MA's), (10, 10289), (Start: 11 @10295 has 1 MA's), (Start: 13 @10325 has 1 MA's), (14, 10334), (15, 10337), (16, 10379), (24, 10490), (25, 10511), (29, 10631), (36, 10673), (46, 10739), (48, 10757), (51, 10778), (52, 10781), (54, 10799), (60, 10823), (69, 10907), (70, 10910), (78, 10949), (80, 10964), (82, 10973), (103, 11141), (106, 11168), (122, 11285), (149, 11456), (152, 11486), (173, 11690), (181, 11735), (185, 11762), (186, 11774), (198, 11864), (202, 11909), (206, 11936), (209, 11966), (220, 12053), (221, 12056), (225, 12095), (234, 12179), (241, 12215), (244, 12257), (248, 12302), (249, 12308), (251, 12320), (252, 12323), (258, 12377), (262, 12416), (265, 12437), (266, 12440), (269, 12458), (270, 12467), (275, 12485), (279, 12506), (281, 12512), (285, 12533), (288, 12560), (293, 12638), (317, 12827), (319, 12851), (320, 12863), (321, 12866), (324, 12881), (326, 12896), (327, 12899), (335, 12950), (347, 13031), (348, 13034), (371, 13067), (374, 13097), (376, 13121), (417, 13454), (423, 13502), (427, 13547), (428, 13550), (430, 13565), (437, 13610), (438, 13619), (439, 13628), (448, 13679), (462, 13751), (466, 13769), (473, 13790), (486, 13889), (487, 13892), (493, 13925), (501, 13991), (502, 14009), (503, 14024), (506, 14057), (514, 14108), (520, 14159), (524, 14207), (539, 14402), (540, 14405), (548, 14477), (549, 14480), (561, 14546), (562, 14549), (563, 14567), (567, 14627), (570, 14684), (573, 14702), (579, 14783), (580, 14786), (582, 14801), (599, 15014), (607, 15080), (612, 15134), (613, 15146), (614, 15152), (622, 15275), (623, 15299), (626, 15317), (628, 15341), (629, 15347), (631, 15368), (633, 15407), (642, 15548), (644, 15560), (651, 15611), (654, 15629), (662, 15779),

Gene: MunkgeeRoachy_16 Start: 9677, Stop: 14815, Start Num: 20

Candidate Starts for MunkgeeRoachy_16:

(17, 9653), (Start: 20 @9677 has 29 MA's), (21, 9704), (28, 9833), (31, 9908), (55, 10061), (56, 10064), (68, 10160), (71, 10169), (76, 10199), (78, 10205), (80, 10220), (81, 10223), (84, 10244), (91, 10316), (94, 10337), (104, 10403), (106, 10424), (122, 10541), (148, 10703), (152, 10742), (161, 10817), (177, 10976), (181, 10988), (185, 11015), (189, 11060), (190, 11072), (205, 11180), (207, 11201), (210, 11231), (215, 11255), (217, 11267), (220, 11306), (224, 11339), (237, 11441), (238, 11444), (240, 11462), (241, 11468), (249, 11561), (252, 11576), (256, 11615), (262, 11669), (269, 11711), (278, 11753), (284, 11783), (285, 11786), (294, 11894), (295, 11897), (297, 11948), (311, 12023), (318, 12113), (319, 12125), (326, 12170), (329, 12191), (330, 12194), (331, 12197), (340, 12272), (348, 12305), (352, 12326), (354, 12356), (361, 12404), (363, 12410), (367, 12437), (383, 12572), (398, 12689), (400, 12722), (402, 12743), (403, 12746), (413, 12812), (414, 12818), (416, 12833), (433, 12953), (436, 12962), (447, 13046), (505, 13367), (529, 13586), (534, 13622), (559, 13835), (585, 14027), (594, 14075), (595, 14096), (607, 14204), (614, 14270), (615, 14288), (622, 14393), (624, 14423), (625, 14432), (628, 14462), (633, 14528), (636, 14576), (641, 14636), (652, 14723), (660, 14786),

Gene: Murp_17 Start: 10264, Stop: 15864, Start Num: 9

Candidate Starts for Murp_17:

(Start: 9 @10264 has 26 MA's), (10, 10279), (Start: 11 @10285 has 1 MA's), (Start: 13 @10315 has 1 MA's), (14, 10324), (15, 10327), (16, 10369), (24, 10480), (25, 10501), (29, 10621), (37, 10669), (46, 10729), (48, 10747), (51, 10768), (52, 10771), (54, 10789), (69, 10897), (71, 10903), (78, 10939), (80, 10954), (82, 10963), (103, 11131), (106, 11158), (122, 11275), (149, 11446), (152, 11476), (165, 11572), (173, 11680), (181, 11725), (185, 11752), (186, 11764), (198, 11854), (202, 11899), (206, 11926), (209, 11956), (220, 12043), (225, 12085), (227, 12091), (241, 12205), (244, 12247), (248,

12292), (249, 12298), (252, 12313), (258, 12367), (262, 12406), (265, 12427), (266, 12430), (269, 12448), (270, 12457), (275, 12475), (279, 12496), (281, 12502), (285, 12523), (288, 12550), (290, 12598), (293, 12628), (314, 12802), (319, 12841), (321, 12856), (326, 12886), (327, 12889), (335, 12940), (347, 13021), (348, 13024), (371, 13057), (374, 13087), (376, 13111), (384, 13165), (385, 13177), (409, 13366), (417, 13444), (422, 13486), (427, 13537), (428, 13540), (430, 13555), (434, 13567), (437, 13600), (438, 13609), (451, 13723), (463, 13777), (465, 13795), (479, 13879), (480, 13885), (485, 13921), (521, 14245), (525, 14293), (526, 14305), (531, 14368), (535, 14437), (537, 14467), (538, 14470), (539, 14479), (540, 14482), (543, 14515), (548, 14554), (549, 14557), (561, 14623), (562, 14626), (563, 14644), (567, 14704), (570, 14761), (573, 14779), (579, 14860), (582, 14878), (599, 15079), (607, 15145), (613, 15211), (614, 15217), (622, 15343), (623, 15367), (626, 15385), (628, 15409), (629, 15415), (631, 15436), (633, 15475), (642, 15616), (651, 15679), (654, 15697), (659, 15757), (662, 15850),

Gene: Nibbles_18 Start: 10619, Stop: 15748, Start Num: 20

Candidate Starts for Nibbles_18:

(18, 10598), (Start: 20 @10619 has 29 MA's), (21, 10646), (28, 10775), (36, 10871), (43, 10922), (53, 10979), (57, 11012), (58, 11015), (68, 11102), (72, 11114), (80, 11162), (81, 11165), (82, 11171), (87, 11225), (88, 11231), (94, 11279), (104, 11345), (106, 11366), (161, 11759), (162, 11762), (170, 11864), (181, 11930), (182, 11936), (185, 11957), (209, 12161), (211, 12179), (213, 12185), (215, 12197), (217, 12209), (220, 12248), (222, 12260), (227, 12296), (231, 12353), (235, 12377), (249, 12503), (252, 12518), (256, 12557), (265, 12632), (271, 12665), (275, 12680), (276, 12686), (277, 12692), (285, 12728), (294, 12836), (300, 12908), (310, 12962), (326, 13112), (330, 13136), (338, 13196), (339, 13208), (340, 13214), (346, 13241), (347, 13244), (348, 13247), (359, 13340), (361, 13346), (369, 13397), (376, 13466), (381, 13499), (383, 13514), (384, 13520), (391, 13577), (393, 13589), (397, 13628), (398, 13631), (399, 13652), (400, 13664), (402, 13685), (403, 13688), (411, 13727), (412, 13739), (413, 13754), (433, 13895), (447, 13991), (461, 14057), (469, 14078), (474, 14084), (505, 14321), (510, 14351), (515, 14390), (528, 14525), (533, 14555), (534, 14576), (551, 14735), (555, 14768), (585, 14981), (592, 14999), (594, 15005), (607, 15134), (614, 15200), (617, 15251), (622, 15323), (625, 15362), (628, 15392), (632, 15425), (633, 15458), (638, 15530), (645, 15602), (652, 15656), (655, 15662), (660, 15719),

Gene: Nina_17 Start: 10662, Stop: 15809, Start Num: 20

Candidate Starts for Nina_17:

(17, 10638), (Start: 20 @10662 has 29 MA's), (21, 10689), (28, 10818), (33, 10911), (34, 10914), (47, 11004), (51, 11028), (60, 11073), (61, 11082), (68, 11154), (70, 11160), (71, 11163), (75, 11190), (77, 11196), (80, 11214), (81, 11217), (84, 11238), (91, 11310), (94, 11331), (104, 11397), (106, 11418), (122, 11535), (148, 11697), (152, 11736), (161, 11811), (177, 11970), (181, 11982), (185, 12009), (189, 12054), (190, 12066), (202, 12156), (205, 12174), (207, 12195), (210, 12225), (215, 12249), (217, 12261), (220, 12300), (224, 12333), (237, 12435), (238, 12438), (241, 12462), (249, 12555), (252, 12570), (256, 12609), (262, 12663), (269, 12705), (271, 12717), (278, 12747), (284, 12777), (285, 12780), (294, 12888), (295, 12891), (297, 12942), (298, 12948), (311, 13017), (318, 13107), (319, 13119), (326, 13164), (329, 13185), (330, 13188), (331, 13191), (340, 13266), (348, 13299), (352, 13320), (354, 13350), (361, 13398), (363, 13404), (367, 13431), (383, 13566), (398, 13683), (400, 13716), (402, 13737), (413, 13806), (414, 13812), (416, 13827), (433, 13947), (436, 13956), (447, 14040), (505, 14361), (507, 14382), (529, 14580), (534, 14616), (559, 14829), (585, 15021), (594, 15069), (595, 15090), (607, 15198), (614, 15264), (615, 15282), (622, 15387), (624, 15417), (625, 15426), (628, 15456), (633, 15522), (636, 15570), (641, 15630), (652, 15717), (660, 15780),

Gene: Nodigi_18 Start: 10594, Stop: 14802, Start Num: 59

Candidate Starts for Nodigi_18:

(Start: 59 @10594 has 23 MA's), (Start: 62 @10621 has 1 MA's), (104, 10930), (113, 10987), (116, 11011), (120, 11056), (124, 11101), (129, 11119), (133, 11134), (136, 11152), (137, 11161), (144, 11215), (153, 11272), (163, 11353), (167, 11401), (169, 11440), (171, 11455), (175, 11464), (177,

11491), (184, 11521), (187, 11542), (203, 11665), (213, 11731), (220, 11794), (230, 11881), (241, 11950), (252, 12058), (254, 12079), (258, 12112), (259, 12130), (261, 12148), (265, 12172), (270, 12202), (281, 12247), (282, 12250), (285, 12268), (308, 12379), (310, 12391), (311, 12394), (313, 12430), (317, 12472), (318, 12484), (321, 12511), (327, 12544), (337, 12619), (347, 12673), (348, 12676), (351, 12694), (374, 12739), (378, 12784), (386, 12832), (387, 12835), (400, 12961), (404, 12991), (406, 13000), (408, 13006), (431, 13159), (441, 13204), (445, 13228), (447, 13234), (453, 13270), (471, 13327), (481, 13378), (490, 13423), (505, 13561), (510, 13591), (530, 13783), (551, 13960), (601, 14152), (609, 14224), (613, 14260), (615, 14284), (616, 14296), (618, 14338), (622, 14386), (628, 14449), (631, 14476), (632, 14482), (633, 14515), (635, 14536), (636, 14563), (638, 14587), (641, 14623), (644, 14650), (645, 14659), (646, 14671), (660, 14773),

Gene: Obliviate_16 Start: 10043, Stop: 15586, Start Num: 9

Candidate Starts for Obliviate_16:

(Start: 9 @10043 has 26 MA's), (10, 10058), (Start: 11 @10064 has 1 MA's), (Start: 13 @10094 has 1 MA's), (14, 10103), (15, 10106), (16, 10148), (24, 10259), (25, 10280), (46, 10508), (48, 10526), (50, 10541), (51, 10547), (52, 10550), (54, 10568), (60, 10592), (69, 10676), (71, 10682), (78, 10718), (80, 10733), (82, 10742), (103, 10910), (106, 10937), (122, 11054), (131, 11108), (149, 11225), (152, 11255), (173, 11459), (181, 11504), (185, 11531), (186, 11543), (198, 11633), (202, 11678), (206, 11705), (209, 11735), (220, 11822), (221, 11825), (225, 11864), (241, 11984), (244, 12026), (248, 12071), (249, 12077), (251, 12089), (252, 12092), (258, 12146), (262, 12185), (265, 12206), (266, 12209), (269, 12227), (275, 12254), (279, 12275), (281, 12281), (285, 12302), (288, 12329), (292, 12401), (310, 12536), (317, 12617), (319, 12641), (321, 12656), (326, 12686), (327, 12689), (335, 12740), (347, 12821), (348, 12824), (371, 12857), (374, 12887), (376, 12911), (385, 12977), (417, 13244), (420, 13262), (423, 13292), (427, 13337), (428, 13340), (430, 13355), (432, 13364), (437, 13400), (438, 13409), (439, 13418), (448, 13469), (462, 13541), (466, 13559), (473, 13580), (486, 13679), (487, 13682), (493, 13715), (501, 13781), (502, 13799), (503, 13814), (506, 13847), (514, 13898), (520, 13949), (539, 14192), (540, 14195), (548, 14267), (549, 14270), (561, 14336), (562, 14339), (563, 14357), (567, 14417), (570, 14474), (573, 14492), (579, 14573), (580, 14576), (582, 14591), (595, 14750), (599, 14804), (607, 14870), (608, 14876), (613, 14936), (614, 14942), (617, 14993), (622, 15065), (623, 15089), (626, 15107), (628, 15131), (629, 15137), (631, 15158), (633, 15197), (642, 15338), (644, 15350), (651, 15401), (654, 15419), (662, 15569),

Gene: Orla_18 Start: 10598, Stop: 14806, Start Num: 59

Candidate Starts for Orla_18:

(Start: 59 @10598 has 23 MA's), (Start: 62 @10625 has 1 MA's), (104, 10934), (113, 10991), (116, 11015), (120, 11060), (124, 11105), (129, 11123), (133, 11138), (136, 11156), (137, 11165), (144, 11219), (153, 11276), (163, 11357), (167, 11405), (169, 11444), (171, 11459), (175, 11468), (177, 11495), (184, 11525), (187, 11546), (203, 11669), (213, 11735), (220, 11798), (230, 11885), (241, 11954), (252, 12062), (254, 12083), (258, 12116), (259, 12134), (261, 12152), (265, 12176), (270, 12206), (281, 12251), (282, 12254), (285, 12272), (308, 12383), (310, 12395), (313, 12434), (317, 12476), (318, 12488), (319, 12500), (321, 12515), (327, 12548), (337, 12623), (347, 12677), (348, 12680), (351, 12698), (374, 12743), (377, 12782), (378, 12788), (382, 12812), (385, 12833), (386, 12836), (387, 12839), (400, 12965), (402, 12986), (404, 12995), (406, 13004), (408, 13010), (431, 13163), (441, 13208), (445, 13232), (447, 13238), (453, 13274), (464, 13307), (471, 13331), (481, 13382), (490, 13427), (505, 13565), (510, 13595), (530, 13787), (551, 13964), (601, 14156), (609, 14228), (613, 14264), (615, 14288), (616, 14300), (618, 14342), (622, 14390), (628, 14453), (631, 14480), (632, 14486), (633, 14519), (635, 14540), (636, 14567), (638, 14591), (641, 14627), (644, 14654), (645, 14663), (646, 14675), (660, 14777),

Gene: PCoral7_17 Start: 10271, Stop: 15886, Start Num: 9

Candidate Starts for PCoral7_17:

(Start: 7 @10235 has 1 MA's), (Start: 9 @10271 has 26 MA's), (Start: 11 @10292 has 1 MA's), (14, 10331), (16, 10376), (22, 10466), (23, 10475), (24, 10487), (25, 10508), (27, 10565), (30, 10637), (33,

10658), (40, 10700), (41, 10703), (44, 10730), (47, 10751), (48, 10754), (51, 10775), (54, 10796), (63, 10847), (64, 10850), (71, 10910), (96, 11093), (106, 11165), (134, 11351), (149, 11453), (150, 11468), (152, 11483), (158, 11540), (181, 11732), (196, 11852), (206, 11933), (209, 11963), (215, 11999), (220, 12050), (237, 12185), (238, 12188), (241, 12212), (245, 12263), (248, 12299), (249, 12305), (252, 12320), (258, 12374), (262, 12413), (266, 12437), (269, 12455), (279, 12503), (281, 12509), (284, 12527), (285, 12530), (286, 12545), (288, 12557), (290, 12605), (310, 12743), (317, 12824), (319, 12848), (320, 12860), (321, 12863), (327, 12896), (340, 12998), (346, 13025), (347, 13028), (348, 13031), (349, 13037), (354, 13082), (356, 13094), (357, 13106), (361, 13130), (364, 13145), (366, 13160), (367, 13163), (371, 13187), (372, 13214), (382, 13295), (394, 13379), (405, 13484), (411, 13517), (417, 13583), (419, 13592), (423, 13631), (426, 13664), (427, 13676), (428, 13679), (430, 13694), (432, 13703), (437, 13739), (438, 13748), (439, 13757), (470, 13913), (472, 13916), (473, 13919), (475, 13940), (487, 14021), (494, 14063), (503, 14150), (506, 14183), (507, 14192), (514, 14234), (526, 14348), (538, 14513), (548, 14597), (549, 14600), (553, 14630), (554, 14633), (561, 14666), (562, 14669), (567, 14747), (570, 14804), (582, 14921), (587, 14972), (596, 15074), (599, 15107), (607, 15173), (613, 15239), (614, 15245), (615, 15263), (617, 15296), (622, 15368), (626, 15410), (627, 15416), (628, 15434), (629, 15440), (631, 15461), (633, 15500), (642, 15641), (651, 15704), (659, 15779), (662, 15872),

Gene: Petra_19 Start: 10705, Stop: 16197, Start Num: 13

Candidate Starts for Petra_19:

(Start: 9 @10654 has 26 MA's), (10, 10669), (Start: 11 @10675 has 1 MA's), (Start: 13 @10705 has 1 MA's), (14, 10714), (15, 10717), (16, 10759), (24, 10870), (25, 10891), (46, 11119), (48, 11137), (51, 11158), (52, 11161), (54, 11179), (60, 11203), (69, 11287), (78, 11329), (80, 11344), (82, 11353), (103, 11521), (106, 11548), (122, 11665), (149, 11836), (152, 11866), (173, 12070), (181, 12115), (202, 12289), (206, 12316), (209, 12346), (220, 12433), (225, 12475), (227, 12481), (241, 12595), (243, 12610), (244, 12637), (248, 12682), (249, 12688), (252, 12703), (258, 12757), (262, 12796), (265, 12817), (266, 12820), (269, 12838), (275, 12865), (279, 12886), (281, 12892), (285, 12913), (288, 12940), (314, 13213), (319, 13252), (321, 13267), (326, 13297), (327, 13300), (335, 13351), (347, 13432), (348, 13435), (371, 13468), (374, 13498), (385, 13588), (417, 13855), (423, 13903), (427, 13948), (428, 13951), (430, 13966), (432, 13975), (437, 14011), (438, 14020), (439, 14029), (448, 14080), (462, 14152), (466, 14170), (473, 14191), (486, 14290), (487, 14293), (493, 14326), (501, 14392), (502, 14410), (503, 14425), (506, 14458), (514, 14509), (520, 14560), (539, 14803), (540, 14806), (548, 14878), (549, 14881), (561, 14947), (562, 14950), (563, 14968), (567, 15028), (570, 15085), (573, 15103), (579, 15184), (580, 15187), (582, 15202), (595, 15361), (599, 15415), (607, 15481), (613, 15547), (614, 15553), (622, 15676), (623, 15700), (626, 15718), (628, 15742), (629, 15748), (631, 15769), (633, 15808), (642, 15949), (644, 15961), (651, 16012), (654, 16030), (659, 16087), (662, 16180),

Gene: PhrostedPhlake_18 Start: 10632, Stop: 16172, Start Num: 9

Candidate Starts for PhrostedPhlake_18:

(Start: 9 @10632 has 26 MA's), (10, 10647), (Start: 11 @10653 has 1 MA's), (Start: 13 @10683 has 1 MA's), (14, 10692), (16, 10737), (24, 10848), (25, 10869), (46, 11097), (48, 11115), (51, 11136), (52, 11139), (54, 11157), (60, 11181), (69, 11265), (71, 11271), (78, 11307), (80, 11322), (82, 11331), (88, 11391), (103, 11499), (106, 11526), (122, 11643), (131, 11697), (138, 11739), (149, 11814), (152, 11844), (173, 12048), (181, 12093), (202, 12267), (206, 12294), (209, 12324), (220, 12411), (225, 12453), (231, 12516), (241, 12573), (244, 12615), (248, 12660), (249, 12666), (252, 12681), (258, 12735), (262, 12774), (265, 12795), (266, 12798), (269, 12816), (275, 12843), (279, 12864), (281, 12870), (285, 12891), (288, 12918), (319, 13230), (321, 13245), (326, 13275), (327, 13278), (335, 13329), (347, 13410), (348, 13413), (371, 13446), (374, 13476), (385, 13566), (417, 13833), (423, 13881), (426, 13914), (427, 13926), (428, 13929), (430, 13944), (432, 13953), (437, 13989), (438, 13998), (439, 14007), (458, 14115), (470, 14163), (472, 14166), (473, 14169), (487, 14271), (488, 14274), (503, 14400), (506, 14433), (513, 14481), (514, 14484), (520, 14535), (526, 14604), (539, 14778), (540, 14781), (548, 14853), (549, 14856), (561, 14922), (562, 14925), (563, 14943), (567,

15003), (570, 15060), (573, 15078), (579, 15159), (580, 15162), (582, 15177), (595, 15336), (599, 15390), (607, 15456), (613, 15522), (614, 15528), (616, 15558), (622, 15651), (623, 15675), (626, 15693), (628, 15717), (629, 15723), (631, 15744), (633, 15783), (642, 15924), (651, 15987), (654, 16005), (662, 16155),

Gene: Pipp_17 Start: 10133, Stop: 15790, Start Num: 6

Candidate Starts for Pipp_17:

(4, 10094), (Start: 6 @10133 has 1 MA's), (Start: 9 @10247 has 26 MA's), (10, 10262), (Start: 11 @10268 has 1 MA's), (Start: 13 @10298 has 1 MA's), (14, 10307), (15, 10310), (16, 10352), (24, 10463), (25, 10484), (48, 10730), (51, 10751), (52, 10754), (54, 10772), (60, 10796), (69, 10880), (71, 10886), (78, 10922), (80, 10937), (82, 10946), (84, 10961), (88, 11006), (103, 11114), (106, 11141), (111, 11174), (122, 11258), (152, 11459), (173, 11663), (182, 11714), (185, 11735), (186, 11747), (198, 11837), (202, 11882), (206, 11909), (209, 11939), (220, 12026), (221, 12029), (225, 12068), (232, 12140), (241, 12188), (244, 12230), (248, 12275), (249, 12281), (251, 12293), (252, 12296), (258, 12350), (262, 12389), (265, 12410), (266, 12413), (269, 12431), (275, 12458), (279, 12479), (281, 12485), (285, 12506), (310, 12740), (314, 12806), (319, 12845), (321, 12860), (326, 12890), (327, 12893), (335, 12944), (347, 13025), (348, 13028), (371, 13061), (374, 13091), (385, 13181), (411, 13382), (417, 13448), (423, 13496), (427, 13541), (428, 13544), (430, 13559), (432, 13568), (437, 13604), (438, 13613), (439, 13622), (462, 13745), (473, 13784), (486, 13883), (487, 13886), (501, 13985), (502, 14003), (503, 14018), (506, 14051), (514, 14102), (520, 14153), (526, 14222), (539, 14396), (540, 14399), (546, 14465), (548, 14471), (549, 14474), (561, 14540), (562, 14543), (563, 14561), (567, 14621), (570, 14678), (573, 14696), (579, 14777), (582, 14795), (587, 14846), (595, 14954), (599, 15008), (607, 15074), (612, 15128), (613, 15140), (614, 15146), (616, 15176), (622, 15269), (623, 15293), (626, 15311), (628, 15335), (629, 15341), (631, 15362), (633, 15401), (642, 15542), (651, 15605), (654, 15623), (659, 15680), (662, 15773),

Gene: Pons_16 Start: 9384, Stop: 14465, Start Num: 20

Candidate Starts for Pons_16:

(Start: 20 @9384 has 29 MA's), (28, 9540), (41, 9669), (45, 9699), (55, 9768), (58, 9780), (61, 9795), (64, 9816), (66, 9825), (68, 9867), (71, 9876), (78, 9912), (82, 9936), (88, 9996), (95, 10050), (99, 10089), (101, 10095), (104, 10110), (106, 10131), (115, 10185), (131, 10302), (142, 10365), (148, 10410), (152, 10449), (157, 10491), (173, 10650), (177, 10683), (181, 10695), (185, 10722), (190, 10779), (194, 10809), (197, 10821), (208, 10923), (209, 10926), (220, 11013), (227, 11061), (241, 11175), (245, 11226), (249, 11268), (252, 11283), (253, 11292), (254, 11304), (258, 11337), (263, 11379), (273, 11439), (274, 11442), (275, 11445), (276, 11451), (280, 11469), (285, 11493), (293, 11598), (299, 11646), (310, 11706), (311, 11709), (313, 11745), (321, 11826), (326, 11856), (329, 11877), (330, 11880), (331, 11883), (341, 11961), (346, 11985), (348, 11991), (365, 12117), (371, 12147), (374, 12186), (379, 12234), (382, 12255), (383, 12258), (384, 12264), (392, 12330), (398, 12375), (400, 12408), (402, 12429), (412, 12483), (433, 12633), (436, 12642), (447, 12729), (505, 13047), (510, 13077), (527, 13215), (534, 13296), (551, 13446), (555, 13476), (584, 13686), (585, 13695), (586, 13701), (594, 13737), (607, 13854), (608, 13860), (611, 13902), (614, 13920), (622, 14043), (623, 14067), (625, 14082), (628, 14112), (631, 14139), (632, 14145), (633, 14178), (637, 14247), (638, 14250), (641, 14286), (650, 14358), (653, 14376),

Gene: PotPie_16 Start: 10237, Stop: 15330, Start Num: 20

Candidate Starts for PotPie_16:

(Start: 20 @10237 has 29 MA's), (28, 10393), (41, 10522), (45, 10552), (55, 10621), (58, 10633), (64, 10669), (66, 10678), (68, 10720), (71, 10729), (78, 10765), (82, 10789), (95, 10903), (99, 10942), (104, 10963), (106, 10984), (131, 11155), (142, 11218), (148, 11263), (157, 11344), (173, 11503), (177, 11536), (181, 11548), (185, 11575), (190, 11632), (194, 11662), (197, 11674), (208, 11776), (209, 11779), (220, 11866), (227, 11914), (241, 12028), (249, 12121), (252, 12136), (254, 12157), (258, 12190), (260, 12220), (263, 12232), (269, 12271), (274, 12295), (275, 12298), (280, 12322), (285, 12346), (293, 12451), (303, 12529), (310, 12559), (311, 12562), (313, 12598), (317, 12640), (319,

12664), (321, 12679), (324, 12694), (326, 12709), (330, 12733), (336, 12772), (337, 12787), (338, 12793), (346, 12838), (348, 12844), (365, 12970), (371, 13000), (375, 13051), (379, 13087), (382, 13108), (383, 13111), (392, 13183), (398, 13228), (400, 13261), (402, 13282), (412, 13336), (421, 13411), (436, 13495), (447, 13582), (505, 13900), (510, 13930), (527, 14068), (531, 14119), (534, 14149), (551, 14314), (555, 14344), (581, 14524), (586, 14575), (594, 14602), (595, 14623), (607, 14719), (611, 14767), (614, 14785), (622, 14908), (623, 14932), (625, 14947), (628, 14977), (631, 15004), (632, 15010), (633, 15043), (637, 15112), (638, 15115), (641, 15151), (653, 15241),

Gene: PrincePatrick_17 Start: 10339, Stop: 15960, Start Num: 9

Candidate Starts for PrincePatrick_17:

(Start: 7 @10303 has 1 MA's), (Start: 9 @10339 has 26 MA's), (Start: 11 @10360 has 1 MA's), (14, 10399), (16, 10444), (22, 10534), (23, 10543), (24, 10555), (25, 10576), (27, 10633), (30, 10705), (33, 10726), (40, 10768), (41, 10771), (44, 10798), (47, 10819), (48, 10822), (51, 10843), (54, 10864), (63, 10915), (64, 10918), (71, 10978), (96, 11161), (106, 11233), (134, 11419), (149, 11521), (150, 11536), (152, 11551), (158, 11608), (181, 11800), (196, 11920), (206, 12001), (209, 12031), (215, 12067), (220, 12118), (225, 12160), (232, 12232), (239, 12268), (241, 12280), (245, 12331), (249, 12373), (252, 12388), (258, 12442), (262, 12481), (266, 12505), (269, 12523), (279, 12571), (281, 12577), (284, 12595), (285, 12598), (286, 12613), (288, 12625), (290, 12673), (293, 12703), (302, 12778), (317, 12892), (319, 12916), (320, 12928), (321, 12931), (327, 12964), (340, 13066), (348, 13099), (354, 13150), (356, 13162), (357, 13174), (361, 13198), (367, 13234), (371, 13258), (372, 13285), (382, 13366), (394, 13450), (405, 13555), (411, 13588), (417, 13654), (419, 13663), (423, 13702), (426, 13735), (427, 13747), (428, 13750), (430, 13765), (432, 13774), (437, 13810), (438, 13819), (439, 13828), (446, 13870), (470, 13984), (472, 13987), (473, 13990), (475, 14011), (487, 14092), (494, 14134), (503, 14221), (506, 14254), (507, 14263), (514, 14305), (526, 14419), (548, 14668), (549, 14671), (553, 14701), (554, 14704), (557, 14728), (561, 14737), (562, 14740), (567, 14818), (570, 14875), (582, 14992), (587, 15043), (599, 15181), (607, 15247), (613, 15313), (614, 15319), (615, 15337), (620, 15430), (622, 15442), (627, 15490), (628, 15508), (629, 15514), (631, 15535), (633, 15574), (642, 15715), (651, 15778), (659, 15853), (662, 15946),

Gene: PsychoKiller_16 Start: 9629, Stop: 14767, Start Num: 20

Candidate Starts for PsychoKiller_16:

(17, 9605), (Start: 20 @9629 has 29 MA's), (21, 9656), (28, 9785), (31, 9860), (55, 10013), (56, 10016), (68, 10112), (71, 10121), (76, 10151), (78, 10157), (80, 10172), (81, 10175), (84, 10196), (91, 10268), (94, 10289), (104, 10355), (106, 10376), (122, 10493), (148, 10655), (152, 10694), (161, 10769), (177, 10928), (181, 10940), (185, 10967), (189, 11012), (190, 11024), (202, 11114), (205, 11132), (207, 11153), (210, 11183), (215, 11207), (217, 11219), (220, 11258), (224, 11291), (237, 11393), (238, 11396), (241, 11420), (249, 11513), (252, 11528), (256, 11567), (277, 11702), (278, 11705), (285, 11738), (294, 11846), (295, 11849), (297, 11900), (311, 11975), (319, 12077), (326, 12122), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (352, 12278), (354, 12308), (361, 12356), (363, 12362), (367, 12389), (383, 12524), (398, 12641), (400, 12674), (402, 12695), (413, 12764), (414, 12770), (416, 12785), (433, 12905), (436, 12914), (447, 12998), (505, 13319), (529, 13538), (534, 13574), (559, 13787), (585, 13979), (594, 14027), (595, 14048), (607, 14156), (614, 14222), (615, 14240), (622, 14345), (624, 14375), (625, 14384), (628, 14414), (633, 14480), (636, 14528), (641, 14588), (652, 14675), (660, 14738),

Gene: Quasar_16 Start: 10238, Stop: 15376, Start Num: 20

Candidate Starts for Quasar_16:

(17, 10214), (Start: 20 @10238 has 29 MA's), (21, 10265), (28, 10394), (31, 10469), (55, 10622), (56, 10625), (68, 10721), (71, 10730), (76, 10760), (78, 10766), (80, 10781), (81, 10784), (84, 10805), (91, 10877), (94, 10898), (104, 10964), (106, 10985), (122, 11102), (148, 11264), (152, 11303), (161, 11378), (177, 11537), (181, 11549), (185, 11576), (189, 11621), (190, 11633), (202, 11723), (205, 11741), (207, 11762), (210, 11792), (215, 11816), (217, 11828), (220, 11867), (224, 11900), (237, 12002), (238, 12005), (241, 12029), (242, 12035), (249, 12122), (252, 12137), (256, 12176), (278,

12314), (284, 12344), (285, 12347), (294, 12455), (295, 12458), (297, 12509), (311, 12584), (319, 12686), (326, 12731), (329, 12752), (330, 12755), (331, 12758), (340, 12833), (348, 12866), (352, 12887), (354, 12917), (361, 12965), (363, 12971), (367, 12998), (383, 13133), (398, 13250), (400, 13283), (402, 13304), (403, 13307), (413, 13373), (414, 13379), (416, 13394), (433, 13514), (436, 13523), (447, 13607), (505, 13928), (529, 14147), (534, 14183), (559, 14396), (585, 14588), (594, 14636), (595, 14657), (607, 14765), (614, 14831), (615, 14849), (622, 14954), (624, 14984), (625, 14993), (628, 15023), (633, 15089), (636, 15137), (641, 15197), (652, 15284), (660, 15347),

Gene: REQ2_18 Start: 12445, Stop: 18258, Start Num: 1

Candidate Starts for REQ2_18:

(Start: 1 @12445 has 1 MA's), (3, 12493), (8, 12664), (19, 12805), (26, 12958), (28, 12970), (31, 13045), (32, 13051), (35, 13060), (42, 13114), (47, 13147), (55, 13198), (56, 13201), (65, 13252), (71, 13306), (72, 13309), (82, 13366), (83, 13369), (86, 13402), (87, 13420), (89, 13447), (90, 13450), (95, 13480), (98, 13531), (101, 13540), (114, 13630), (168, 14125), (183, 14227), (191, 14308), (195, 14338), (204, 14407), (209, 14452), (218, 14515), (232, 14668), (245, 14767), (248, 14803), (249, 14809), (250, 14818), (252, 14824), (261, 14914), (267, 14950), (274, 14983), (280, 15010), (285, 15034), (286, 15049), (288, 15061), (294, 15142), (309, 15244), (332, 15430), (334, 15445), (344, 15517), (348, 15529), (350, 15544), (355, 15589), (359, 15622), (362, 15631), (368, 15667), (384, 15802), (388, 15826), (389, 15838), (390, 15859), (392, 15871), (401, 15961), (415, 16075), (418, 16093), (425, 16150), (440, 16264), (443, 16297), (460, 16405), (468, 16441), (477, 16480), (478, 16498), (482, 16519), (483, 16522), (497, 16615), (514, 16750), (517, 16771), (522, 16828), (558, 17152), (564, 17185), (569, 17263), (574, 17308), (578, 17347), (580, 17377), (582, 17392), (583, 17410), (588, 17443), (603, 17611), (639, 18052), (640, 18064), (643, 18094), (644, 18097), (649, 18142), (657, 18190),

Gene: RanchParmCat_19 Start: 10311, Stop: 14516, Start Num: 59

Candidate Starts for RanchParmCat_19:

(Start: 59 @10311 has 23 MA's), (Start: 62 @10338 has 1 MA's), (99, 10626), (104, 10647), (105, 10653), (109, 10686), (113, 10704), (116, 10728), (124, 10818), (127, 10827), (129, 10836), (136, 10869), (139, 10896), (141, 10905), (143, 10929), (166, 11082), (169, 11145), (171, 11160), (177, 11196), (184, 11226), (187, 11247), (192, 11289), (203, 11370), (214, 11445), (216, 11454), (219, 11475), (235, 11622), (252, 11763), (254, 11784), (257, 11814), (258, 11817), (259, 11835), (262, 11856), (265, 11877), (269, 11898), (280, 11949), (281, 11952), (282, 11955), (285, 11973), (301, 12054), (308, 12084), (313, 12135), (318, 12189), (321, 12216), (327, 12249), (336, 12309), (347, 12378), (348, 12381), (377, 12483), (378, 12489), (386, 12537), (387, 12540), (398, 12633), (400, 12666), (402, 12687), (404, 12696), (406, 12705), (408, 12711), (431, 12864), (445, 12933), (447, 12939), (453, 12975), (489, 13104), (505, 13245), (509, 13269), (515, 13314), (530, 13467), (532, 13470), (551, 13659), (555, 13689), (601, 13866), (609, 13938), (611, 13962), (613, 13974), (615, 13998), (616, 14010), (621, 14094), (622, 14100), (626, 14142), (628, 14163), (632, 14196), (633, 14229), (635, 14250), (636, 14277), (638, 14301), (641, 14337), (646, 14385), (660, 14487),

Gene: RedBaron_17 Start: 9673, Stop: 14811, Start Num: 20

Candidate Starts for RedBaron_17:

(17, 9649), (Start: 20 @9673 has 29 MA's), (21, 9700), (28, 9829), (31, 9904), (55, 10057), (56, 10060), (68, 10156), (71, 10165), (76, 10195), (78, 10201), (80, 10216), (81, 10219), (84, 10240), (91, 10312), (94, 10333), (104, 10399), (106, 10420), (122, 10537), (148, 10699), (152, 10738), (161, 10813), (185, 11011), (199, 11119), (207, 11197), (209, 11215), (211, 11233), (220, 11302), (221, 11305), (222, 11314), (226, 11347), (240, 11458), (241, 11464), (249, 11557), (252, 11572), (269, 11707), (276, 11740), (285, 11782), (294, 11890), (297, 11944), (310, 12016), (311, 12019), (319, 12121), (326, 12166), (328, 12175), (329, 12187), (330, 12190), (331, 12193), (340, 12268), (341, 12271), (342, 12274), (343, 12286), (346, 12295), (348, 12301), (353, 12343), (354, 12352), (361, 12400), (367, 12433), (383, 12568), (398, 12685), (400, 12718), (402, 12739), (413, 12808), (414, 12814), (433, 12949), (436, 12958), (447, 13042), (505, 13363), (529, 13582), (534, 13618), (585, 14023), (594,

14071), (595, 14092), (607, 14200), (614, 14266), (615, 14284), (622, 14389), (624, 14419), (625, 14428), (628, 14458), (633, 14524), (636, 14572), (641, 14632), (652, 14719), (660, 14782),

Gene: SheckWes_15 Start: 9372, Stop: 14465, Start Num: 20

Candidate Starts for SheckWes_15:

(Start: 20 @9372 has 29 MA's), (28, 9528), (38, 9633), (41, 9657), (48, 9708), (50, 9723), (55, 9756), (64, 9804), (66, 9813), (68, 9855), (70, 9861), (71, 9864), (78, 9900), (82, 9924), (85, 9951), (95, 10038), (99, 10077), (101, 10083), (104, 10098), (106, 10119), (115, 10173), (131, 10290), (142, 10353), (148, 10398), (152, 10437), (157, 10479), (173, 10641), (176, 10650), (177, 10674), (181, 10686), (185, 10713), (186, 10725), (190, 10770), (194, 10800), (197, 10812), (208, 10914), (209, 10917), (220, 11004), (223, 11031), (229, 11091), (233, 11121), (238, 11142), (241, 11166), (245, 11217), (249, 11259), (252, 11274), (253, 11283), (254, 11295), (258, 11328), (263, 11370), (273, 11430), (274, 11433), (275, 11436), (276, 11442), (280, 11460), (285, 11484), (291, 11568), (293, 11589), (299, 11637), (310, 11697), (311, 11700), (313, 11736), (319, 11802), (321, 11817), (326, 11847), (329, 11868), (330, 11871), (331, 11874), (341, 11952), (346, 11976), (348, 11982), (365, 12108), (371, 12138), (374, 12177), (379, 12225), (382, 12246), (383, 12249), (384, 12255), (392, 12321), (398, 12366), (400, 12399), (402, 12420), (412, 12474), (433, 12624), (436, 12633), (447, 12720), (489, 12897), (505, 13038), (510, 13068), (527, 13206), (534, 13287), (551, 13440), (555, 13470), (584, 13686), (585, 13695), (586, 13701), (594, 13737), (607, 13854), (608, 13860), (611, 13902), (614, 13920), (622, 14043), (623, 14067), (625, 14082), (628, 14112), (631, 14139), (632, 14145), (633, 14178), (637, 14247), (638, 14250), (641, 14286), (650, 14358), (651, 14361), (653, 14376),

Gene: SketchMex_15 Start: 9616, Stop: 14415, Start Num: 59

Candidate Starts for SketchMex_15:

(Start: 59 @9616 has 23 MA's), (Start: 62 @9643 has 1 MA's), (81, 9772), (93, 9874), (97, 9919), (100, 9931), (104, 9949), (107, 9976), (108, 9979), (110, 9994), (118, 10045), (119, 10048), (125, 10105), (126, 10108), (135, 10150), (138, 10168), (144, 10213), (151, 10249), (155, 10282), (159, 10315), (160, 10327), (167, 10381), (170, 10420), (172, 10435), (175, 10444), (179, 10471), (187, 10522), (192, 10564), (194, 10582), (197, 10591), (203, 10645), (212, 10708), (215, 10723), (222, 10786), (235, 10876), (240, 10903), (248, 10996), (249, 11002), (252, 11017), (256, 11056), (266, 11134), (272, 11167), (281, 11206), (284, 11224), (285, 11227), (288, 11254), (291, 11311), (293, 11332), (298, 11395), (303, 11431), (306, 11443), (311, 11464), (313, 11500), (317, 11542), (318, 11554), (319, 11566), (326, 11611), (327, 11614), (329, 11632), (330, 11635), (331, 11638), (340, 11713), (342, 11719), (348, 11746), (355, 11806), (357, 11821), (365, 11872), (366, 11875), (367, 11878), (369, 11896), (380, 11995), (382, 12010), (383, 12013), (400, 12163), (402, 12184), (411, 12226), (413, 12253), (414, 12259), (431, 12391), (436, 12403), (447, 12490), (455, 12532), (467, 12568), (484, 12643), (492, 12694), (496, 12733), (504, 12811), (512, 12862), (519, 12919), (533, 13057), (536, 13132), (555, 13276), (559, 13297), (575, 13474), (576, 13480), (607, 13804), (608, 13810), (614, 13870), (615, 13888), (617, 13921), (622, 13993), (625, 14032), (628, 14062), (633, 14128), (636, 14176), (641, 14236), (653, 14326), (660, 14386),

Gene: Socotra_17 Start: 9629, Stop: 14767, Start Num: 20

Candidate Starts for Socotra_17:

(17, 9605), (Start: 20 @9629 has 29 MA's), (21, 9656), (28, 9785), (31, 9860), (55, 10013), (56, 10016), (68, 10112), (71, 10121), (76, 10151), (78, 10157), (80, 10172), (81, 10175), (84, 10196), (91, 10268), (94, 10289), (104, 10355), (106, 10376), (122, 10493), (148, 10655), (152, 10694), (161, 10769), (177, 10928), (181, 10940), (185, 10967), (189, 11012), (190, 11024), (202, 11114), (205, 11132), (207, 11153), (210, 11183), (215, 11207), (217, 11219), (220, 11258), (224, 11291), (237, 11393), (238, 11396), (241, 11420), (249, 11513), (252, 11528), (256, 11567), (262, 11621), (269, 11663), (271, 11675), (278, 11705), (284, 11735), (285, 11738), (294, 11846), (295, 11849), (297, 11900), (311, 11975), (318, 12065), (319, 12077), (326, 12122), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (352, 12278), (354, 12308), (361, 12356), (363, 12362), (367, 12389), (383,

12524), (398, 12641), (400, 12674), (402, 12695), (403, 12698), (413, 12764), (414, 12770), (416, 12785), (433, 12905), (436, 12914), (447, 12998), (505, 13319), (529, 13538), (534, 13574), (559, 13787), (585, 13979), (594, 14027), (595, 14048), (607, 14156), (614, 14222), (615, 14240), (619, 14300), (622, 14345), (624, 14375), (625, 14384), (628, 14414), (633, 14480), (636, 14528), (641, 14588), (652, 14675), (660, 14738),

Gene: Sopespian_16 Start: 9630, Stop: 14768, Start Num: 20

Candidate Starts for Sopespian_16:

(17, 9606), (Start: 20 @9630 has 29 MA's), (21, 9657), (28, 9786), (31, 9861), (55, 10014), (56, 10017), (68, 10113), (71, 10122), (76, 10152), (78, 10158), (80, 10173), (81, 10176), (84, 10197), (91, 10269), (94, 10290), (104, 10356), (106, 10377), (122, 10494), (148, 10656), (152, 10695), (161, 10770), (177, 10929), (181, 10941), (185, 10968), (189, 11013), (190, 11025), (202, 11115), (205, 11133), (207, 11154), (210, 11184), (215, 11208), (217, 11220), (220, 11259), (224, 11292), (237, 11394), (238, 11397), (241, 11421), (249, 11514), (252, 11529), (256, 11568), (277, 11703), (278, 11706), (285, 11739), (294, 11847), (295, 11850), (297, 11901), (311, 11976), (318, 12066), (319, 12078), (326, 12123), (329, 12144), (330, 12147), (331, 12150), (340, 12225), (348, 12258), (352, 12279), (354, 12309), (361, 12357), (363, 12363), (367, 12390), (383, 12525), (398, 12642), (400, 12675), (402, 12696), (413, 12765), (414, 12771), (416, 12786), (433, 12906), (436, 12915), (447, 12999), (505, 13320), (529, 13539), (534, 13575), (559, 13788), (585, 13980), (594, 14028), (595, 14049), (607, 14157), (614, 14223), (615, 14241), (622, 14346), (624, 14376), (625, 14385), (628, 14415), (633, 14481), (636, 14529), (641, 14589), (652, 14676), (660, 14739),

Gene: Starburst_17 Start: 9629, Stop: 14767, Start Num: 20

Candidate Starts for Starburst_17:

(17, 9605), (Start: 20 @9629 has 29 MA's), (21, 9656), (28, 9785), (31, 9860), (55, 10013), (56, 10016), (68, 10112), (71, 10121), (76, 10151), (78, 10157), (80, 10172), (81, 10175), (84, 10196), (91, 10268), (94, 10289), (104, 10355), (106, 10376), (122, 10493), (148, 10655), (152, 10694), (161, 10769), (177, 10928), (181, 10940), (185, 10967), (189, 11012), (190, 11024), (202, 11114), (205, 11132), (207, 11153), (210, 11183), (215, 11207), (217, 11219), (220, 11258), (224, 11291), (237, 11393), (238, 11396), (241, 11420), (242, 11426), (249, 11513), (252, 11528), (256, 11567), (278, 11705), (284, 11735), (285, 11738), (294, 11846), (295, 11849), (297, 11900), (311, 11975), (319, 12077), (326, 12122), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (352, 12278), (354, 12308), (361, 12356), (363, 12362), (367, 12389), (383, 12524), (398, 12641), (400, 12674), (402, 12695), (413, 12764), (414, 12770), (416, 12785), (433, 12905), (436, 12914), (447, 12998), (505, 13319), (529, 13538), (534, 13574), (559, 13787), (585, 13979), (594, 14027), (595, 14048), (607, 14156), (614, 14222), (615, 14240), (619, 14300), (622, 14345), (624, 14375), (625, 14384), (628, 14414), (633, 14480), (636, 14528), (641, 14588), (652, 14675), (660, 14738),

Gene: SteamedHams_18 Start: 9646, Stop: 14433, Start Num: 59

Candidate Starts for SteamedHams_18:

(Start: 59 @9646 has 23 MA's), (Start: 62 @9673 has 1 MA's), (73, 9751), (81, 9802), (90, 9889), (93, 9904), (100, 9961), (104, 9979), (107, 10006), (108, 10009), (119, 10078), (125, 10135), (135, 10180), (138, 10198), (144, 10243), (151, 10279), (155, 10312), (162, 10360), (163, 10363), (167, 10411), (170, 10450), (172, 10465), (193, 10606), (201, 10657), (203, 10675), (210, 10729), (235, 10906), (240, 10933), (248, 11026), (249, 11032), (252, 11047), (256, 11086), (257, 11098), (266, 11164), (281, 11236), (284, 11254), (285, 11257), (288, 11284), (313, 11530), (319, 11596), (326, 11641), (329, 11662), (330, 11665), (331, 11668), (336, 11704), (340, 11743), (342, 11749), (348, 11776), (366, 11905), (367, 11908), (369, 11926), (384, 12049), (386, 12064), (400, 12193), (402, 12214), (411, 12256), (413, 12283), (414, 12289), (431, 12421), (436, 12433), (447, 12520), (455, 12562), (467, 12598), (492, 12724), (496, 12763), (512, 12892), (519, 12949), (523, 12991), (533, 13084), (536, 13159), (543, 13222), (555, 13303), (559, 13324), (575, 13501), (576, 13507), (597, 13726), (606, 13804), (607, 13822), (608, 13828), (614, 13888), (615, 13906), (617, 13939), (622, 14011), (625, 14050), (628, 14080), (633, 14146), (636, 14194), (641, 14254), (653, 14344), (660, 14404),

Gene: SummitAcademy_15 Start: 9452, Stop: 14545, Start Num: 20

Candidate Starts for SummitAcademy_15:

(Start: 20 @9452 has 29 MA's), (28, 9608), (41, 9737), (45, 9767), (55, 9836), (58, 9848), (64, 9884), (68, 9935), (71, 9944), (78, 9980), (82, 10004), (88, 10064), (95, 10118), (99, 10157), (101, 10163), (104, 10178), (106, 10199), (131, 10370), (142, 10433), (148, 10478), (157, 10559), (173, 10718), (177, 10751), (181, 10763), (185, 10790), (190, 10847), (194, 10877), (197, 10889), (208, 10991), (209, 10994), (220, 11081), (227, 11129), (241, 11243), (249, 11336), (252, 11351), (254, 11372), (258, 11405), (260, 11435), (263, 11447), (269, 11486), (274, 11510), (275, 11513), (280, 11537), (285, 11561), (293, 11666), (303, 11744), (310, 11774), (311, 11777), (313, 11813), (317, 11855), (319, 11879), (321, 11894), (324, 11909), (326, 11924), (330, 11948), (336, 11987), (337, 12002), (338, 12008), (341, 12029), (346, 12053), (348, 12059), (365, 12185), (371, 12215), (375, 12266), (379, 12302), (382, 12323), (383, 12326), (392, 12398), (398, 12443), (400, 12476), (402, 12497), (412, 12551), (421, 12626), (436, 12710), (447, 12797), (505, 13115), (510, 13145), (527, 13283), (531, 13334), (534, 13364), (551, 13529), (555, 13559), (581, 13739), (586, 13790), (594, 13817), (595, 13838), (607, 13934), (611, 13982), (614, 14000), (622, 14123), (623, 14147), (625, 14162), (628, 14192), (631, 14219), (632, 14225), (633, 14258), (637, 14327), (638, 14330), (641, 14366), (653, 14456),

Gene: Survivors_18 Start: 10474, Stop: 15597, Start Num: 20

Candidate Starts for Survivors_18:

(18, 10453), (Start: 20 @10474 has 29 MA's), (21, 10501), (28, 10630), (36, 10726), (43, 10777), (53, 10834), (57, 10867), (58, 10870), (68, 10957), (72, 10969), (80, 11017), (81, 11020), (82, 11026), (87, 11080), (88, 11086), (94, 11134), (104, 11200), (106, 11221), (161, 11614), (162, 11617), (170, 11719), (181, 11785), (182, 11791), (185, 11812), (209, 12016), (211, 12034), (213, 12040), (215, 12052), (217, 12064), (220, 12103), (222, 12115), (227, 12151), (231, 12208), (235, 12232), (237, 12238), (249, 12358), (252, 12373), (256, 12412), (265, 12487), (271, 12520), (275, 12535), (276, 12541), (277, 12547), (285, 12583), (294, 12691), (300, 12763), (310, 12817), (326, 12967), (330, 12991), (338, 13051), (339, 13063), (340, 13069), (346, 13096), (347, 13099), (348, 13102), (359, 13195), (361, 13201), (369, 13252), (376, 13321), (381, 13354), (383, 13369), (384, 13375), (391, 13432), (393, 13444), (397, 13483), (398, 13486), (399, 13507), (400, 13519), (402, 13540), (403, 13543), (411, 13582), (412, 13594), (413, 13609), (433, 13750), (447, 13846), (461, 13912), (469, 13933), (474, 13939), (505, 14176), (510, 14206), (515, 14245), (528, 14380), (533, 14410), (534, 14431), (547, 14569), (555, 14617), (592, 14848), (594, 14854), (607, 14983), (614, 15049), (617, 15100), (622, 15172), (625, 15211), (628, 15241), (632, 15274), (633, 15307), (638, 15379), (645, 15451), (652, 15505), (655, 15511), (660, 15568),

Gene: SweatNTears_18 Start: 10127, Stop: 14926, Start Num: 59

Candidate Starts for SweatNTears_18:

(Start: 59 @10127 has 23 MA's), (Start: 62 @10154 has 1 MA's), (64, 10160), (81, 10283), (93, 10385), (97, 10430), (100, 10442), (104, 10460), (107, 10487), (108, 10490), (110, 10505), (118, 10556), (119, 10559), (125, 10616), (126, 10619), (135, 10661), (138, 10679), (144, 10724), (151, 10760), (155, 10793), (159, 10826), (160, 10838), (167, 10892), (170, 10931), (172, 10946), (175, 10955), (179, 10982), (187, 11033), (194, 11093), (197, 11102), (203, 11156), (212, 11219), (215, 11234), (222, 11297), (235, 11387), (240, 11414), (246, 11495), (248, 11507), (249, 11513), (252, 11528), (255, 11558), (256, 11567), (266, 11645), (272, 11678), (281, 11717), (284, 11735), (285, 11738), (288, 11765), (291, 11822), (293, 11843), (306, 11954), (311, 11975), (313, 12011), (317, 12053), (318, 12065), (319, 12077), (326, 12122), (327, 12125), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (355, 12317), (365, 12383), (366, 12386), (367, 12389), (369, 12407), (380, 12506), (382, 12521), (383, 12524), (400, 12674), (402, 12695), (411, 12737), (413, 12764), (414, 12770), (431, 12902), (436, 12914), (447, 13001), (455, 13043), (467, 13079), (484, 13154), (492, 13205), (496, 13244), (498, 13268), (512, 13373), (519, 13430), (533, 13568), (536, 13643), (555, 13787), (559, 13808), (575, 13985), (576, 13991), (607, 14315), (608, 14321), (614, 14381), (615,

14399), (617, 14432), (622, 14504), (625, 14543), (628, 14573), (633, 14639), (636, 14687), (641, 14747), (653, 14837), (660, 14897),

Gene: Toast_17 Start: 10235, Stop: 15886, Start Num: 7

Candidate Starts for Toast_17:

(Start: 7 @10235 has 1 MA's), (Start: 9 @10271 has 26 MA's), (Start: 11 @10292 has 1 MA's), (14, 10331), (16, 10376), (22, 10466), (23, 10475), (24, 10487), (25, 10508), (27, 10565), (30, 10637), (33, 10658), (40, 10700), (41, 10703), (44, 10730), (47, 10751), (48, 10754), (51, 10775), (54, 10796), (63, 10847), (64, 10850), (71, 10910), (96, 11093), (106, 11165), (134, 11351), (149, 11453), (150, 11468), (152, 11483), (158, 11540), (181, 11732), (196, 11852), (206, 11933), (209, 11963), (215, 11999), (220, 12050), (237, 12185), (238, 12188), (241, 12212), (245, 12263), (248, 12299), (249, 12305), (252, 12320), (258, 12374), (262, 12413), (266, 12437), (269, 12455), (279, 12503), (281, 12509), (284, 12527), (285, 12530), (286, 12545), (288, 12557), (290, 12605), (310, 12743), (317, 12824), (319, 12848), (320, 12860), (321, 12863), (327, 12896), (340, 12998), (346, 13025), (347, 13028), (348, 13031), (349, 13037), (354, 13082), (356, 13094), (357, 13106), (361, 13130), (364, 13145), (366, 13160), (367, 13163), (371, 13187), (372, 13214), (382, 13295), (394, 13379), (405, 13484), (411, 13517), (417, 13583), (419, 13592), (423, 13631), (426, 13664), (427, 13676), (428, 13679), (430, 13694), (432, 13703), (437, 13739), (438, 13748), (439, 13757), (470, 13913), (472, 13916), (473, 13919), (475, 13940), (487, 14021), (494, 14063), (503, 14150), (506, 14183), (507, 14192), (514, 14234), (526, 14348), (538, 14513), (548, 14597), (549, 14600), (553, 14630), (554, 14633), (561, 14666), (562, 14669), (567, 14747), (570, 14804), (582, 14921), (587, 14972), (596, 15074), (599, 15107), (607, 15173), (613, 15239), (614, 15245), (615, 15263), (617, 15296), (622, 15368), (626, 15410), (627, 15416), (628, 15434), (629, 15440), (631, 15461), (633, 15500), (642, 15641), (651, 15704), (659, 15779), (662, 15872),

Gene: Tolls_18 Start: 9649, Stop: 14436, Start Num: 59

Candidate Starts for Tolls_18:

(Start: 59 @9649 has 23 MA's), (Start: 62 @9676 has 1 MA's), (73, 9754), (81, 9805), (90, 9892), (93, 9907), (100, 9964), (104, 9982), (107, 10009), (108, 10012), (119, 10081), (125, 10138), (135, 10183), (138, 10201), (144, 10246), (147, 10261), (151, 10282), (155, 10315), (162, 10363), (163, 10366), (167, 10414), (170, 10453), (172, 10468), (201, 10660), (203, 10678), (216, 10762), (235, 10909), (240, 10936), (248, 11029), (249, 11035), (252, 11050), (256, 11089), (257, 11101), (266, 11167), (281, 11239), (284, 11257), (285, 11260), (288, 11287), (313, 11533), (319, 11599), (326, 11644), (329, 11665), (330, 11668), (331, 11671), (336, 11707), (340, 11746), (342, 11752), (348, 11779), (366, 11908), (367, 11911), (369, 11929), (384, 12052), (386, 12067), (400, 12196), (402, 12217), (411, 12259), (413, 12286), (414, 12292), (431, 12424), (436, 12436), (447, 12523), (455, 12565), (467, 12601), (492, 12727), (496, 12766), (512, 12895), (519, 12952), (523, 12994), (533, 13087), (536, 13162), (543, 13225), (555, 13306), (559, 13327), (575, 13504), (576, 13510), (597, 13729), (606, 13807), (607, 13825), (608, 13831), (614, 13891), (615, 13909), (617, 13942), (622, 14014), (625, 14053), (628, 14083), (633, 14149), (636, 14197), (641, 14257), (653, 14347), (660, 14407),

Gene: Troje_16 Start: 9601, Stop: 14397, Start Num: 59

Candidate Starts for Troje_16:

(Start: 59 @9601 has 23 MA's), (Start: 62 @9628 has 1 MA's), (64, 9634), (81, 9757), (93, 9859), (97, 9904), (100, 9916), (104, 9934), (107, 9961), (108, 9964), (110, 9979), (118, 10030), (119, 10033), (125, 10090), (126, 10093), (135, 10135), (138, 10153), (144, 10198), (151, 10234), (155, 10267), (159, 10300), (160, 10312), (167, 10366), (170, 10405), (172, 10420), (175, 10429), (179, 10456), (187, 10507), (194, 10567), (197, 10576), (203, 10630), (212, 10693), (215, 10708), (235, 10861), (240, 10888), (246, 10969), (248, 10981), (249, 10987), (252, 11002), (256, 11041), (266, 11119), (272, 11152), (281, 11191), (284, 11209), (285, 11212), (288, 11239), (291, 11296), (293, 11317), (298, 11380), (306, 11428), (311, 11449), (313, 11485), (317, 11527), (319, 11551), (326, 11596), (327, 11599), (329, 11617), (330, 11620), (331, 11623), (340, 11698), (342, 11704), (348, 11731), (355, 11791), (365, 11857), (366, 11860), (367, 11863), (369, 11881), (380, 11980), (382, 11995),

(383, 11998), (400, 12148), (402, 12169), (411, 12211), (413, 12238), (414, 12244), (436, 12388), (447, 12475), (455, 12517), (467, 12553), (484, 12628), (492, 12679), (496, 12718), (504, 12796), (512, 12847), (519, 12904), (533, 13042), (536, 13114), (555, 13258), (559, 13279), (575, 13456), (576, 13462), (607, 13786), (608, 13792), (614, 13852), (615, 13870), (617, 13903), (622, 13975), (625, 14014), (628, 14044), (633, 14110), (634, 14128), (636, 14158), (641, 14218), (653, 14308), (660, 14368),

Gene: Typhonomachy_17 Start: 9629, Stop: 14767, Start Num: 20

Candidate Starts for Typhonomachy_17:

(17, 9605), (Start: 20 @9629 has 29 MA's), (21, 9656), (28, 9785), (31, 9860), (55, 10013), (56, 10016), (68, 10112), (71, 10121), (76, 10151), (78, 10157), (80, 10172), (81, 10175), (84, 10196), (91, 10268), (94, 10289), (104, 10355), (106, 10376), (122, 10493), (148, 10655), (152, 10694), (161, 10769), (177, 10928), (181, 10940), (185, 10967), (189, 11012), (190, 11024), (202, 11114), (205, 11132), (207, 11153), (210, 11183), (215, 11207), (217, 11219), (220, 11258), (224, 11291), (226, 11303), (237, 11393), (238, 11396), (241, 11420), (249, 11513), (252, 11528), (256, 11567), (262, 11621), (269, 11663), (278, 11705), (284, 11735), (285, 11738), (294, 11846), (295, 11849), (297, 11900), (311, 11975), (318, 12065), (319, 12077), (325, 12116), (326, 12122), (329, 12143), (330, 12146), (331, 12149), (340, 12224), (348, 12257), (352, 12278), (354, 12308), (361, 12356), (363, 12362), (367, 12389), (383, 12524), (398, 12641), (400, 12674), (402, 12695), (413, 12764), (414, 12770), (416, 12785), (433, 12905), (436, 12914), (447, 12998), (505, 13319), (529, 13538), (534, 13574), (559, 13787), (585, 13979), (594, 14027), (595, 14048), (607, 14156), (614, 14222), (615, 14240), (622, 14345), (624, 14375), (625, 14384), (628, 14414), (633, 14480), (636, 14528), (641, 14588), (652, 14675), (660, 14738),

Gene: UmaThurman_17 Start: 10381, Stop: 15924, Start Num: 9

Candidate Starts for UmaThurman_17:

(Start: 9 @10381 has 26 MA's), (10, 10396), (Start: 11 @10402 has 1 MA's), (Start: 13 @10432 has 1 MA's), (14, 10441), (15, 10444), (16, 10486), (24, 10597), (25, 10618), (46, 10846), (48, 10864), (50, 10879), (51, 10885), (52, 10888), (54, 10906), (60, 10930), (69, 11014), (70, 11017), (78, 11056), (80, 11071), (82, 11080), (103, 11248), (106, 11275), (152, 11593), (173, 11797), (181, 11842), (182, 11848), (185, 11869), (186, 11881), (198, 11971), (202, 12016), (206, 12043), (209, 12073), (220, 12160), (221, 12163), (225, 12202), (241, 12322), (244, 12364), (248, 12409), (249, 12415), (252, 12430), (258, 12484), (262, 12523), (265, 12544), (266, 12547), (269, 12565), (270, 12574), (279, 12613), (281, 12619), (285, 12640), (288, 12667), (310, 12874), (314, 12940), (319, 12979), (321, 12994), (326, 13024), (327, 13027), (335, 13078), (347, 13159), (348, 13162), (371, 13195), (374, 13225), (376, 13249), (417, 13582), (423, 13630), (427, 13675), (428, 13678), (430, 13693), (437, 13738), (438, 13747), (439, 13756), (448, 13807), (462, 13879), (466, 13897), (473, 13918), (486, 14017), (487, 14020), (493, 14053), (501, 14119), (502, 14137), (503, 14152), (506, 14185), (514, 14236), (520, 14287), (524, 14335), (539, 14530), (540, 14533), (548, 14605), (549, 14608), (561, 14674), (562, 14677), (563, 14695), (567, 14755), (570, 14812), (573, 14830), (579, 14911), (580, 14914), (582, 14929), (595, 15088), (599, 15142), (607, 15208), (612, 15262), (613, 15274), (614, 15280), (622, 15403), (623, 15427), (626, 15445), (628, 15469), (629, 15475), (631, 15496), (633, 15535), (642, 15676), (644, 15688), (651, 15739), (654, 15757), (662, 15907),

Gene: Utz_17 Start: 10248, Stop: 15791, Start Num: 9

Candidate Starts for Utz_17:

(Start: 9 @10248 has 26 MA's), (10, 10263), (Start: 11 @10269 has 1 MA's), (Start: 13 @10299 has 1 MA's), (14, 10308), (15, 10311), (16, 10353), (24, 10464), (25, 10485), (29, 10605), (36, 10647), (46, 10713), (48, 10731), (51, 10752), (52, 10755), (54, 10773), (60, 10797), (69, 10881), (70, 10884), (78, 10923), (80, 10938), (82, 10947), (103, 11115), (106, 11142), (122, 11259), (149, 11430), (152, 11460), (173, 11664), (181, 11709), (185, 11736), (186, 11748), (198, 11838), (206, 11910), (209, 11940), (220, 12027), (221, 12030), (225, 12069), (241, 12189), (244, 12231), (248, 12276), (249, 12282), (251, 12294), (252, 12297), (258, 12351), (262, 12390), (265, 12411), (266, 12414), (269,

12432), (279, 12480), (281, 12486), (285, 12507), (288, 12534), (314, 12807), (319, 12846), (321, 12861), (326, 12891), (327, 12894), (335, 12945), (347, 13026), (348, 13029), (371, 13062), (374, 13092), (376, 13116), (385, 13182), (417, 13449), (420, 13467), (423, 13497), (427, 13542), (428, 13545), (430, 13560), (432, 13569), (437, 13605), (438, 13614), (439, 13623), (448, 13674), (462, 13746), (466, 13764), (473, 13785), (486, 13884), (487, 13887), (493, 13920), (501, 13986), (502, 14004), (503, 14019), (506, 14052), (514, 14103), (520, 14154), (539, 14397), (540, 14400), (548, 14472), (549, 14475), (561, 14541), (562, 14544), (563, 14562), (567, 14622), (570, 14679), (573, 14697), (579, 14778), (580, 14781), (582, 14796), (599, 15009), (607, 15075), (613, 15141), (614, 15147), (622, 15270), (623, 15294), (626, 15312), (628, 15336), (629, 15342), (631, 15363), (633, 15402), (642, 15543), (651, 15606), (654, 15624), (658, 15651), (659, 15681), (662, 15774),

Gene: Vine_17 Start: 10381, Stop: 15480, Start Num: 20

Candidate Starts for Vine_17:

(Start: 20 @10381 has 29 MA's), (28, 10537), (41, 10666), (45, 10696), (55, 10765), (58, 10777), (64, 10813), (66, 10822), (68, 10864), (71, 10873), (78, 10909), (82, 10933), (88, 10993), (95, 11047), (99, 11086), (104, 11107), (106, 11128), (128, 11287), (131, 11299), (142, 11362), (148, 11407), (157, 11488), (173, 11647), (177, 11680), (181, 11692), (185, 11719), (190, 11776), (194, 11806), (197, 11818), (208, 11920), (209, 11923), (220, 12010), (226, 12055), (227, 12058), (241, 12172), (249, 12265), (252, 12280), (254, 12301), (258, 12334), (260, 12364), (263, 12376), (269, 12415), (274, 12439), (275, 12442), (280, 12466), (285, 12490), (293, 12595), (303, 12673), (310, 12703), (311, 12706), (313, 12742), (317, 12784), (319, 12808), (321, 12823), (324, 12838), (326, 12853), (330, 12877), (336, 12916), (337, 12931), (338, 12937), (341, 12958), (346, 12982), (348, 12988), (365, 13114), (371, 13144), (375, 13195), (379, 13231), (382, 13252), (383, 13255), (392, 13327), (398, 13372), (400, 13405), (402, 13426), (412, 13480), (421, 13555), (436, 13639), (447, 13726), (491, 13912), (505, 14044), (510, 14074), (527, 14212), (531, 14263), (534, 14293), (542, 14398), (551, 14449), (555, 14479), (581, 14659), (586, 14710), (594, 14752), (595, 14773), (607, 14869), (611, 14917), (614, 14935), (622, 15058), (623, 15082), (625, 15097), (628, 15127), (631, 15154), (632, 15160), (633, 15193), (637, 15262), (638, 15265), (641, 15301), (653, 15391),

Gene: Walrus_18 Start: 10497, Stop: 16019, Start Num: 11

Candidate Starts for Walrus_18:

(Start: 9 @10476 has 26 MA's), (10, 10491), (Start: 11 @10497 has 1 MA's), (Start: 13 @10527 has 1 MA's), (14, 10536), (15, 10539), (16, 10581), (24, 10692), (25, 10713), (29, 10833), (46, 10941), (48, 10959), (52, 10983), (54, 11001), (60, 11025), (69, 11109), (71, 11115), (78, 11151), (80, 11166), (82, 11175), (84, 11190), (88, 11235), (89, 11256), (103, 11343), (106, 11370), (111, 11403), (122, 11487), (131, 11541), (138, 11583), (149, 11658), (152, 11688), (173, 11892), (181, 11937), (202, 12111), (206, 12138), (209, 12168), (220, 12255), (221, 12258), (225, 12297), (227, 12303), (231, 12360), (241, 12417), (244, 12459), (248, 12504), (249, 12510), (252, 12525), (258, 12579), (262, 12618), (265, 12639), (266, 12642), (269, 12660), (275, 12687), (279, 12708), (281, 12714), (285, 12735), (292, 12834), (314, 13035), (317, 13050), (319, 13074), (321, 13089), (326, 13119), (327, 13122), (335, 13173), (347, 13254), (348, 13257), (371, 13290), (374, 13320), (376, 13344), (385, 13410), (417, 13677), (423, 13725), (427, 13770), (428, 13773), (430, 13788), (435, 13806), (437, 13833), (438, 13842), (439, 13851), (448, 13902), (462, 13974), (466, 13992), (473, 14013), (486, 14112), (487, 14115), (493, 14148), (501, 14214), (502, 14232), (503, 14247), (506, 14280), (514, 14331), (520, 14382), (539, 14625), (540, 14628), (548, 14700), (549, 14703), (561, 14769), (562, 14772), (563, 14790), (567, 14850), (570, 14907), (573, 14925), (579, 15006), (580, 15009), (582, 15024), (595, 15183), (599, 15237), (607, 15303), (608, 15309), (613, 15369), (614, 15375), (622, 15498), (623, 15522), (626, 15540), (628, 15564), (629, 15570), (631, 15591), (633, 15630), (642, 15771), (644, 15783), (651, 15834), (654, 15852), (661, 15981), (662, 16002),

Gene: Whack_16 Start: 10349, Stop: 16249, Start Num: 1

Candidate Starts for Whack_16:

(Start: 1 @10349 has 1 MA's), (2, 10358), (3, 10397), (5, 10445), (28, 10874), (31, 10949), (32, 10955), (42, 11018), (43, 11021), (48, 11054), (55, 11102), (56, 11105), (67, 11192), (72, 11213), (74, 11231), (82, 11270), (86, 11306), (90, 11354), (95, 11384), (101, 11444), (116, 11567), (142, 11777), (145, 11819), (168, 12029), (174, 12083), (183, 12134), (191, 12215), (207, 12341), (209, 12359), (236, 12593), (245, 12674), (248, 12710), (249, 12716), (252, 12731), (257, 12782), (258, 12785), (264, 12836), (268, 12860), (269, 12866), (276, 12899), (283, 12926), (285, 12941), (289, 13004), (291, 13025), (296, 13088), (303, 13145), (315, 13247), (333, 13343), (343, 13400), (345, 13406), (346, 13409), (360, 13511), (364, 13529), (368, 13553), (398, 13802), (399, 13823), (407, 13880), (424, 14024), (429, 14081), (444, 14183), (449, 14207), (450, 14210), (457, 14270), (459, 14276), (470, 14324), (483, 14399), (495, 14498), (499, 14549), (500, 14555), (508, 14636), (511, 14645), (539, 14966), (541, 14990), (545, 15026), (552, 15065), (560, 15110), (566, 15170), (568, 15212), (571, 15242), (572, 15245), (589, 15416), (590, 15419), (593, 15446), (600, 15578), (602, 15593), (604, 15599), (605, 15608), (609, 15656), (630, 15905), (634, 15977), (639, 16052), (644, 16097), (647, 16127), (648, 16136), (656, 16172), (657, 16187),

Gene: William_17 Start: 10217, Stop: 15835, Start Num: 9

Candidate Starts for William_17:

(Start: 7 @10181 has 1 MA's), (Start: 9 @10217 has 26 MA's), (Start: 11 @10238 has 1 MA's), (15, 10280), (16, 10322), (22, 10412), (23, 10421), (24, 10433), (25, 10454), (28, 10520), (30, 10583), (33, 10604), (40, 10646), (41, 10649), (44, 10676), (47, 10697), (48, 10700), (51, 10721), (54, 10742), (63, 10793), (64, 10796), (71, 10856), (96, 11039), (106, 11111), (134, 11297), (149, 11399), (150, 11414), (152, 11429), (158, 11486), (181, 11678), (196, 11798), (206, 11879), (209, 11909), (215, 11945), (220, 11996), (237, 12131), (238, 12134), (241, 12158), (245, 12209), (248, 12245), (249, 12251), (252, 12266), (258, 12320), (262, 12359), (266, 12383), (269, 12401), (279, 12449), (281, 12455), (284, 12473), (285, 12476), (286, 12491), (288, 12503), (290, 12551), (310, 12689), (317, 12770), (319, 12794), (320, 12806), (321, 12809), (327, 12842), (340, 12944), (346, 12971), (347, 12974), (348, 12977), (349, 12983), (356, 13040), (357, 13052), (361, 13076), (364, 13091), (366, 13106), (367, 13109), (371, 13133), (372, 13160), (382, 13241), (394, 13325), (405, 13430), (411, 13463), (417, 13529), (419, 13538), (423, 13577), (426, 13610), (427, 13622), (428, 13625), (430, 13640), (432, 13649), (437, 13685), (438, 13694), (439, 13703), (470, 13859), (472, 13862), (473, 13865), (475, 13886), (487, 13967), (494, 14009), (503, 14096), (506, 14129), (507, 14138), (514, 14180), (526, 14294), (548, 14543), (549, 14546), (553, 14576), (554, 14579), (557, 14603), (561, 14612), (562, 14615), (567, 14693), (570, 14750), (582, 14867), (587, 14918), (599, 15056), (607, 15122), (613, 15188), (614, 15194), (615, 15212), (620, 15305), (622, 15317), (627, 15365), (628, 15383), (629, 15389), (631, 15410), (633, 15449), (642, 15590), (651, 15653), (659, 15728), (662, 15821),

Gene: Yarn_15 Start: 9639, Stop: 14426, Start Num: 59

Candidate Starts for Yarn_15:

(Start: 59 @9639 has 23 MA's), (Start: 62 @9666 has 1 MA's), (73, 9744), (81, 9795), (90, 9882), (93, 9897), (100, 9954), (104, 9972), (107, 9999), (108, 10002), (119, 10071), (125, 10128), (135, 10173), (138, 10191), (144, 10236), (151, 10272), (155, 10305), (162, 10353), (163, 10356), (167, 10404), (170, 10443), (172, 10458), (201, 10650), (203, 10668), (216, 10752), (235, 10899), (240, 10926), (248, 11019), (249, 11025), (252, 11040), (256, 11079), (257, 11091), (266, 11157), (281, 11229), (284, 11247), (285, 11250), (288, 11277), (313, 11523), (319, 11589), (326, 11634), (329, 11655), (330, 11658), (331, 11661), (336, 11697), (340, 11736), (342, 11742), (348, 11769), (366, 11898), (367, 11901), (369, 11919), (384, 12042), (386, 12057), (400, 12186), (402, 12207), (411, 12249), (413, 12276), (414, 12282), (431, 12414), (436, 12426), (447, 12513), (455, 12555), (467, 12591), (492, 12717), (496, 12756), (512, 12885), (519, 12942), (523, 12984), (533, 13077), (536, 13152), (543, 13215), (555, 13296), (559, 13317), (575, 13494), (576, 13500), (597, 13719), (606, 13797), (607, 13815), (608, 13821), (614, 13881), (615, 13899), (617, 13932), (622, 14004), (625, 14043), (628, 14073), (633, 14139), (636, 14187), (641, 14247), (653, 14337), (660, 14397),

Gene: Yucky_18 Start: 10241, Stop: 15340, Start Num: 20

Candidate Starts for Yucky_18:

(Start: 20 @10241 has 29 MA's), (28, 10397), (45, 10556), (55, 10625), (64, 10673), (68, 10724), (71, 10733), (78, 10769), (82, 10793), (88, 10853), (95, 10907), (99, 10946), (101, 10952), (104, 10967), (106, 10988), (128, 11147), (131, 11159), (142, 11222), (148, 11267), (157, 11348), (173, 11507), (177, 11540), (181, 11552), (185, 11579), (190, 11636), (194, 11666), (197, 11678), (208, 11780), (209, 11783), (220, 11870), (226, 11915), (227, 11918), (241, 12032), (249, 12125), (252, 12140), (254, 12161), (258, 12194), (260, 12224), (263, 12236), (269, 12275), (274, 12299), (275, 12302), (280, 12326), (285, 12350), (293, 12455), (299, 12503), (303, 12533), (307, 12548), (310, 12563), (313, 12602), (317, 12644), (319, 12668), (321, 12683), (324, 12698), (326, 12713), (330, 12737), (336, 12776), (337, 12791), (338, 12797), (341, 12818), (346, 12842), (348, 12848), (365, 12974), (371, 13004), (373, 13040), (374, 13043), (379, 13091), (382, 13112), (383, 13115), (392, 13187), (398, 13232), (400, 13265), (402, 13286), (412, 13340), (421, 13415), (436, 13499), (447, 13586), (491, 13772), (505, 13904), (510, 13934), (527, 14072), (531, 14123), (534, 14153), (542, 14258), (551, 14309), (555, 14339), (581, 14519), (586, 14570), (594, 14612), (595, 14633), (607, 14729), (611, 14777), (614, 14795), (622, 14918), (623, 14942), (625, 14957), (628, 14987), (631, 15014), (632, 15020), (633, 15053), (637, 15122), (638, 15125), (641, 15161), (653, 15251),

Gene: Yummy_17 Start: 9515, Stop: 14311, Start Num: 59

Candidate Starts for Yummy_17:

(Start: 59 @9515 has 23 MA's), (Start: 62 @9542 has 1 MA's), (64, 9548), (81, 9671), (93, 9773), (97, 9818), (100, 9830), (104, 9848), (107, 9875), (108, 9878), (110, 9893), (118, 9944), (119, 9947), (125, 10004), (126, 10007), (127, 10010), (135, 10049), (138, 10067), (144, 10112), (151, 10148), (155, 10181), (159, 10214), (160, 10226), (167, 10280), (170, 10319), (172, 10334), (175, 10343), (179, 10370), (187, 10421), (194, 10481), (197, 10490), (203, 10544), (212, 10607), (215, 10622), (222, 10685), (235, 10775), (240, 10802), (248, 10895), (249, 10901), (252, 10916), (256, 10955), (266, 11033), (272, 11066), (281, 11105), (284, 11123), (285, 11126), (288, 11153), (291, 11210), (293, 11231), (306, 11342), (311, 11363), (313, 11399), (317, 11441), (318, 11453), (319, 11465), (326, 11510), (327, 11513), (329, 11531), (330, 11534), (331, 11537), (340, 11612), (348, 11645), (355, 11705), (365, 11771), (366, 11774), (367, 11777), (369, 11795), (380, 11894), (382, 11909), (383, 11912), (400, 12062), (402, 12083), (411, 12125), (413, 12152), (414, 12158), (431, 12290), (436, 12302), (447, 12389), (455, 12431), (467, 12467), (476, 12503), (484, 12542), (492, 12593), (496, 12632), (504, 12710), (512, 12761), (519, 12818), (533, 12956), (536, 13028), (555, 13172), (559, 13193), (575, 13370), (576, 13376), (607, 13700), (608, 13706), (614, 13766), (615, 13784), (617, 13817), (622, 13889), (625, 13928), (628, 13958), (633, 14024), (634, 14042), (636, 14072), (641, 14132), (653, 14222), (660, 14282),

Gene: Zarbodnamra_17 Start: 10273, Stop: 15795, Start Num: 9

Candidate Starts for Zarbodnamra_17:

(Start: 9 @10273 has 26 MA's), (10, 10288), (Start: 11 @10294 has 1 MA's), (Start: 13 @10324 has 1 MA's), (14, 10333), (15, 10336), (16, 10378), (24, 10489), (25, 10510), (46, 10738), (48, 10756), (50, 10771), (51, 10777), (52, 10780), (54, 10798), (60, 10822), (69, 10906), (70, 10909), (78, 10948), (80, 10963), (82, 10972), (103, 11140), (106, 11167), (149, 11455), (152, 11485), (173, 11689), (181, 11734), (185, 11761), (186, 11773), (198, 11863), (202, 11908), (206, 11935), (209, 11965), (220, 12052), (221, 12055), (225, 12094), (234, 12178), (241, 12214), (244, 12256), (248, 12301), (249, 12307), (251, 12319), (252, 12322), (258, 12376), (262, 12415), (265, 12436), (266, 12439), (269, 12457), (270, 12466), (275, 12484), (279, 12505), (281, 12511), (285, 12532), (288, 12559), (293, 12637), (317, 12826), (319, 12850), (320, 12862), (321, 12865), (324, 12880), (326, 12895), (327, 12898), (335, 12949), (347, 13030), (348, 13033), (371, 13066), (374, 13096), (376, 13120), (417, 13453), (423, 13501), (427, 13546), (428, 13549), (430, 13564), (437, 13609), (438, 13618), (439, 13627), (448, 13678), (462, 13750), (466, 13768), (473, 13789), (486, 13888), (487, 13891), (493, 13924), (501, 13990), (502, 14008), (503, 14023), (506, 14056), (514, 14107), (520, 14158), (539, 14401), (540, 14404), (548, 14476), (549, 14479), (561, 14545), (562, 14548), (563, 14566), (567, 14626), (570, 14683), (573, 14701), (579, 14782), (580, 14785), (582, 14800), (595, 14959), (599,

15013), (607, 15079), (608, 15085), (613, 15145), (614, 15151), (622, 15274), (623, 15298), (626, 15316), (628, 15340), (629, 15346), (631, 15367), (633, 15406), (642, 15547), (644, 15559), (651, 15610), (654, 15628), (662, 15778),

Gene: Zareef_20 Start: 10620, Stop: 15749, Start Num: 20

Candidate Starts for Zareef_20:

(18, 10599), (Start: 20 @10620 has 29 MA's), (21, 10647), (28, 10776), (36, 10872), (43, 10923), (53, 10980), (57, 11013), (58, 11016), (68, 11103), (72, 11115), (80, 11163), (81, 11166), (82, 11172), (83, 11175), (87, 11226), (88, 11232), (94, 11280), (104, 11346), (106, 11367), (161, 11760), (162, 11763), (170, 11865), (178, 11922), (180, 11928), (181, 11931), (182, 11937), (185, 11958), (198, 12060), (200, 12087), (209, 12162), (211, 12180), (215, 12198), (217, 12210), (220, 12249), (227, 12297), (231, 12354), (235, 12378), (237, 12384), (249, 12504), (252, 12519), (256, 12558), (265, 12633), (271, 12666), (275, 12681), (276, 12687), (277, 12693), (285, 12729), (294, 12837), (300, 12909), (310, 12963), (319, 13068), (326, 13113), (330, 13137), (335, 13167), (338, 13197), (339, 13209), (340, 13215), (346, 13242), (348, 13248), (359, 13341), (361, 13347), (369, 13398), (376, 13467), (381, 13500), (383, 13515), (384, 13521), (391, 13578), (398, 13632), (399, 13653), (400, 13665), (402, 13686), (403, 13689), (413, 13755), (433, 13896), (447, 13992), (452, 14025), (461, 14058), (469, 14079), (474, 14085), (505, 14322), (510, 14352), (528, 14526), (533, 14556), (534, 14577), (555, 14769), (556, 14778), (574, 14859), (592, 15000), (594, 15006), (607, 15135), (614, 15201), (617, 15252), (622, 15324), (625, 15363), (626, 15366), (628, 15393), (632, 15426), (633, 15459), (638, 15531), (645, 15603), (652, 15657), (655, 15663), (660, 15720),

Gene: ZiggyZoo_16 Start: 10043, Stop: 15586, Start Num: 9

Candidate Starts for ZiggyZoo_16:

(Start: 9 @10043 has 26 MA's), (10, 10058), (Start: 11 @10064 has 1 MA's), (Start: 13 @10094 has 1 MA's), (14, 10103), (15, 10106), (16, 10148), (24, 10259), (25, 10280), (46, 10508), (48, 10526), (50, 10541), (51, 10547), (52, 10550), (54, 10568), (60, 10592), (69, 10676), (71, 10682), (78, 10718), (80, 10733), (82, 10742), (103, 10910), (106, 10937), (122, 11054), (131, 11108), (149, 11225), (152, 11255), (173, 11459), (181, 11504), (185, 11531), (186, 11543), (198, 11633), (202, 11678), (206, 11705), (209, 11735), (220, 11822), (221, 11825), (225, 11864), (241, 11984), (244, 12026), (248, 12071), (249, 12077), (251, 12089), (252, 12092), (258, 12146), (262, 12185), (265, 12206), (266, 12209), (269, 12227), (275, 12254), (279, 12275), (281, 12281), (285, 12302), (288, 12329), (292, 12401), (310, 12536), (317, 12617), (319, 12641), (321, 12656), (326, 12686), (327, 12689), (335, 12740), (347, 12821), (348, 12824), (371, 12857), (374, 12887), (376, 12911), (385, 12977), (417, 13244), (420, 13262), (423, 13292), (427, 13337), (428, 13340), (430, 13355), (432, 13364), (437, 13400), (438, 13409), (439, 13418), (448, 13469), (462, 13541), (466, 13559), (473, 13580), (486, 13679), (487, 13682), (493, 13715), (501, 13781), (502, 13799), (503, 13814), (506, 13847), (514, 13898), (520, 13949), (539, 14192), (540, 14195), (548, 14267), (549, 14270), (561, 14336), (562, 14339), (563, 14357), (567, 14417), (570, 14474), (573, 14492), (579, 14573), (580, 14576), (582, 14591), (595, 14750), (599, 14804), (607, 14870), (608, 14876), (613, 14936), (614, 14942), (617, 14993), (622, 15065), (623, 15089), (626, 15107), (628, 15131), (629, 15137), (631, 15158), (633, 15197), (642, 15338), (644, 15350), (651, 15401), (654, 15419), (662, 15569),