

Zoomed Pham 311650

1: Chocolat_22 + 9	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
2: MoyaNatais_22	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
3: JaNo_22 + 4	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
4: Colucci_21	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
5: ArV1_018	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
6: KBurrous1X_22	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
7: Lymara_22	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
8: DrYang_22	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
9: SPB78_16	13	32	40	50	60	80	90	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500	520	540	560	580	600	611	646	
10: VWB_17	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
11: Araceli_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
12: Stuff_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
13: Marky_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
14: Shynx_25 + 1	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
15: Crosby_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
16: LazerLemon_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
17: Microdon_24	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
18: JackieB_24	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
19: Bogota_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
20: UNTPL_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
21: Henoccus_25	17	26	38	51	70	91	112	133	154	175	196	217	238	259	280	301	322	343	364	385	406	427	448	469	490	511	532	553	574	595	616	637	658	679	700	
22: AbbeyMikolon_15	20	30	41	52	63	74	85	96	107	118	129	140	151	162	173	184	195	206	217	228	239	250	261	272	283	294	305	316	327	338	349	360	371	382	393	404
23: Nesbitt_15	20	30	41	52	63	74	85	96	107	118	129	140	151	162	173	184	195	206	217	228	239	250	261	272	283	294	305	316	327	338	349	360	371	382	393	404
24: Rowa_15	20	30	41	52	63	74	85	96	107	118	129	140	151	162	173	184	195	206	217	228	239	250	261	272	283	294	305	316	327	338	349	360	371	382	393	404
25: G4_16	22	33	44	55	66	77	88	99	110	121	132	143	154	165	176	187	198	209	220	231	242	253	264	275	286	297	308	319	330	341	352	363	374	385	396	407
26: Doucette_16	22	33	44	55	66	77	88	99	110	121	132	143	154	165	176	187	198	209	220	231	242	253	264	275	286	297	308	319	330	341	352	363	374	385	396	407
27: B22_16	22	33	44	55	66	77	88	99	110	121	132	143	154	165	176	187	198	209	220	231	242	253	264	275	286	297	308	319	330	341	352	363	374	385	396	407
28: E6_17	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	432	444
29: RegnumDei_21	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
30: Madraxi_16	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
31: Shagrat_2	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
32: REQ_17	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
33: SFuller_2	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
34: Jflix2_120	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
35: CurryFries_19	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
36: BaileyBlu_15	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
37: CallinAliBarbz_15	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
38: Efly_14	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
39: Bubbykins_21	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
40: Shambre1_17	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	
41: Spartoi_14	25	37	50	63	76	89	102	115	128	141	154	167	180	193	206	219	232	245	258	271	284	297	310	323	336	349	362	375	388	401	414	427	440	453	466	

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 311650 Report

This analysis was run 06/27/26 on database version 652.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 311650 has 55 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Chocolat_22, Kabreeze_22, Conboy_22, PrincessTrina_22, Chipper1996_220, Scavito_22, Chubster_22, RosiePosie_22, EdgarPoe_22, HumptyDumpty_22
- Track 2 : MoyaNatalis_22
- Track 3 : JaNo_22, Linus_22, JayCookie_22, Tophat_22, Mordred_22
- Track 4 : Colucci_21
- Track 5 : ArV1_018
- Track 6 : KBurrousTX_22
- Track 7 : Lymara_22
- Track 8 : DrYang_22
- Track 9 : SPB78_16
- Track 10 : VWB_17
- Track 11 : Araceli_25
- Track 12 : Stuff_25
- Track 13 : Marky_25
- Track 14 : Shynx_25, Intolerant_24
- Track 15 : Crosby_25
- Track 16 : LazerLemon_25
- Track 17 : Microdon_24
- Track 18 : JackieB_24
- Track 19 : Bogota_25
- Track 20 : UNTPL_25
- Track 21 : Henoccus_25
- Track 22 : AbbeyMikolon_15
- Track 23 : Nesbitt_15
- Track 24 : Rowa_15
- Track 25 : G4_16
- Track 26 : Doucette_16
- Track 27 : B22_16
- Track 28 : E6_17
- Track 29 : RegnumDei_20
- Track 30 : Madraxi_25
- Track 31 : Shagrat_21

- Track 32 : REQ1_78
- Track 33 : SFuller_22
- Track 34 : Jflix2_20
- Track 35 : CurlyFries_19
- Track 36 : BaileyBlu_15
- Track 37 : CallinAllBarbz_15
- Track 38 : Elfy_14
- Track 39 : Bubbykins_21
- Track 40 : Shambre1_17
- Track 41 : Spartoi_14

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

The start number called the most often in the published annotations is 13, it was called in 12 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Chipper1996_220, Chocolat_22, Chubster_22, Colucci_21, Conboy_22, EdgarPoe_22, HumptyDumpty_22, KBurrousTX_22, Kabreeze_22, PrincessTrina_22, RosiePosie_22, Scavito_22,

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

- ArV1_018, Bubbykins_21, JaNo_22, JayCookie_22, Linus_22, Lymara_22, Mordred_22, MoyaNatalis_22, Tophat_22,

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

- AbbeyMikolon_15, Araceli_25, B22_16, BaileyBlu_15, Bogota_25, CallinAllBarbz_15, Crosby_25, CurlyFries_19, Doucette_16, DrYang_22, E6_17, Elfy_14, G4_16, Henoccus_25, Intolerant_24, JackieB_24, Jflix2_20, LazerLemon_25, Madraxi_25, Marky_25, Microdon_24, Nesbitt_15, REQ1_78, RegnumDei_20, Rowa_15, SFuller_22, SPB78_16, Shagrat_21, Shambre1_17, Shynx_25, Spartoi_14, Stuff_25, UNTPL_25, VWB_17,

Summary by start number:

Start 7:

- Found in 7 of 55 (12.7%) of genes in pham
- Manual Annotations of this start: 5 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CurlyFries_19 (CF), Jflix2_20 (CF), Madraxi_25 (CF), REQ1_78 (CF), RegnumDei_20 (CF), SFuller_22 (CF), Shagrat_21 (CF),

Start 13:

- Found in 21 of 55 (38.2%) of genes in pham
- Manual Annotations of this start: 12 of 48
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Chipper1996_220 (AR), Chocolat_22 (AR), Chubster_22 (AR), Colucci_21 (AR), Conboy_22 (AR), EdgarPoe_22 (AR), HumptyDumpty_22 (AR), KBurrousTX_22 (AR), Kabreeze_22 (AR), PrincessTrina_22

(AR), RosiePosie_22 (AR), Scavito_22 (AR),

Start 14:

- Found in 22 of 55 (40.0%) of genes in pham
- Manual Annotations of this start: 7 of 48
- Called 40.9% of time when present
- Phage (with cluster) where this start called: ArV1_018 (AR), DrYang_22 (AR), JaNo_22 (AR), JayCookie_22 (AR), Linus_22 (AR), Lymara_22 (AR), Mordred_22 (AR), MoyaNatalis_22 (AR), Tophat_22 (AR),

Start 16:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marky_25 (BH),

Start 17:

- Found in 11 of 55 (20.0%) of genes in pham
- Manual Annotations of this start: 11 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Araceli_25 (BH), Bogota_25 (BH), Crosby_25 (BH), Henoccus_25 (BH), Intolerant_24 (BH), JackieB_24 (BH), LazerLemon_25 (BH), Microdon_24 (BH), Shynx_25 (BH), Stuff_25 (BH), UNTPL_25 (BH),

Start 25:

- Found in 9 of 55 (16.4%) of genes in pham
- Manual Annotations of this start: 4 of 48
- Called 55.6% of time when present
- Phage (with cluster) where this start called: B22_16 (BW), Bubbykins_21 (UNK), Doucette_16 (BW), E6_17 (BW), G4_16 (BW),

Start 28:

- Found in 2 of 55 (3.6%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: VWB_17 (BA),

Start 29:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rowa_15 (BL),

Start 30:

- Found in 2 of 55 (3.6%) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbeyMikolon_15 (BL), Nesbitt_15 (BL),

Start 31:

- Found in 11 of 55 (20.0%) of genes in pham
- No Manual Annotations of this start.

- Called 9.1% of time when present
- Phage (with cluster) where this start called: SPB78_16 (BA),

Start 34:

- Found in 3 of 55 (5.5%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Spartoi_14 (singleton),

Start 38:

- Found in 12 of 55 (21.8%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Elfy_14 (FP),

Start 42:

- Found in 2 of 55 (3.6%) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_15 (FP), CallinAlIBarbz_15 (FP),

Start 43:

- Found in 3 of 55 (5.5%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Shambre1_17 (singleton),

Summary by clusters:

There are 9 clusters represented in this pham: FP, singleton, BA, BL, BH, CF, BW, AR, UNK,

Info for manual annotations of cluster AR:

- Start number 13 was manually annotated 12 times for cluster AR.
- Start number 14 was manually annotated 7 times for cluster AR.

Info for manual annotations of cluster BH:

- Start number 16 was manually annotated 1 time for cluster BH.
- Start number 17 was manually annotated 11 times for cluster BH.

Info for manual annotations of cluster BL:

- Start number 29 was manually annotated 1 time for cluster BL.
- Start number 30 was manually annotated 2 times for cluster BL.

Info for manual annotations of cluster BW:

- Start number 25 was manually annotated 4 times for cluster BW.

Info for manual annotations of cluster CF:

- Start number 7 was manually annotated 5 times for cluster CF.

Info for manual annotations of cluster FP:

- Start number 38 was manually annotated 1 time for cluster FP.
- Start number 42 was manually annotated 2 times for cluster FP.

Gene Information:

Gene: AbbeyMikolon_15 Start: 9493, Stop: 12630, Start Num: 30

Candidate Starts for AbbeyMikolon_15:

(Start: 30 @9493 has 2 MA's), (47, 9577), (97, 9805), (98, 9808), (118, 9913), (120, 9922), (125, 9946), (126, 9952), (132, 9976), (172, 10183), (184, 10219), (187, 10225), (199, 10264), (202, 10279), (214, 10324), (216, 10330), (217, 10333), (222, 10354), (226, 10366), (231, 10387), (250, 10456), (256, 10495), (274, 10567), (278, 10576), (293, 10615), (330, 10714), (342, 10765), (343, 10774), (347, 10789), (348, 10795), (351, 10807), (363, 10849), (364, 10852), (380, 10915), (392, 10951), (403, 10984), (404, 10987), (407, 11002), (423, 11044), (427, 11068), (433, 11089), (435, 11098), (438, 11107), (445, 11128), (448, 11137), (462, 11197), (466, 11209), (468, 11224), (495, 11356), (500, 11368), (523, 11464), (524, 11476), (532, 11512), (536, 11524), (563, 11623), (571, 11659), (580, 11695), (585, 11710), (605, 11791), (620, 11824), (696, 12088), (704, 12112), (724, 12184), (729, 12208), (746, 12295), (765, 12391), (772, 12439), (795, 12529), (802, 12559), (811, 12598),

Gene: ArV1_018 Start: 14054, Stop: 17587, Start Num: 14

Candidate Starts for ArV1_018:

(Start: 13 @14048 has 12 MA's), (Start: 14 @14054 has 7 MA's), (Start: 25 @14126 has 4 MA's), (27, 14138), (32, 14159), (40, 14204), (48, 14237), (50, 14255), (53, 14279), (56, 14288), (61, 14309), (68, 14357), (90, 14468), (106, 14552), (127, 14669), (143, 14744), (161, 14837), (167, 14873), (178, 14924), (180, 14930), (188, 14945), (197, 14975), (207, 15020), (209, 15032), (223, 15077), (225, 15086), (229, 15107), (234, 15146), (248, 15185), (258, 15251), (273, 15317), (290, 15377), (299, 15419), (302, 15428), (308, 15458), (315, 15479), (317, 15485), (320, 15491), (337, 15557), (360, 15650), (361, 15653), (366, 15674), (370, 15692), (371, 15695), (377, 15716), (379, 15725), (382, 15737), (383, 15740), (389, 15761), (392, 15770), (393, 15773), (405, 15812), (408, 15827), (420, 15875), (424, 15890), (435, 15941), (437, 15947), (445, 15971), (448, 15980), (450, 15986), (460, 16022), (482, 16121), (495, 16190), (502, 16208), (518, 16241), (533, 16253), (550, 16325), (554, 16352), (559, 16373), (576, 16442), (578, 16448), (583, 16463), (588, 16484), (590, 16505), (611, 16562), (644, 16595), (646, 16598), (653, 16622), (665, 16691), (672, 16727), (673, 16730), (674, 16733), (685, 16775), (689, 16796), (698, 16835), (717, 16898), (730, 16955), (756, 17096), (761, 17108), (775, 17177), (787, 17219), (793, 17249), (803, 17288), (806, 17309), (818, 17354), (826, 17417), (827, 17426), (835, 17489), (849, 17546),

Gene: Araceli_25 Start: 16171, Stop: 20268, Start Num: 17

Candidate Starts for Araceli_25:

(Start: 17 @16171 has 11 MA's), (26, 16237), (Start: 38 @16303 has 1 MA's), (40, 16309), (55, 16387), (57, 16393), (76, 16495), (93, 16588), (97, 16606), (110, 16678), (113, 16702), (114, 16705), (116, 16714), (119, 16726), (134, 16795), (136, 16801), (145, 16852), (171, 16993), (172, 16996), (191, 17050), (200, 17083), (206, 17113), (207, 17116), (233, 17224), (257, 17323), (260, 17335), (269, 17368), (281, 17401), (296, 17467), (325, 17575), (345, 17656), (347, 17662), (365, 17731), (380, 17788), (384, 17803), (394, 17830), (404, 17860), (423, 17938), (439, 18004), (445, 18022), (454, 18055), (458, 18070), (459, 18073), (468, 18118), (506, 18286), (509, 18301), (538, 18436), (563, 18547), (568, 18568), (588, 18646), (596, 18709), (599, 18724), (616, 18775), (619, 18793), (637, 18868), (651, 18913), (684, 19063), (690, 19093), (714, 19174), (728, 19237), (736, 19279), (741, 19294), (758, 19387), (763, 19405), (792, 19561), (800, 19588), (807, 19624), (821, 19693), (859, 19933), (864, 19978), (870, 20032), (877, 20083), (879, 20110), (882, 20140), (883, 20146), (892, 20203), (896, 20239),

Gene: B22_16 Start: 9773, Stop: 13753, Start Num: 25

Candidate Starts for B22_16:

(Start: 25 @9773 has 4 MA's), (31, 9800), (32, 9806), (37, 9839), (44, 9863), (75, 10037), (79, 10058), (89, 10109), (95, 10142), (96, 10151), (99, 10163), (115, 10259), (117, 10271), (121, 10283), (122, 10289), (131, 10334), (134, 10343), (135, 10346), (144, 10388), (155, 10445), (186, 10583), (219, 10709), (224, 10727), (238, 10802), (244, 10823), (248, 10832), (249, 10835), (258, 10889), (284, 10985), (285, 10988), (295, 11033), (302, 11063), (304, 11075), (306, 11084), (333, 11174), (349, 11225), (363, 11267), (370, 11297), (373, 11306), (381, 11333), (385, 11345), (391, 11360), (407, 11408), (412, 11429), (417, 11447), (419, 11453), (422, 11468), (428, 11492), (443, 11537), (454, 11570), (465, 11615), (501, 11783), (509, 11819), (548, 11999), (557, 12044), (558, 12047), (561, 12053), (571, 12092), (589, 12173), (617, 12287), (660, 12443), (662, 12455), (679, 12536), (681, 12539), (685, 12557), (687, 12569), (688, 12572), (699, 12623), (712, 12659), (715, 12668), (718, 12680), (719, 12683), (723, 12701), (748, 12839), (760, 12893), (765, 12911), (785, 13007), (791, 13037), (811, 13121), (824, 13205), (833, 13271), (841, 13322), (853, 13379), (858, 13418), (873, 13535), (880, 13601), (887, 13661), (889, 13673), (891, 13688), (894, 13718),

Gene: BaileyBlu_15 Start: 8628, Stop: 12227, Start Num: 42

Candidate Starts for BaileyBlu_15:

(Start: 42 @8628 has 2 MA's), (62, 8730), (74, 8802), (76, 8817), (77, 8820), (97, 8925), (106, 8967), (109, 8985), (128, 9084), (129, 9093), (141, 9144), (164, 9276), (166, 9288), (177, 9342), (310, 9753), (318, 9768), (337, 9840), (345, 9879), (357, 9918), (368, 9969), (378, 10005), (390, 10047), (408, 10107), (427, 10179), (436, 10212), (472, 10353), (492, 10449), (503, 10488), (520, 10554), (527, 10587), (535, 10623), (537, 10632), (564, 10746), (567, 10761), (572, 10785), (599, 10917), (608, 10947), (631, 11034), (656, 11124), (660, 11148), (669, 11208), (693, 11301), (725, 11412), (750, 11544), (753, 11556), (757, 11568), (765, 11589), (788, 11682), (820, 11823), (843, 11967), (854, 12024), (862, 12084), (869, 12144), (875, 12180),

Gene: Bogota_25 Start: 16314, Stop: 20414, Start Num: 17

Candidate Starts for Bogota_25:

(Start: 17 @16314 has 11 MA's), (26, 16380), (Start: 38 @16446 has 1 MA's), (55, 16530), (57, 16536), (70, 16608), (76, 16638), (93, 16731), (97, 16749), (110, 16821), (113, 16845), (114, 16848), (116, 16857), (119, 16869), (134, 16938), (138, 16950), (168, 17118), (191, 17193), (207, 17259), (211, 17277), (217, 17292), (219, 17304), (225, 17322), (227, 17334), (250, 17418), (258, 17469), (260, 17478), (269, 17511), (281, 17544), (291, 17592), (297, 17613), (319, 17700), (345, 17799), (347, 17805), (365, 17874), (369, 17892), (380, 17931), (384, 17946), (394, 17973), (401, 17991), (423, 18081), (434, 18129), (439, 18147), (440, 18150), (445, 18165), (458, 18213), (459, 18216), (468, 18261), (504, 18423), (563, 18690), (568, 18711), (586, 18777), (596, 18852), (624, 18951), (631, 18984), (640, 19020), (642, 19029), (684, 19209), (690, 19239), (722, 19356), (728, 19383), (741, 19440), (758, 19533), (763, 19551), (785, 19671), (792, 19707), (807, 19770), (821, 19839), (859, 20079), (864, 20124), (868, 20163), (870, 20178), (877, 20229), (879, 20256), (882, 20286), (883, 20292), (887, 20316), (892, 20349), (896, 20385),

Gene: Bubbykins_21 Start: 15316, Stop: 18789, Start Num: 25

Candidate Starts for Bubbykins_21:

(Start: 13 @15238 has 12 MA's), (Start: 14 @15244 has 7 MA's), (Start: 25 @15316 has 4 MA's), (40, 15394), (56, 15478), (64, 15523), (65, 15535), (68, 15547), (78, 15589), (105, 15721), (110, 15754), (127, 15823), (147, 15898), (152, 15925), (171, 16000), (182, 16033), (185, 16039), (189, 16045), (215, 16132), (227, 16183), (237, 16228), (245, 16249), (247, 16255), (263, 16330), (264, 16339), (269, 16360), (310, 16519), (333, 16588), (335, 16591), (353, 16636), (355, 16642), (377, 16714), (381, 16732), (402, 16792), (418, 16849), (424, 16870), (431, 16903), (439, 16921), (444, 16936), (446, 16942), (460, 16984), (464, 16993), (471, 17026), (482, 17077), (485, 17089), (490, 17119), (491, 17122), (495, 17146), (507, 17185), (516, 17230), (523, 17266), (525, 17281), (526, 17287),

(550, 17389), (559, 17437), (562, 17446), (565, 17458), (573, 17494), (575, 17503), (592, 17584), (599, 17626), (601, 17629), (603, 17641), (622, 17704), (638, 17773), (639, 17776), (660, 17860), (678, 17950), (685, 17974), (689, 17995), (698, 18034), (716, 18091), (735, 18175), (764, 18319), (768, 18340), (775, 18376), (780, 18397), (781, 18400), (799, 18472), (806, 18511), (818, 18556), (827, 18628), (831, 18655), (832, 18661), (833, 18676), (837, 18712), (842, 18727),

Gene: CallinAllBarbz_15 Start: 8647, Stop: 12354, Start Num: 42

Candidate Starts for CallinAllBarbz_15:

(Start: 42 @8647 has 2 MA's), (62, 8749), (97, 8944), (106, 8986), (109, 9004), (128, 9103), (129, 9112), (164, 9295), (166, 9307), (177, 9361), (195, 9406), (271, 9739), (310, 9889), (318, 9904), (337, 9976), (345, 10015), (357, 10054), (365, 10090), (368, 10105), (378, 10141), (390, 10183), (427, 10315), (436, 10348), (453, 10402), (472, 10489), (493, 10588), (503, 10624), (535, 10759), (541, 10783), (564, 10882), (572, 10921), (660, 11275), (662, 11287), (669, 11335), (671, 11338), (686, 11392), (727, 11551), (738, 11602), (750, 11671), (753, 11683), (757, 11695), (820, 11950), (854, 12151), (862, 12211), (875, 12307),

Gene: Chipper1996_220 Start: 15723, Stop: 19265, Start Num: 13

Candidate Starts for Chipper1996_220:

(Start: 13 @15723 has 12 MA's), (Start: 14 @15729 has 7 MA's), (18, 15750), (19, 15753), (32, 15834), (40, 15879), (48, 15912), (50, 15930), (56, 15963), (63, 15993), (65, 16020), (68, 16032), (91, 16149), (95, 16173), (105, 16224), (106, 16227), (124, 16332), (127, 16344), (143, 16419), (149, 16449), (153, 16470), (161, 16512), (188, 16620), (197, 16650), (207, 16695), (209, 16707), (223, 16752), (225, 16761), (234, 16821), (248, 16860), (288, 17040), (290, 17052), (291, 17061), (299, 17094), (301, 17100), (302, 17103), (315, 17154), (317, 17160), (320, 17166), (327, 17190), (333, 17217), (337, 17232), (340, 17244), (360, 17325), (361, 17328), (366, 17349), (370, 17367), (371, 17370), (377, 17391), (383, 17415), (389, 17436), (392, 17445), (393, 17448), (405, 17487), (409, 17511), (420, 17550), (424, 17565), (437, 17622), (445, 17646), (448, 17655), (450, 17661), (460, 17697), (471, 17745), (473, 17754), (482, 17796), (485, 17808), (495, 17865), (502, 17883), (505, 17898), (507, 17904), (550, 18000), (554, 18027), (559, 18048), (576, 18117), (583, 18138), (588, 18159), (611, 18237), (644, 18270), (646, 18273), (653, 18297), (665, 18366), (672, 18402), (673, 18405), (674, 18408), (677, 18423), (689, 18471), (697, 18507), (698, 18510), (717, 18573), (747, 18705), (756, 18771), (767, 18813), (775, 18852), (787, 18897), (803, 18966), (806, 18987), (818, 19032), (826, 19095), (832, 19134), (833, 19149), (842, 19200), (847, 19212),

Gene: Chocolat_22 Start: 15724, Stop: 19266, Start Num: 13

Candidate Starts for Chocolat_22:

(Start: 13 @15724 has 12 MA's), (Start: 14 @15730 has 7 MA's), (18, 15751), (19, 15754), (32, 15835), (40, 15880), (48, 15913), (50, 15931), (56, 15964), (63, 15994), (65, 16021), (68, 16033), (91, 16150), (95, 16174), (105, 16225), (106, 16228), (124, 16333), (127, 16345), (143, 16420), (149, 16450), (153, 16471), (161, 16513), (188, 16621), (197, 16651), (207, 16696), (209, 16708), (223, 16753), (225, 16762), (234, 16822), (248, 16861), (288, 17041), (290, 17053), (291, 17062), (299, 17095), (301, 17101), (302, 17104), (315, 17155), (317, 17161), (320, 17167), (327, 17191), (333, 17218), (337, 17233), (340, 17245), (360, 17326), (361, 17329), (366, 17350), (370, 17368), (371, 17371), (377, 17392), (383, 17416), (389, 17437), (392, 17446), (393, 17449), (405, 17488), (409, 17512), (420, 17551), (424, 17566), (437, 17623), (445, 17647), (448, 17656), (450, 17662), (460, 17698), (471, 17746), (473, 17755), (482, 17797), (485, 17809), (495, 17866), (502, 17884), (505, 17899), (507, 17905), (550, 18001), (554, 18028), (559, 18049), (576, 18118), (583, 18139), (588, 18160), (611, 18238), (644, 18271), (646, 18274), (653, 18298), (665, 18367), (672, 18403), (673, 18406), (674, 18409), (677, 18424), (689, 18472), (697, 18508), (698, 18511), (717, 18574), (747, 18706), (756, 18772), (767, 18814), (775, 18853), (787, 18898), (803, 18967), (806, 18988), (818, 19033), (826, 19096), (832, 19135), (833, 19150), (842, 19201), (847, 19213),

Gene: Chubster_22 Start: 15494, Stop: 19036, Start Num: 13

Candidate Starts for Chubster_22:

(Start: 13 @15494 has 12 MA's), (Start: 14 @15500 has 7 MA's), (18, 15521), (19, 15524), (32, 15605), (40, 15650), (48, 15683), (50, 15701), (56, 15734), (63, 15764), (65, 15791), (68, 15803), (91, 15920), (95, 15944), (105, 15995), (106, 15998), (124, 16103), (127, 16115), (143, 16190), (149, 16220), (153, 16241), (161, 16283), (188, 16391), (197, 16421), (207, 16466), (209, 16478), (223, 16523), (225, 16532), (234, 16592), (248, 16631), (288, 16811), (290, 16823), (291, 16832), (299, 16865), (301, 16871), (302, 16874), (315, 16925), (317, 16931), (320, 16937), (327, 16961), (333, 16988), (337, 17003), (340, 17015), (360, 17096), (361, 17099), (366, 17120), (370, 17138), (371, 17141), (377, 17162), (383, 17186), (389, 17207), (392, 17216), (393, 17219), (405, 17258), (409, 17282), (420, 17321), (424, 17336), (437, 17393), (445, 17417), (448, 17426), (450, 17432), (460, 17468), (471, 17516), (473, 17525), (482, 17567), (485, 17579), (495, 17636), (502, 17654), (505, 17669), (507, 17675), (550, 17771), (554, 17798), (559, 17819), (576, 17888), (583, 17909), (588, 17930), (611, 18008), (644, 18041), (646, 18044), (653, 18068), (665, 18137), (672, 18173), (673, 18176), (674, 18179), (677, 18194), (689, 18242), (697, 18278), (698, 18281), (717, 18344), (747, 18476), (756, 18542), (767, 18584), (775, 18623), (787, 18668), (803, 18737), (806, 18758), (818, 18803), (826, 18866), (832, 18905), (833, 18920), (842, 18971), (847, 18983),

Gene: Colucci_21 Start: 15200, Stop: 18736, Start Num: 13

Candidate Starts for Colucci_21:

(Start: 13 @15200 has 12 MA's), (Start: 14 @15206 has 7 MA's), (Start: 25 @15278 has 4 MA's), (27, 15290), (32, 15311), (40, 15356), (46, 15386), (50, 15407), (56, 15440), (68, 15509), (90, 15620), (95, 15650), (97, 15662), (102, 15683), (106, 15704), (124, 15809), (127, 15821), (143, 15896), (149, 15926), (153, 15947), (161, 15989), (167, 16025), (178, 16076), (180, 16082), (188, 16097), (207, 16172), (209, 16184), (223, 16229), (225, 16238), (229, 16259), (248, 16337), (258, 16403), (259, 16406), (272, 16463), (273, 16469), (290, 16529), (299, 16571), (302, 16580), (315, 16631), (317, 16637), (320, 16643), (324, 16658), (333, 16694), (337, 16709), (366, 16826), (370, 16844), (371, 16847), (376, 16865), (377, 16868), (379, 16877), (383, 16892), (385, 16898), (389, 16913), (392, 16922), (393, 16925), (405, 16964), (409, 16988), (415, 17009), (420, 17027), (424, 17042), (437, 17099), (446, 17126), (448, 17132), (450, 17138), (469, 17213), (478, 17252), (485, 17285), (495, 17342), (502, 17360), (505, 17375), (507, 17381), (550, 17477), (554, 17504), (576, 17594), (583, 17615), (587, 17630), (588, 17636), (611, 17714), (612, 17717), (643, 17744), (644, 17747), (646, 17750), (650, 17765), (672, 17879), (677, 17900), (685, 17927), (689, 17948), (694, 17969), (695, 17975), (700, 17996), (717, 18050), (756, 18248), (761, 18260), (775, 18329), (782, 18353), (787, 18371), (803, 18437), (806, 18458), (818, 18503), (831, 18599), (832, 18605), (852, 18716),

Gene: Conboy_22 Start: 15722, Stop: 19264, Start Num: 13

Candidate Starts for Conboy_22:

(Start: 13 @15722 has 12 MA's), (Start: 14 @15728 has 7 MA's), (18, 15749), (19, 15752), (32, 15833), (40, 15878), (48, 15911), (50, 15929), (56, 15962), (63, 15992), (65, 16019), (68, 16031), (91, 16148), (95, 16172), (105, 16223), (106, 16226), (124, 16331), (127, 16343), (143, 16418), (149, 16448), (153, 16469), (161, 16511), (188, 16619), (197, 16649), (207, 16694), (209, 16706), (223, 16751), (225, 16760), (234, 16820), (248, 16859), (288, 17039), (290, 17051), (291, 17060), (299, 17093), (301, 17099), (302, 17102), (315, 17153), (317, 17159), (320, 17165), (327, 17189), (333, 17216), (337, 17231), (340, 17243), (360, 17324), (361, 17327), (366, 17348), (370, 17366), (371, 17369), (377, 17390), (383, 17414), (389, 17435), (392, 17444), (393, 17447), (405, 17486), (409, 17510), (420, 17549), (424, 17564), (437, 17621), (445, 17645), (448, 17654), (450, 17660), (460, 17696), (471, 17744), (473, 17753), (482, 17795), (485, 17807), (495, 17864), (502, 17882), (505, 17897), (507, 17903), (550, 17999), (554, 18026), (559, 18047), (576, 18116), (583, 18137), (588, 18158), (611, 18236), (644, 18269), (646, 18272), (653, 18296), (665, 18365), (672, 18401), (673, 18404), (674, 18407), (677, 18422), (689, 18470), (697, 18506), (698, 18509), (717, 18572), (747, 18704), (756, 18770), (767, 18812), (775, 18851), (787, 18896), (803, 18965), (806, 18986), (818, 19031), (826, 19094), (832, 19133), (833, 19148), (842, 19199), (847, 19211),

Gene: Crosby_25 Start: 16313, Stop: 20413, Start Num: 17

Candidate Starts for Crosby_25:

(Start: 17 @16313 has 11 MA's), (26, 16379), (Start: 38 @16445 has 1 MA's), (57, 16535), (70, 16607), (73, 16619), (76, 16637), (97, 16748), (109, 16811), (113, 16844), (116, 16856), (119, 16868), (134, 16937), (138, 16949), (141, 16967), (145, 16994), (148, 17003), (168, 17117), (191, 17192), (207, 17258), (225, 17321), (233, 17366), (250, 17417), (257, 17465), (258, 17468), (260, 17477), (269, 17510), (275, 17531), (281, 17543), (297, 17612), (334, 17753), (342, 17786), (360, 17852), (375, 17912), (380, 17930), (384, 17945), (404, 18002), (405, 18008), (423, 18080), (434, 18128), (439, 18146), (445, 18164), (458, 18212), (459, 18215), (468, 18260), (563, 18689), (568, 18710), (581, 18761), (586, 18776), (596, 18851), (631, 18983), (637, 19010), (684, 19205), (690, 19235), (714, 19316), (722, 19352), (741, 19436), (758, 19529), (763, 19547), (792, 19703), (821, 19838), (864, 20123), (866, 20156), (868, 20162), (870, 20177), (877, 20228), (879, 20255), (882, 20285), (883, 20291), (887, 20315), (892, 20348), (896, 20384),

Gene: CurlyFries_19 Start: 12522, Stop: 16934, Start Num: 7

Candidate Starts for CurlyFries_19:

(4, 12486), (6, 12504), (Start: 7 @12522 has 5 MA's), (11, 12726), (31, 12882), (33, 12906), (35, 12912), (41, 12936), (58, 13023), (59, 13029), (61, 13038), (67, 13083), (70, 13098), (76, 13128), (79, 13140), (80, 13143), (85, 13173), (101, 13257), (104, 13272), (108, 13293), (110, 13311), (113, 13335), (118, 13356), (120, 13365), (123, 13377), (129, 13410), (138, 13443), (142, 13473), (157, 13551), (158, 13554), (160, 13560), (174, 13641), (202, 13737), (212, 13779), (215, 13785), (220, 13806), (232, 13854), (236, 13887), (242, 13905), (246, 13914), (276, 14070), (286, 14103), (311, 14223), (312, 14226), (328, 14274), (338, 14319), (344, 14352), (354, 14385), (358, 14397), (373, 14463), (387, 14517), (390, 14523), (416, 14622), (430, 14682), (456, 14766), (467, 14817), (468, 14820), (542, 15015), (548, 15048), (568, 15135), (575, 15168), (586, 15201), (614, 15336), (629, 15402), (631, 15411), (635, 15423), (661, 15507), (666, 15540), (676, 15585), (696, 15666), (710, 15711), (718, 15741), (725, 15768), (746, 15879), (828, 16317), (829, 16326), (844, 16428), (850, 16455), (864, 16569), (865, 16590), (874, 16647), (875, 16650), (897, 16791), (901, 16848), (902, 16860), (904, 16869), (906, 16893), (907, 16899),

Gene: Doucette_16 Start: 9832, Stop: 13926, Start Num: 25

Candidate Starts for Doucette_16:

(12, 9718), (Start: 25 @9832 has 4 MA's), (31, 9859), (32, 9865), (37, 9898), (44, 9922), (75, 10096), (79, 10117), (89, 10168), (95, 10201), (96, 10210), (115, 10318), (117, 10330), (121, 10342), (122, 10348), (131, 10393), (134, 10402), (135, 10405), (144, 10447), (155, 10504), (176, 10612), (186, 10642), (219, 10768), (228, 10807), (238, 10861), (239, 10867), (243, 10879), (249, 10894), (258, 10957), (260, 10966), (261, 10969), (265, 10987), (268, 11008), (278, 11044), (287, 11071), (289, 11083), (305, 11155), (311, 11182), (321, 11209), (329, 11239), (342, 11296), (352, 11338), (359, 11356), (370, 11407), (378, 11437), (382, 11452), (398, 11503), (406, 11536), (439, 11668), (440, 11671), (442, 11680), (446, 11689), (451, 11701), (479, 11827), (491, 11887), (493, 11896), (497, 11917), (508, 11959), (520, 12019), (521, 12025), (530, 12073), (534, 12085), (535, 12091), (544, 12124), (545, 12127), (547, 12142), (553, 12175), (555, 12184), (558, 12199), (565, 12223), (570, 12244), (582, 12289), (584, 12298), (586, 12301), (588, 12313), (590, 12334), (591, 12343), (602, 12397), (604, 12406), (607, 12418), (613, 12430), (626, 12484), (632, 12505), (635, 12520), (641, 12538), (653, 12577), (662, 12628), (679, 12709), (681, 12712), (685, 12730), (687, 12742), (688, 12745), (709, 12820), (712, 12832), (715, 12841), (719, 12856), (748, 13012), (760, 13066), (765, 13084), (785, 13180), (791, 13210), (811, 13294), (824, 13378), (833, 13444), (841, 13495), (853, 13552), (858, 13591), (873, 13708), (880, 13774), (887, 13834), (889, 13846), (891, 13861), (894, 13891),

Gene: DrYang_22 Start: 15693, Stop: 19463, Start Num: 14

Candidate Starts for DrYang_22:

(Start: 14 @15693 has 7 MA's), (Start: 25 @15765 has 4 MA's), (40, 15843), (Start: 43 @15852 has 1 MA's), (48, 15876), (50, 15894), (56, 15927), (63, 15957), (65, 15984), (68, 15996), (88, 16095), (95, 16137), (105, 16188), (106, 16191), (124, 16296), (127, 16308), (138, 16350), (143, 16383), (149, 16413), (161, 16476), (167, 16512), (180, 16569), (207, 16659), (209, 16671), (223, 16716), (225, 16725), (229, 16746), (234, 16785), (248, 16824), (260, 16899), (280, 16977), (290, 17016), (300, 17061), (302, 17067), (304, 17079), (308, 17097), (309, 17103), (311, 17109), (320, 17130), (324, 17145), (333, 17181), (340, 17208), (341, 17214), (342, 17217), (360, 17289), (367, 17322), (371, 17334), (372, 17340), (376, 17352), (389, 17400), (392, 17409), (396, 17421), (397, 17424), (399, 17427), (405, 17451), (410, 17478), (424, 17529), (425, 17532), (427, 17550), (437, 17586), (444, 17607), (448, 17619), (450, 17625), (460, 17661), (465, 17679), (467, 17694), (470, 17703), (471, 17709), (478, 17739), (482, 17760), (485, 17772), (487, 17781), (491, 17805), (495, 17829), (507, 17868), (514, 17904), (515, 17907), (521, 17937), (522, 17940), (526, 17964), (535, 18003), (550, 18066), (554, 18093), (576, 18183), (583, 18204), (590, 18246), (608, 18333), (611, 18339), (618, 18360), (636, 18441), (639, 18453), (643, 18468), (660, 18537), (667, 18588), (672, 18603), (674, 18609), (681, 18633), (685, 18651), (689, 18672), (697, 18708), (702, 18723), (717, 18774), (747, 18906), (756, 18972), (775, 19053), (803, 19164), (806, 19185), (818, 19230), (826, 19293), (827, 19302), (832, 19332), (838, 19386), (849, 19422),

Gene: E6_17 Start: 9880, Stop: 13974, Start Num: 25

Candidate Starts for E6_17:

(12, 9766), (Start: 25 @9880 has 4 MA's), (31, 9907), (37, 9946), (44, 9970), (75, 10144), (79, 10165), (89, 10216), (95, 10249), (96, 10258), (115, 10366), (117, 10378), (121, 10390), (122, 10396), (131, 10441), (134, 10450), (135, 10453), (144, 10495), (155, 10552), (186, 10690), (219, 10816), (228, 10855), (238, 10909), (239, 10915), (243, 10927), (249, 10942), (258, 11005), (260, 11014), (261, 11017), (265, 11035), (268, 11056), (278, 11092), (287, 11119), (289, 11131), (305, 11203), (311, 11230), (321, 11257), (329, 11287), (342, 11344), (352, 11386), (359, 11404), (370, 11455), (378, 11485), (382, 11500), (398, 11551), (439, 11716), (440, 11719), (442, 11728), (446, 11737), (451, 11749), (479, 11875), (491, 11935), (493, 11944), (497, 11965), (499, 11968), (503, 11977), (508, 12007), (520, 12067), (521, 12073), (530, 12121), (534, 12133), (535, 12139), (544, 12172), (545, 12175), (547, 12190), (553, 12223), (555, 12232), (558, 12247), (565, 12271), (570, 12292), (574, 12313), (579, 12331), (582, 12337), (584, 12346), (586, 12349), (588, 12361), (590, 12382), (591, 12391), (600, 12439), (602, 12445), (604, 12454), (607, 12466), (609, 12469), (613, 12478), (626, 12532), (632, 12553), (646, 12601), (652, 12622), (681, 12760), (685, 12778), (688, 12793), (692, 12811), (709, 12868), (712, 12880), (715, 12889), (719, 12904), (723, 12922), (748, 13060), (760, 13114), (765, 13132), (785, 13228), (791, 13258), (811, 13342), (824, 13426), (833, 13492), (841, 13543), (853, 13600), (858, 13639), (880, 13822), (887, 13882), (889, 13894), (891, 13909), (894, 13939),

Gene: EdgarPoe_22 Start: 15722, Stop: 19264, Start Num: 13

Candidate Starts for EdgarPoe_22:

(Start: 13 @15722 has 12 MA's), (Start: 14 @15728 has 7 MA's), (18, 15749), (19, 15752), (32, 15833), (40, 15878), (48, 15911), (50, 15929), (56, 15962), (63, 15992), (65, 16019), (68, 16031), (91, 16148), (95, 16172), (105, 16223), (106, 16226), (124, 16331), (127, 16343), (143, 16418), (149, 16448), (153, 16469), (161, 16511), (188, 16619), (197, 16649), (207, 16694), (209, 16706), (223, 16751), (225, 16760), (234, 16820), (248, 16859), (288, 17039), (290, 17051), (291, 17060), (299, 17093), (301, 17099), (302, 17102), (315, 17153), (317, 17159), (320, 17165), (327, 17189), (333, 17216), (337, 17231), (340, 17243), (360, 17324), (361, 17327), (366, 17348), (370, 17366), (371, 17369), (377, 17390), (383, 17414), (389, 17435), (392, 17444), (393, 17447), (405, 17486), (409, 17510), (420, 17549), (424, 17564), (437, 17621), (445, 17645), (448, 17654), (450, 17660), (460, 17696), (471, 17744), (473, 17753), (482, 17795), (485, 17807), (495, 17864), (502, 17882), (505, 17897), (507, 17903), (550, 17999), (554, 18026), (559, 18047), (576, 18116), (583, 18137), (588, 18158), (611, 18236), (644, 18269), (646, 18272), (653, 18296), (665, 18365), (672, 18401), (673, 18404), (674, 18407), (677, 18422), (689, 18470), (697, 18506), (698, 18509), (717, 18572), (747, 18704), (756,

18770), (767, 18812), (775, 18851), (787, 18896), (803, 18965), (806, 18986), (818, 19031), (826, 19094), (832, 19133), (833, 19148), (842, 19199), (847, 19211),

Gene: Elfy_14 Start: 8586, Stop: 11948, Start Num: 38

Candidate Starts for Elfy_14:

(Start: 38 @8586 has 1 MA's), (49, 8637), (57, 8679), (64, 8721), (71, 8760), (92, 8853), (97, 8883), (129, 9030), (139, 9060), (150, 9111), (193, 9273), (204, 9318), (205, 9321), (210, 9342), (225, 9387), (233, 9432), (277, 9498), (295, 9543), (316, 9606), (321, 9615), (325, 9630), (341, 9696), (343, 9708), (345, 9717), (350, 9738), (357, 9756), (368, 9807), (371, 9816), (378, 9843), (380, 9849), (390, 9885), (411, 9960), (427, 10017), (436, 10050), (444, 10074), (447, 10083), (455, 10116), (472, 10182), (501, 10212), (503, 10215), (517, 10236), (524, 10281), (539, 10341), (601, 10626), (625, 10713), (630, 10731), (669, 10905), (671, 10908), (686, 10962), (732, 11145), (739, 11178), (744, 11193), (757, 11265), (769, 11313), (782, 11370), (798, 11439), (816, 11520), (817, 11523), (823, 11568), (839, 11679), (861, 11805), (870, 11874), (872, 11883),

Gene: G4_16 Start: 9822, Stop: 13916, Start Num: 25

Candidate Starts for G4_16:

(12, 9708), (Start: 25 @9822 has 4 MA's), (31, 9849), (32, 9855), (37, 9888), (44, 9912), (54, 9978), (75, 10086), (79, 10107), (89, 10158), (95, 10191), (115, 10308), (117, 10320), (121, 10332), (122, 10338), (131, 10383), (134, 10392), (135, 10395), (144, 10437), (155, 10494), (176, 10602), (186, 10632), (219, 10758), (228, 10797), (238, 10851), (239, 10857), (243, 10869), (249, 10884), (258, 10947), (260, 10956), (261, 10959), (265, 10977), (268, 10998), (278, 11034), (287, 11061), (289, 11073), (305, 11145), (311, 11172), (321, 11199), (329, 11229), (342, 11286), (352, 11328), (359, 11346), (370, 11397), (378, 11427), (382, 11442), (398, 11493), (406, 11526), (440, 11661), (442, 11670), (446, 11679), (451, 11691), (474, 11799), (479, 11817), (491, 11877), (493, 11886), (497, 11907), (499, 11910), (503, 11919), (508, 11949), (520, 12009), (521, 12015), (530, 12063), (534, 12075), (535, 12081), (544, 12114), (545, 12117), (547, 12132), (553, 12165), (555, 12174), (558, 12189), (565, 12213), (570, 12234), (574, 12255), (579, 12273), (582, 12279), (586, 12291), (588, 12303), (590, 12324), (591, 12333), (602, 12387), (604, 12396), (607, 12408), (609, 12411), (613, 12420), (626, 12474), (633, 12498), (635, 12510), (638, 12522), (641, 12528), (644, 12540), (646, 12543), (649, 12555), (652, 12564), (658, 12588), (662, 12618), (679, 12699), (681, 12702), (687, 12732), (688, 12735), (709, 12810), (712, 12822), (715, 12831), (718, 12843), (719, 12846), (748, 13002), (760, 13056), (765, 13074), (785, 13170), (791, 13200), (811, 13284), (824, 13368), (833, 13434), (840, 13482), (841, 13485), (853, 13542), (858, 13581), (873, 13698), (880, 13764), (887, 13824), (889, 13836), (891, 13851), (894, 13881),

Gene: Henococcus_25 Start: 16181, Stop: 20278, Start Num: 17

Candidate Starts for Henococcus_25:

(Start: 17 @16181 has 11 MA's), (26, 16247), (Start: 38 @16313 has 1 MA's), (40, 16319), (55, 16397), (57, 16403), (76, 16505), (93, 16598), (97, 16616), (110, 16688), (113, 16712), (114, 16715), (116, 16724), (119, 16736), (134, 16805), (136, 16811), (145, 16862), (171, 17003), (172, 17006), (191, 17060), (200, 17093), (206, 17123), (207, 17126), (233, 17234), (257, 17333), (260, 17345), (269, 17378), (281, 17411), (296, 17477), (325, 17585), (326, 17588), (345, 17666), (347, 17672), (365, 17741), (380, 17798), (384, 17813), (394, 17840), (404, 17870), (423, 17948), (439, 18014), (445, 18032), (454, 18065), (458, 18080), (459, 18083), (468, 18128), (506, 18296), (509, 18311), (538, 18446), (563, 18557), (568, 18578), (588, 18656), (596, 18719), (599, 18734), (616, 18785), (619, 18803), (637, 18878), (651, 18923), (684, 19073), (690, 19103), (714, 19184), (728, 19247), (736, 19289), (741, 19304), (758, 19397), (763, 19415), (792, 19571), (800, 19598), (807, 19634), (821, 19703), (859, 19943), (864, 19988), (870, 20042), (877, 20093), (879, 20120), (882, 20150), (883, 20156), (892, 20213), (896, 20249),

Gene: HumptyDumpty_22 Start: 15721, Stop: 19263, Start Num: 13

Candidate Starts for HumptyDumpty_22:

(Start: 13 @15721 has 12 MA's), (Start: 14 @15727 has 7 MA's), (18, 15748), (19, 15751), (32, 15832), (40, 15877), (48, 15910), (50, 15928), (56, 15961), (63, 15991), (65, 16018), (68, 16030), (91, 16147), (95, 16171), (105, 16222), (106, 16225), (124, 16330), (127, 16342), (143, 16417), (149, 16447), (153, 16468), (161, 16510), (188, 16618), (197, 16648), (207, 16693), (209, 16705), (223, 16750), (225, 16759), (234, 16819), (248, 16858), (288, 17038), (290, 17050), (291, 17059), (299, 17092), (301, 17098), (302, 17101), (315, 17152), (317, 17158), (320, 17164), (327, 17188), (333, 17215), (337, 17230), (340, 17242), (360, 17323), (361, 17326), (366, 17347), (370, 17365), (371, 17368), (377, 17389), (383, 17413), (389, 17434), (392, 17443), (393, 17446), (405, 17485), (409, 17509), (420, 17548), (424, 17563), (437, 17620), (445, 17644), (448, 17653), (450, 17659), (460, 17695), (471, 17743), (473, 17752), (482, 17794), (485, 17806), (495, 17863), (502, 17881), (505, 17896), (507, 17902), (550, 17998), (554, 18025), (559, 18046), (576, 18115), (583, 18136), (588, 18157), (611, 18235), (644, 18268), (646, 18271), (653, 18295), (665, 18364), (672, 18400), (673, 18403), (674, 18406), (677, 18421), (689, 18469), (697, 18505), (698, 18508), (717, 18571), (747, 18703), (756, 18769), (767, 18811), (775, 18850), (787, 18895), (803, 18964), (806, 18985), (818, 19030), (826, 19093), (832, 19132), (833, 19147), (842, 19198), (847, 19210),

Gene: Intolerant_24 Start: 16181, Stop: 20281, Start Num: 17

Candidate Starts for Intolerant_24:

(Start: 17 @16181 has 11 MA's), (26, 16247), (Start: 38 @16313 has 1 MA's), (57, 16403), (70, 16475), (76, 16505), (97, 16616), (109, 16679), (110, 16688), (113, 16712), (116, 16724), (119, 16736), (134, 16805), (138, 16817), (141, 16835), (145, 16862), (148, 16871), (168, 16985), (191, 17060), (194, 17069), (207, 17126), (225, 17189), (250, 17285), (258, 17336), (260, 17345), (269, 17378), (281, 17411), (297, 17480), (334, 17621), (342, 17654), (356, 17702), (360, 17720), (380, 17798), (384, 17813), (404, 17870), (405, 17876), (423, 17948), (434, 17996), (439, 18014), (445, 18032), (458, 18080), (459, 18083), (468, 18128), (504, 18290), (538, 18446), (563, 18557), (568, 18578), (581, 18629), (586, 18644), (596, 18719), (624, 18818), (631, 18851), (640, 18887), (642, 18896), (683, 19073), (690, 19106), (722, 19223), (728, 19250), (758, 19400), (763, 19418), (792, 19574), (821, 19706), (859, 19946), (864, 19991), (868, 20030), (870, 20045), (877, 20096), (879, 20123), (882, 20153), (883, 20159), (887, 20183), (892, 20216), (896, 20252),

Gene: JaNo_22 Start: 15727, Stop: 19263, Start Num: 14

Candidate Starts for JaNo_22:

(Start: 13 @15721 has 12 MA's), (Start: 14 @15727 has 7 MA's), (18, 15748), (19, 15751), (32, 15832), (40, 15877), (48, 15910), (50, 15928), (56, 15961), (63, 15991), (65, 16018), (68, 16030), (91, 16147), (95, 16171), (105, 16222), (106, 16225), (124, 16330), (127, 16342), (143, 16417), (149, 16447), (153, 16468), (161, 16510), (188, 16618), (197, 16648), (207, 16693), (209, 16705), (223, 16750), (225, 16759), (234, 16819), (248, 16858), (288, 17038), (290, 17050), (291, 17059), (299, 17092), (301, 17098), (302, 17101), (315, 17152), (317, 17158), (320, 17164), (327, 17188), (333, 17215), (337, 17230), (340, 17242), (360, 17323), (361, 17326), (366, 17347), (370, 17365), (371, 17368), (377, 17389), (383, 17413), (389, 17434), (392, 17443), (393, 17446), (405, 17485), (409, 17509), (420, 17548), (424, 17563), (437, 17620), (445, 17644), (448, 17653), (450, 17659), (460, 17695), (471, 17743), (473, 17752), (482, 17794), (485, 17806), (495, 17863), (502, 17881), (505, 17896), (507, 17902), (550, 17998), (554, 18025), (559, 18046), (576, 18115), (583, 18136), (588, 18157), (611, 18235), (644, 18268), (646, 18271), (653, 18295), (665, 18364), (672, 18400), (673, 18403), (674, 18406), (677, 18421), (689, 18469), (697, 18505), (698, 18508), (717, 18571), (747, 18703), (756, 18769), (767, 18811), (775, 18850), (787, 18895), (803, 18964), (806, 18985), (818, 19030), (826, 19093), (832, 19132), (833, 19147), (842, 19198), (847, 19210),

Gene: JackieB_24 Start: 16036, Stop: 20133, Start Num: 17

Candidate Starts for JackieB_24:

(Start: 17 @16036 has 11 MA's), (26, 16102), (Start: 38 @16168 has 1 MA's), (57, 16258), (76, 16360), (93, 16453), (97, 16471), (110, 16543), (113, 16567), (114, 16570), (116, 16579), (119, 16591), (134, 16660), (136, 16666), (145, 16717), (171, 16858), (172, 16861), (191, 16915), (200, 16948), (206,

16978), (207, 16981), (233, 17089), (257, 17188), (260, 17200), (269, 17233), (281, 17266), (296, 17332), (325, 17440), (345, 17521), (347, 17527), (365, 17596), (380, 17653), (384, 17668), (394, 17695), (404, 17725), (423, 17803), (439, 17869), (445, 17887), (454, 17920), (459, 17938), (468, 17983), (506, 18151), (509, 18166), (563, 18412), (568, 18433), (588, 18511), (596, 18574), (599, 18589), (616, 18640), (619, 18658), (637, 18733), (651, 18778), (684, 18928), (690, 18958), (714, 19039), (728, 19102), (736, 19144), (741, 19159), (758, 19252), (763, 19270), (792, 19426), (800, 19453), (807, 19489), (821, 19558), (859, 19798), (864, 19843), (870, 19897), (877, 19948), (879, 19975), (882, 20005), (883, 20011), (892, 20068), (896, 20104),

Gene: JayCookie_22 Start: 15730, Stop: 19266, Start Num: 14

Candidate Starts for JayCookie_22:

(Start: 13 @15724 has 12 MA's), (Start: 14 @15730 has 7 MA's), (18, 15751), (19, 15754), (32, 15835), (40, 15880), (48, 15913), (50, 15931), (56, 15964), (63, 15994), (65, 16021), (68, 16033), (91, 16150), (95, 16174), (105, 16225), (106, 16228), (124, 16333), (127, 16345), (143, 16420), (149, 16450), (153, 16471), (161, 16513), (188, 16621), (197, 16651), (207, 16696), (209, 16708), (223, 16753), (225, 16762), (234, 16822), (248, 16861), (288, 17041), (290, 17053), (291, 17062), (299, 17095), (301, 17101), (302, 17104), (315, 17155), (317, 17161), (320, 17167), (327, 17191), (333, 17218), (337, 17233), (340, 17245), (360, 17326), (361, 17329), (366, 17350), (370, 17368), (371, 17371), (377, 17392), (383, 17416), (389, 17437), (392, 17446), (393, 17449), (405, 17488), (409, 17512), (420, 17551), (424, 17566), (437, 17623), (445, 17647), (448, 17656), (450, 17662), (460, 17698), (471, 17746), (473, 17755), (482, 17797), (485, 17809), (495, 17866), (502, 17884), (505, 17899), (507, 17905), (550, 18001), (554, 18028), (559, 18049), (576, 18118), (583, 18139), (588, 18160), (611, 18238), (644, 18271), (646, 18274), (653, 18298), (665, 18367), (672, 18403), (673, 18406), (674, 18409), (677, 18424), (689, 18472), (697, 18508), (698, 18511), (717, 18574), (747, 18706), (756, 18772), (767, 18814), (775, 18853), (787, 18898), (803, 18967), (806, 18988), (818, 19033), (826, 19096), (832, 19135), (833, 19150), (842, 19201), (847, 19213),

Gene: Jflix2_20 Start: 14680, Stop: 19173, Start Num: 7

Candidate Starts for Jflix2_20:

(Start: 7 @14680 has 5 MA's), (8, 14761), (9, 14779), (11, 14884), (31, 15043), (36, 15079), (51, 15157), (53, 15169), (69, 15256), (76, 15289), (82, 15319), (83, 15322), (87, 15343), (104, 15433), (110, 15472), (120, 15526), (123, 15538), (130, 15577), (137, 15601), (138, 15604), (142, 15634), (158, 15715), (170, 15787), (173, 15796), (190, 15844), (192, 15853), (196, 15865), (200, 15883), (203, 15898), (219, 15961), (221, 15967), (233, 16027), (250, 16084), (252, 16090), (257, 16132), (258, 16135), (286, 16234), (288, 16240), (290, 16246), (296, 16273), (299, 16294), (323, 16378), (325, 16381), (336, 16426), (356, 16498), (359, 16507), (361, 16519), (370, 16558), (410, 16693), (413, 16705), (434, 16789), (489, 17014), (511, 17110), (568, 17365), (631, 17635), (635, 17647), (654, 17689), (656, 17701), (662, 17737), (668, 17776), (705, 17920), (710, 17935), (718, 17965), (725, 17992), (730, 18022), (737, 18055), (782, 18220), (829, 18427), (833, 18472), (844, 18529), (851, 18559), (856, 18598), (874, 18748), (881, 18829), (888, 18874), (891, 18892), (895, 18928), (904, 19027), (905, 19045), (907, 19063), (908, 19069), (910, 19141), (911, 19144),

Gene: KBurrousTX_22 Start: 15522, Stop: 19298, Start Num: 13

Candidate Starts for KBurrousTX_22:

(Start: 13 @15522 has 12 MA's), (Start: 14 @15528 has 7 MA's), (18, 15549), (Start: 25 @15600 has 4 MA's), (37, 15666), (40, 15678), (Start: 43 @15687 has 1 MA's), (48, 15711), (50, 15729), (56, 15762), (68, 15831), (88, 15930), (90, 15942), (91, 15948), (103, 16011), (106, 16026), (108, 16038), (124, 16131), (127, 16143), (138, 16185), (143, 16218), (149, 16248), (153, 16269), (161, 16311), (163, 16332), (167, 16347), (181, 16407), (207, 16494), (209, 16506), (223, 16551), (225, 16560), (229, 16581), (234, 16620), (272, 16785), (280, 16812), (290, 16851), (300, 16896), (302, 16902), (304, 16914), (322, 16977), (333, 17016), (342, 17052), (360, 17124), (361, 17127), (366, 17148), (370, 17166), (389, 17235), (396, 17256), (399, 17262), (405, 17286), (409, 17310), (435, 17415), (437, 17421), (452, 17463), (461, 17508), (471, 17550), (473, 17559), (478, 17580), (485, 17613), (490,

17643), (495, 17670), (498, 17679), (509, 17721), (513, 17733), (515, 17745), (516, 17751), (518, 17757), (525, 17796), (526, 17802), (529, 17820), (535, 17841), (538, 17853), (550, 17904), (576, 18021), (583, 18042), (590, 18084), (596, 18129), (608, 18171), (610, 18174), (611, 18177), (622, 18219), (639, 18291), (643, 18306), (646, 18312), (666, 18414), (673, 18444), (674, 18447), (689, 18510), (697, 18546), (698, 18549), (716, 18606), (730, 18669), (747, 18744), (754, 18789), (775, 18891), (787, 18933), (803, 19002), (806, 19023), (818, 19068), (827, 19140), (835, 19200), (847, 19245),

Gene: Kabreeze_22 Start: 15721, Stop: 19263, Start Num: 13

Candidate Starts for Kabreeze_22:

(Start: 13 @15721 has 12 MA's), (Start: 14 @15727 has 7 MA's), (18, 15748), (19, 15751), (32, 15832), (40, 15877), (48, 15910), (50, 15928), (56, 15961), (63, 15991), (65, 16018), (68, 16030), (91, 16147), (95, 16171), (105, 16222), (106, 16225), (124, 16330), (127, 16342), (143, 16417), (149, 16447), (153, 16468), (161, 16510), (188, 16618), (197, 16648), (207, 16693), (209, 16705), (223, 16750), (225, 16759), (234, 16819), (248, 16858), (288, 17038), (290, 17050), (291, 17059), (299, 17092), (301, 17098), (302, 17101), (315, 17152), (317, 17158), (320, 17164), (327, 17188), (333, 17215), (337, 17230), (340, 17242), (360, 17323), (361, 17326), (366, 17347), (370, 17365), (371, 17368), (377, 17389), (383, 17413), (389, 17434), (392, 17443), (393, 17446), (405, 17485), (409, 17509), (420, 17548), (424, 17563), (437, 17620), (445, 17644), (448, 17653), (450, 17659), (460, 17695), (471, 17743), (473, 17752), (482, 17794), (485, 17806), (495, 17863), (502, 17881), (505, 17896), (507, 17902), (550, 17998), (554, 18025), (559, 18046), (576, 18115), (583, 18136), (588, 18157), (611, 18235), (644, 18268), (646, 18271), (653, 18295), (665, 18364), (672, 18400), (673, 18403), (674, 18406), (677, 18421), (689, 18469), (697, 18505), (698, 18508), (717, 18571), (747, 18703), (756, 18769), (767, 18811), (775, 18850), (787, 18895), (803, 18964), (806, 18985), (818, 19030), (826, 19093), (832, 19132), (833, 19147), (842, 19198), (847, 19210),

Gene: LazerLemon_25 Start: 16594, Stop: 20694, Start Num: 17

Candidate Starts for LazerLemon_25:

(Start: 17 @16594 has 11 MA's), (Start: 38 @16726 has 1 MA's), (55, 16810), (57, 16816), (70, 16888), (76, 16918), (83, 16951), (93, 17011), (97, 17029), (109, 17092), (110, 17101), (113, 17125), (116, 17137), (119, 17149), (134, 17218), (136, 17224), (138, 17230), (191, 17473), (207, 17539), (211, 17557), (225, 17602), (233, 17647), (257, 17746), (258, 17749), (260, 17758), (269, 17791), (275, 17812), (281, 17824), (319, 17980), (334, 18034), (342, 18067), (356, 18115), (360, 18133), (370, 18175), (380, 18211), (384, 18226), (404, 18283), (405, 18289), (423, 18361), (439, 18427), (445, 18445), (458, 18493), (459, 18496), (466, 18526), (468, 18541), (509, 18724), (528, 18820), (563, 18970), (568, 18991), (588, 19069), (596, 19132), (599, 19147), (631, 19264), (637, 19291), (651, 19336), (684, 19486), (690, 19516), (728, 19660), (736, 19702), (758, 19810), (763, 19828), (785, 19948), (792, 19984), (807, 20047), (814, 20080), (821, 20119), (833, 20218), (836, 20245), (844, 20275), (864, 20404), (866, 20437), (868, 20443), (870, 20458), (871, 20461), (877, 20509), (879, 20536), (882, 20566), (883, 20572), (887, 20596), (892, 20629), (896, 20665),

Gene: Linus_22 Start: 15727, Stop: 19263, Start Num: 14

Candidate Starts for Linus_22:

(Start: 13 @15721 has 12 MA's), (Start: 14 @15727 has 7 MA's), (18, 15748), (19, 15751), (32, 15832), (40, 15877), (48, 15910), (50, 15928), (56, 15961), (63, 15991), (65, 16018), (68, 16030), (91, 16147), (95, 16171), (105, 16222), (106, 16225), (124, 16330), (127, 16342), (143, 16417), (149, 16447), (153, 16468), (161, 16510), (188, 16618), (197, 16648), (207, 16693), (209, 16705), (223, 16750), (225, 16759), (234, 16819), (248, 16858), (288, 17038), (290, 17050), (291, 17059), (299, 17092), (301, 17098), (302, 17101), (315, 17152), (317, 17158), (320, 17164), (327, 17188), (333, 17215), (337, 17230), (340, 17242), (360, 17323), (361, 17326), (366, 17347), (370, 17365), (371, 17368), (377, 17389), (383, 17413), (389, 17434), (392, 17443), (393, 17446), (405, 17485), (409, 17509), (420, 17548), (424, 17563), (437, 17620), (445, 17644), (448, 17653), (450, 17659), (460, 17695), (471, 17743), (473, 17752), (482, 17794), (485, 17806), (495, 17863), (502, 17881), (505, 17896), (507, 17902),

17902), (550, 17998), (554, 18025), (559, 18046), (576, 18115), (583, 18136), (588, 18157), (611, 18235), (644, 18268), (646, 18271), (653, 18295), (665, 18364), (672, 18400), (673, 18403), (674, 18406), (677, 18421), (689, 18469), (697, 18505), (698, 18508), (717, 18571), (747, 18703), (756, 18769), (767, 18811), (775, 18850), (787, 18895), (803, 18964), (806, 18985), (818, 19030), (826, 19093), (832, 19132), (833, 19147), (842, 19198), (847, 19210),

Gene: Lymara_22 Start: 15725, Stop: 19261, Start Num: 14

Candidate Starts for Lymara_22:

(Start: 13 @15719 has 12 MA's), (Start: 14 @15725 has 7 MA's), (18, 15746), (19, 15749), (32, 15830), (40, 15875), (48, 15908), (50, 15926), (53, 15950), (56, 15959), (63, 15989), (65, 16016), (68, 16028), (88, 16127), (91, 16145), (95, 16169), (105, 16220), (106, 16223), (124, 16328), (127, 16340), (143, 16415), (149, 16445), (153, 16466), (161, 16508), (167, 16544), (180, 16601), (188, 16616), (197, 16646), (207, 16691), (209, 16703), (223, 16748), (234, 16817), (248, 16856), (258, 16922), (273, 16988), (290, 17048), (291, 17057), (299, 17090), (302, 17099), (315, 17150), (320, 17162), (333, 17213), (337, 17228), (340, 17240), (360, 17321), (366, 17345), (370, 17363), (371, 17366), (376, 17384), (377, 17387), (379, 17396), (381, 17405), (383, 17411), (385, 17417), (389, 17432), (392, 17441), (393, 17444), (405, 17483), (420, 17546), (424, 17561), (437, 17618), (439, 17624), (448, 17651), (450, 17657), (460, 17693), (471, 17741), (478, 17771), (482, 17792), (495, 17861), (502, 17879), (505, 17894), (538, 17945), (550, 17996), (554, 18023), (576, 18113), (578, 18119), (583, 18134), (590, 18176), (611, 18233), (644, 18266), (646, 18269), (653, 18293), (672, 18398), (673, 18401), (674, 18404), (689, 18467), (697, 18503), (717, 18569), (756, 18767), (761, 18779), (774, 18845), (775, 18848), (776, 18854), (787, 18893), (793, 18923), (803, 18962), (806, 18983), (818, 19028), (826, 19091), (833, 19145), (842, 19196), (847, 19208),

Gene: Madraxi_25 Start: 17119, Stop: 21537, Start Num: 7

Candidate Starts for Madraxi_25:

(Start: 7 @17119 has 5 MA's), (8, 17200), (9, 17218), (11, 17323), (15, 17377), (20, 17404), (21, 17410), (22, 17437), (26, 17458), (31, 17482), (36, 17518), (39, 17527), (51, 17596), (53, 17608), (64, 17662), (76, 17728), (81, 17752), (82, 17758), (85, 17773), (104, 17872), (110, 17911), (120, 17965), (123, 17977), (137, 18040), (138, 18043), (142, 18073), (158, 18154), (170, 18226), (173, 18235), (183, 18268), (190, 18283), (192, 18292), (196, 18304), (200, 18322), (203, 18337), (219, 18400), (221, 18406), (233, 18466), (250, 18523), (252, 18529), (257, 18571), (276, 18643), (279, 18649), (283, 18661), (286, 18673), (296, 18712), (299, 18733), (300, 18736), (307, 18769), (323, 18817), (336, 18865), (356, 18937), (359, 18946), (361, 18958), (370, 18997), (384, 19045), (390, 19063), (409, 19129), (419, 19162), (421, 19174), (434, 19228), (548, 19717), (568, 19804), (623, 20038), (629, 20065), (656, 20134), (690, 20263), (691, 20266), (725, 20374), (731, 20398), (801, 20644), (808, 20671), (813, 20695), (829, 20791), (864, 21034), (874, 21112), (881, 21193), (888, 21238), (891, 21256), (895, 21292), (900, 21352), (904, 21391), (905, 21409), (907, 21427), (908, 21433), (910, 21505), (911, 21508),

Gene: Marky_25 Start: 16066, Stop: 20151, Start Num: 16

Candidate Starts for Marky_25:

(Start: 16 @16066 has 1 MA's), (45, 16216), (70, 16357), (72, 16363), (83, 16420), (90, 16456), (91, 16462), (110, 16561), (111, 16570), (113, 16585), (119, 16609), (134, 16678), (138, 16690), (140, 16702), (143, 16723), (146, 16738), (191, 16933), (194, 16942), (200, 16966), (207, 16999), (233, 17107), (241, 17134), (257, 17206), (258, 17209), (269, 17251), (281, 17284), (296, 17350), (319, 17440), (325, 17458), (326, 17461), (343, 17536), (356, 17575), (368, 17629), (379, 17668), (395, 17716), (404, 17743), (405, 17749), (414, 17788), (423, 17821), (439, 17887), (458, 17953), (459, 17956), (466, 17986), (468, 18001), (509, 18184), (536, 18310), (563, 18430), (568, 18451), (588, 18529), (596, 18592), (599, 18607), (624, 18685), (637, 18745), (640, 18754), (684, 18937), (690, 18967), (696, 18991), (708, 19027), (737, 19156), (751, 19234), (758, 19267), (763, 19285), (764, 19291), (785, 19405), (792, 19441), (807, 19504), (829, 19630), (833, 19675), (859, 19816), (864, 19861), (867, 19897), (870, 19915), (875, 19942), (877, 19966), (883, 20029), (884, 20035), (885,

20038), (886, 20050), (892, 20086), (893, 20089),

Gene: Microdon_24 Start: 16006, Stop: 20106, Start Num: 17

Candidate Starts for Microdon_24:

(Start: 17 @16006 has 11 MA's), (26, 16072), (Start: 38 @16138 has 1 MA's), (45, 16159), (57, 16228), (70, 16300), (73, 16312), (76, 16330), (97, 16441), (109, 16504), (113, 16537), (116, 16549), (119, 16561), (134, 16630), (138, 16642), (141, 16660), (145, 16687), (148, 16696), (168, 16810), (191, 16885), (207, 16951), (225, 17014), (233, 17059), (250, 17110), (258, 17161), (260, 17170), (269, 17203), (275, 17224), (281, 17236), (297, 17305), (334, 17446), (342, 17479), (356, 17527), (360, 17545), (380, 17623), (384, 17638), (404, 17695), (405, 17701), (423, 17773), (434, 17821), (439, 17839), (445, 17857), (458, 17905), (459, 17908), (468, 17953), (563, 18382), (568, 18403), (581, 18454), (586, 18469), (596, 18544), (631, 18676), (637, 18703), (651, 18748), (690, 18928), (714, 19009), (722, 19045), (741, 19129), (758, 19222), (763, 19240), (821, 19531), (864, 19816), (870, 19870), (877, 19921), (879, 19948), (882, 19978), (883, 19984), (887, 20008), (892, 20041), (896, 20077),

Gene: Mordred_22 Start: 15727, Stop: 19263, Start Num: 14

Candidate Starts for Mordred_22:

(Start: 13 @15721 has 12 MA's), (Start: 14 @15727 has 7 MA's), (18, 15748), (19, 15751), (32, 15832), (40, 15877), (48, 15910), (50, 15928), (56, 15961), (63, 15991), (65, 16018), (68, 16030), (91, 16147), (95, 16171), (105, 16222), (106, 16225), (124, 16330), (127, 16342), (143, 16417), (149, 16447), (153, 16468), (161, 16510), (188, 16618), (197, 16648), (207, 16693), (209, 16705), (223, 16750), (225, 16759), (234, 16819), (248, 16858), (288, 17038), (290, 17050), (291, 17059), (299, 17092), (301, 17098), (302, 17101), (315, 17152), (317, 17158), (320, 17164), (327, 17188), (333, 17215), (337, 17230), (340, 17242), (360, 17323), (361, 17326), (366, 17347), (370, 17365), (371, 17368), (377, 17389), (383, 17413), (389, 17434), (392, 17443), (393, 17446), (405, 17485), (409, 17509), (420, 17548), (424, 17563), (437, 17620), (445, 17644), (448, 17653), (450, 17659), (460, 17695), (471, 17743), (473, 17752), (482, 17794), (485, 17806), (495, 17863), (502, 17881), (505, 17896), (507, 17902), (550, 17998), (554, 18025), (559, 18046), (576, 18115), (583, 18136), (588, 18157), (611, 18235), (644, 18268), (646, 18271), (653, 18295), (665, 18364), (672, 18400), (673, 18403), (674, 18406), (677, 18421), (689, 18469), (697, 18505), (698, 18508), (717, 18571), (747, 18703), (756, 18769), (767, 18811), (775, 18850), (787, 18895), (803, 18964), (806, 18985), (818, 19030), (826, 19093), (832, 19132), (833, 19147), (842, 19198), (847, 19210),

Gene: MoyaNatalis_22 Start: 15730, Stop: 19266, Start Num: 14

Candidate Starts for MoyaNatalis_22:

(Start: 13 @15724 has 12 MA's), (Start: 14 @15730 has 7 MA's), (18, 15751), (19, 15754), (32, 15835), (40, 15880), (48, 15913), (50, 15931), (56, 15964), (63, 15994), (65, 16021), (68, 16033), (91, 16150), (95, 16174), (105, 16225), (106, 16228), (124, 16333), (127, 16345), (143, 16420), (149, 16450), (153, 16471), (161, 16513), (188, 16621), (197, 16651), (207, 16696), (209, 16708), (223, 16753), (225, 16762), (234, 16822), (248, 16861), (288, 17041), (290, 17053), (291, 17062), (299, 17095), (301, 17101), (302, 17104), (315, 17155), (317, 17161), (320, 17167), (327, 17191), (333, 17218), (337, 17233), (340, 17245), (360, 17326), (361, 17329), (366, 17350), (370, 17368), (371, 17371), (377, 17392), (383, 17416), (389, 17437), (392, 17446), (393, 17449), (405, 17488), (409, 17512), (420, 17551), (424, 17566), (437, 17623), (445, 17647), (448, 17656), (450, 17662), (460, 17698), (471, 17746), (473, 17755), (482, 17797), (485, 17809), (495, 17866), (502, 17884), (505, 17899), (507, 17905), (550, 18001), (554, 18028), (559, 18049), (576, 18118), (583, 18139), (588, 18160), (611, 18238), (644, 18271), (646, 18274), (653, 18298), (665, 18367), (672, 18403), (673, 18406), (674, 18409), (677, 18424), (689, 18472), (697, 18508), (698, 18511), (717, 18574), (747, 18706), (756, 18772), (761, 18784), (775, 18853), (787, 18898), (803, 18967), (806, 18988), (818, 19033), (826, 19096), (832, 19135), (833, 19150), (842, 19201), (847, 19213),

Gene: Nesbitt_15 Start: 9565, Stop: 12702, Start Num: 30

Candidate Starts for Nesbitt_15:

(Start: 30 @9565 has 2 MA's), (47, 9649), (97, 9877), (98, 9880), (118, 9985), (120, 9994), (125, 10018), (126, 10024), (132, 10048), (172, 10255), (184, 10291), (187, 10297), (198, 10330), (202, 10351), (204, 10360), (217, 10405), (226, 10438), (231, 10459), (250, 10528), (256, 10567), (278, 10648), (293, 10687), (330, 10786), (339, 10825), (342, 10837), (347, 10861), (348, 10867), (363, 10921), (364, 10924), (372, 10960), (380, 10987), (392, 11023), (403, 11056), (404, 11059), (407, 11074), (423, 11116), (427, 11140), (433, 11161), (435, 11170), (438, 11179), (445, 11200), (448, 11209), (462, 11269), (466, 11281), (468, 11296), (495, 11428), (500, 11440), (523, 11536), (524, 11548), (532, 11584), (536, 11596), (563, 11695), (571, 11731), (580, 11767), (585, 11782), (605, 11863), (620, 11896), (696, 12160), (704, 12184), (729, 12280), (746, 12367), (765, 12463), (772, 12511), (795, 12601), (802, 12631), (810, 12667), (811, 12670),

Gene: PrincessTrina_22 Start: 15724, Stop: 19266, Start Num: 13

Candidate Starts for PrincessTrina_22:

(Start: 13 @15724 has 12 MA's), (Start: 14 @15730 has 7 MA's), (18, 15751), (19, 15754), (32, 15835), (40, 15880), (48, 15913), (50, 15931), (56, 15964), (63, 15994), (65, 16021), (68, 16033), (91, 16150), (95, 16174), (105, 16225), (106, 16228), (124, 16333), (127, 16345), (143, 16420), (149, 16450), (153, 16471), (161, 16513), (188, 16621), (197, 16651), (207, 16696), (209, 16708), (223, 16753), (225, 16762), (234, 16822), (248, 16861), (288, 17041), (290, 17053), (291, 17062), (299, 17095), (301, 17101), (302, 17104), (315, 17155), (317, 17161), (320, 17167), (327, 17191), (333, 17218), (337, 17233), (340, 17245), (360, 17326), (361, 17329), (366, 17350), (370, 17368), (371, 17371), (377, 17392), (383, 17416), (389, 17437), (392, 17446), (393, 17449), (405, 17488), (409, 17512), (420, 17551), (424, 17566), (437, 17623), (445, 17647), (448, 17656), (450, 17662), (460, 17698), (471, 17746), (473, 17755), (482, 17797), (485, 17809), (495, 17866), (502, 17884), (505, 17899), (507, 17905), (550, 18001), (554, 18028), (559, 18049), (576, 18118), (583, 18139), (588, 18160), (611, 18238), (644, 18271), (646, 18274), (653, 18298), (665, 18367), (672, 18403), (673, 18406), (674, 18409), (677, 18424), (689, 18472), (697, 18508), (698, 18511), (717, 18574), (747, 18706), (756, 18772), (767, 18814), (775, 18853), (787, 18898), (803, 18967), (806, 18988), (818, 19033), (826, 19096), (832, 19135), (833, 19150), (842, 19201), (847, 19213),

Gene: REQ1_78 Start: 38584, Stop: 42927, Start Num: 7

Candidate Starts for REQ1_78:

(3, 38533), (5, 38560), (Start: 7 @38584 has 5 MA's), (8, 38665), (9, 38683), (11, 38788), (20, 38869), (21, 38875), (22, 38902), (31, 38947), (36, 38983), (53, 39073), (64, 39127), (69, 39160), (76, 39193), (81, 39217), (82, 39223), (100, 39316), (104, 39337), (110, 39376), (120, 39430), (123, 39442), (137, 39505), (138, 39508), (142, 39538), (170, 39691), (179, 39724), (190, 39748), (196, 39769), (203, 39802), (218, 39862), (221, 39871), (233, 39931), (252, 39994), (257, 40036), (260, 40048), (286, 40138), (288, 40144), (296, 40177), (299, 40198), (307, 40234), (323, 40282), (336, 40330), (356, 40402), (359, 40411), (361, 40423), (370, 40462), (386, 40519), (475, 40852), (480, 40876), (489, 40918), (535, 41125), (548, 41182), (568, 41269), (631, 41539), (656, 41599), (680, 41689), (690, 41728), (691, 41731), (725, 41839), (731, 41863), (801, 42109), (829, 42259), (844, 42361), (864, 42502), (874, 42580), (875, 42583), (898, 42706), (904, 42781), (905, 42799), (907, 42817), (910, 42895), (911, 42898),

Gene: RegnumDei_20 Start: 13238, Stop: 17680, Start Num: 7

Candidate Starts for RegnumDei_20:

(Start: 7 @13238 has 5 MA's), (11, 13442), (26, 13574), (35, 13628), (41, 13652), (52, 13718), (59, 13745), (61, 13754), (70, 13814), (76, 13844), (85, 13889), (101, 13973), (104, 13988), (108, 14009), (110, 14027), (113, 14051), (118, 14072), (120, 14081), (123, 14093), (136, 14153), (138, 14159), (142, 14189), (157, 14267), (158, 14270), (160, 14276), (191, 14408), (193, 14414), (202, 14453), (205, 14465), (223, 14531), (225, 14540), (230, 14558), (236, 14603), (243, 14624), (251, 14645), (252, 14648), (253, 14663), (255, 14687), (260, 14711), (298, 14810), (312, 14867), (313, 14876), (318, 14885), (328, 14915), (338, 14960), (344, 14993), (354, 15026), (362, 15059), (387, 15158),

(390, 15164), (430, 15323), (449, 15380), (456, 15407), (463, 15437), (468, 15461), (475, 15491), (568, 15908), (586, 15974), (629, 16175), (631, 16184), (636, 16199), (659, 16259), (664, 16292), (676, 16355), (685, 16385), (721, 16520), (762, 16724), (770, 16772), (780, 16823), (781, 16826), (784, 16835), (800, 16904), (809, 16952), (821, 17021), (828, 17066), (829, 17075), (833, 17120), (864, 17318), (865, 17339), (874, 17396), (897, 17540), (904, 17618), (906, 17642), (907, 17648),

Gene: RosiePosie_22 Start: 15724, Stop: 19266, Start Num: 13

Candidate Starts for RosiePosie_22:

(Start: 13 @15724 has 12 MA's), (Start: 14 @15730 has 7 MA's), (18, 15751), (19, 15754), (32, 15835), (40, 15880), (48, 15913), (50, 15931), (56, 15964), (63, 15994), (65, 16021), (68, 16033), (91, 16150), (95, 16174), (105, 16225), (106, 16228), (124, 16333), (127, 16345), (143, 16420), (149, 16450), (153, 16471), (161, 16513), (188, 16621), (197, 16651), (207, 16696), (209, 16708), (223, 16753), (225, 16762), (234, 16822), (248, 16861), (288, 17041), (290, 17053), (291, 17062), (299, 17095), (301, 17101), (302, 17104), (315, 17155), (317, 17161), (320, 17167), (327, 17191), (333, 17218), (337, 17233), (340, 17245), (360, 17326), (361, 17329), (366, 17350), (370, 17368), (371, 17371), (377, 17392), (383, 17416), (389, 17437), (392, 17446), (393, 17449), (405, 17488), (409, 17512), (420, 17551), (424, 17566), (437, 17623), (445, 17647), (448, 17656), (450, 17662), (460, 17698), (471, 17746), (473, 17755), (482, 17797), (485, 17809), (495, 17866), (502, 17884), (505, 17899), (507, 17905), (550, 18001), (554, 18028), (559, 18049), (576, 18118), (583, 18139), (588, 18160), (611, 18238), (644, 18271), (646, 18274), (653, 18298), (665, 18367), (672, 18403), (673, 18406), (674, 18409), (677, 18424), (689, 18472), (697, 18508), (698, 18511), (717, 18574), (747, 18706), (756, 18772), (767, 18814), (775, 18853), (787, 18898), (803, 18967), (806, 18988), (818, 19033), (826, 19096), (832, 19135), (833, 19150), (842, 19201), (847, 19213),

Gene: Rowa_15 Start: 9318, Stop: 12419, Start Num: 29

Candidate Starts for Rowa_15:

(Start: 29 @9318 has 1 MA's), (Start: 34 @9351 has 1 MA's), (60, 9459), (72, 9525), (83, 9579), (97, 9657), (98, 9660), (107, 9702), (132, 9828), (133, 9831), (151, 9921), (154, 9930), (159, 9960), (162, 9984), (202, 10131), (243, 10290), (256, 10347), (262, 10374), (266, 10389), (278, 10428), (331, 10554), (346, 10620), (348, 10629), (358, 10659), (364, 10686), (367, 10704), (369, 10710), (376, 10734), (380, 10749), (392, 10785), (400, 10806), (404, 10821), (466, 10920), (472, 10941), (552, 11289), (563, 11328), (571, 11364), (580, 11400), (585, 11415), (630, 11613), (633, 11622), (648, 11664), (696, 11868), (703, 11886), (704, 11892), (711, 11916), (724, 11964), (726, 11973), (729, 11988), (734, 12012), (739, 12042), (741, 12048), (765, 12171), (766, 12186), (795, 12318),

Gene: SFuller_22 Start: 15291, Stop: 19784, Start Num: 7

Candidate Starts for SFuller_22:

(Start: 7 @15291 has 5 MA's), (8, 15372), (9, 15390), (11, 15495), (28, 15645), (31, 15654), (36, 15690), (40, 15705), (50, 15756), (53, 15780), (76, 15900), (81, 15924), (82, 15930), (83, 15933), (87, 15954), (104, 16044), (110, 16083), (120, 16137), (123, 16149), (137, 16212), (138, 16215), (142, 16245), (158, 16326), (170, 16398), (173, 16407), (190, 16455), (192, 16464), (196, 16476), (200, 16494), (203, 16509), (219, 16572), (221, 16578), (233, 16638), (250, 16695), (252, 16701), (257, 16743), (286, 16845), (288, 16851), (296, 16884), (299, 16905), (323, 16989), (325, 16992), (336, 17037), (356, 17109), (361, 17130), (370, 17169), (410, 17304), (413, 17316), (434, 17400), (489, 17625), (548, 17889), (568, 17976), (569, 17979), (631, 18246), (635, 18258), (654, 18300), (656, 18312), (662, 18348), (668, 18387), (705, 18531), (710, 18546), (718, 18576), (725, 18603), (730, 18633), (737, 18666), (782, 18831), (829, 19038), (833, 19083), (844, 19140), (851, 19170), (856, 19209), (864, 19281), (874, 19359), (875, 19362), (881, 19440), (888, 19485), (891, 19503), (895, 19539), (904, 19638), (905, 19656), (907, 19674), (908, 19680), (910, 19752), (911, 19755),

Gene: SPB78_16 Start: 10072, Stop: 13644, Start Num: 31

Candidate Starts for SPB78_16:

(31, 10072), (Start: 34 @10099 has 1 MA's), (39, 10117), (63, 10219), (66, 10246), (83, 10327), (104, 10438), (132, 10576), (136, 10591), (197, 10855), (202, 10879), (226, 10966), (240, 11029), (243, 11038), (256, 11095), (266, 11137), (270, 11155), (292, 11233), (303, 11281), (332, 11392), (340, 11425), (343, 11443), (361, 11509), (364, 11521), (368, 11542), (426, 11752), (429, 11764), (437, 11794), (441, 11806), (447, 11824), (476, 11944), (477, 11950), (482, 11977), (488, 12001), (508, 12094), (535, 12220), (560, 12331), (594, 12496), (595, 12499), (599, 12517), (615, 12565), (619, 12583), (621, 12589), (648, 12694), (677, 12823), (682, 12835), (707, 12931), (712, 12949), (720, 12982), (723, 12994), (740, 13078), (742, 13084), (752, 13147), (755, 13168), (759, 13180), (792, 13348), (797, 13363), (845, 13630),

Gene: Scavito_22 Start: 15721, Stop: 19263, Start Num: 13

Candidate Starts for Scavito_22:

(Start: 13 @15721 has 12 MA's), (Start: 14 @15727 has 7 MA's), (18, 15748), (19, 15751), (32, 15832), (40, 15877), (48, 15910), (50, 15928), (56, 15961), (63, 15991), (65, 16018), (68, 16030), (91, 16147), (95, 16171), (105, 16222), (106, 16225), (124, 16330), (127, 16342), (143, 16417), (149, 16447), (153, 16468), (161, 16510), (188, 16618), (197, 16648), (207, 16693), (209, 16705), (223, 16750), (225, 16759), (234, 16819), (248, 16858), (288, 17038), (290, 17050), (291, 17059), (299, 17092), (301, 17098), (302, 17101), (315, 17152), (317, 17158), (320, 17164), (327, 17188), (333, 17215), (337, 17230), (340, 17242), (360, 17323), (361, 17326), (366, 17347), (370, 17365), (371, 17368), (377, 17389), (383, 17413), (389, 17434), (392, 17443), (393, 17446), (405, 17485), (409, 17509), (420, 17548), (424, 17563), (437, 17620), (445, 17644), (448, 17653), (450, 17659), (460, 17695), (471, 17743), (473, 17752), (482, 17794), (485, 17806), (495, 17863), (502, 17881), (505, 17896), (507, 17902), (550, 17998), (554, 18025), (559, 18046), (576, 18115), (583, 18136), (588, 18157), (611, 18235), (644, 18268), (646, 18271), (653, 18295), (665, 18364), (672, 18400), (673, 18403), (674, 18406), (677, 18421), (689, 18469), (697, 18505), (698, 18508), (717, 18571), (747, 18703), (756, 18769), (767, 18811), (775, 18850), (787, 18895), (803, 18964), (806, 18985), (818, 19030), (826, 19093), (832, 19132), (833, 19147), (842, 19198), (847, 19210),

Gene: Shagrat_21 Start: 14283, Stop: 18716, Start Num: 7

Candidate Starts for Shagrat_21:

(1, 14097), (2, 14106), (4, 14247), (Start: 7 @14283 has 5 MA's), (10, 14391), (11, 14487), (23, 14601), (24, 14607), (31, 14643), (35, 14673), (41, 14697), (59, 14790), (70, 14859), (76, 14889), (79, 14901), (87, 14943), (101, 15018), (104, 15033), (108, 15054), (110, 15072), (112, 15084), (113, 15096), (118, 15117), (120, 15126), (123, 15138), (136, 15198), (138, 15204), (142, 15234), (157, 15312), (158, 15315), (160, 15321), (201, 15489), (202, 15498), (208, 15522), (212, 15540), (215, 15546), (220, 15567), (232, 15615), (236, 15648), (242, 15666), (246, 15675), (276, 15831), (286, 15864), (302, 15942), (311, 15984), (312, 15987), (328, 16035), (338, 16080), (344, 16113), (354, 16146), (358, 16158), (375, 16230), (376, 16233), (430, 16443), (456, 16527), (457, 16533), (472, 16599), (483, 16653), (566, 16887), (568, 16896), (586, 16962), (599, 17055), (614, 17097), (629, 17163), (636, 17187), (661, 17289), (666, 17322), (676, 17367), (710, 17493), (718, 17523), (725, 17550), (746, 17661), (828, 18099), (829, 18108), (844, 18210), (850, 18237), (864, 18351), (865, 18372), (874, 18429), (885, 18531), (897, 18573), (901, 18630), (902, 18642), (904, 18651), (906, 18675), (907, 18681),

Gene: Shambre1_17 Start: 11044, Stop: 14676, Start Num: 43

Candidate Starts for Shambre1_17:

(Start: 43 @11044 has 1 MA's), (84, 11266), (92, 11308), (97, 11338), (129, 11485), (139, 11515), (150, 11566), (165, 11638), (175, 11683), (193, 11728), (205, 11776), (213, 11806), (225, 11842), (227, 11854), (240, 11917), (246, 11932), (267, 12034), (294, 12130), (302, 12157), (322, 12223), (374, 12427), (411, 12556), (432, 12622), (470, 12766), (486, 12841), (501, 12898), (509, 12919), (531, 13024), (566, 13171), (628, 13429), (648, 13504), (655, 13528), (701, 13735), (725, 13816), (734, 13864), (745, 13918), (778, 14083), (783, 14092), (811, 14221), (813, 14242), (825, 14314), (846, 14440), (855, 14485), (860, 14518),

Gene: Shynx_25 Start: 16457, Stop: 20557, Start Num: 17

Candidate Starts for Shynx_25:

(Start: 17 @16457 has 11 MA's), (26, 16523), (Start: 38 @16589 has 1 MA's), (57, 16679), (70, 16751), (76, 16781), (97, 16892), (109, 16955), (110, 16964), (113, 16988), (116, 17000), (119, 17012), (134, 17081), (138, 17093), (141, 17111), (145, 17138), (148, 17147), (168, 17261), (191, 17336), (194, 17345), (207, 17402), (225, 17465), (250, 17561), (258, 17612), (260, 17621), (269, 17654), (281, 17687), (297, 17756), (334, 17897), (342, 17930), (356, 17978), (360, 17996), (380, 18074), (384, 18089), (404, 18146), (405, 18152), (423, 18224), (434, 18272), (439, 18290), (445, 18308), (458, 18356), (459, 18359), (468, 18404), (504, 18566), (538, 18722), (563, 18833), (568, 18854), (581, 18905), (586, 18920), (596, 18995), (624, 19094), (631, 19127), (640, 19163), (642, 19172), (683, 19349), (690, 19382), (722, 19499), (728, 19526), (758, 19676), (763, 19694), (792, 19850), (821, 19982), (859, 20222), (864, 20267), (868, 20306), (870, 20321), (877, 20372), (879, 20399), (882, 20429), (883, 20435), (887, 20459), (892, 20492), (896, 20528),

Gene: Spartoi_14 Start: 8472, Stop: 11996, Start Num: 34

Candidate Starts for Spartoi_14:

(Start: 34 @8472 has 1 MA's), (45, 8511), (86, 8736), (97, 8793), (128, 8952), (129, 8961), (134, 8982), (141, 9012), (156, 9099), (164, 9144), (169, 9177), (183, 9222), (205, 9300), (235, 9432), (337, 9825), (358, 9897), (388, 10011), (465, 10299), (469, 10320), (494, 10440), (496, 10458), (502, 10473), (518, 10518), (522, 10545), (532, 10566), (540, 10599), (546, 10623), (549, 10638), (551, 10653), (552, 10656), (556, 10674), (577, 10758), (593, 10848), (597, 10869), (598, 10875), (601, 10881), (608, 10908), (616, 10929), (627, 10980), (634, 11001), (645, 11037), (647, 11046), (658, 11082), (663, 11115), (675, 11175), (682, 11196), (691, 11241), (715, 11331), (733, 11409), (743, 11454), (758, 11544), (761, 11553), (771, 11586), (777, 11625), (794, 11691), (804, 11730), (819, 11799), (832, 11901), (834, 11925), (845, 11976), (848, 11991),

Gene: Stuff_25 Start: 16476, Stop: 20576, Start Num: 17

Candidate Starts for Stuff_25:

(Start: 17 @16476 has 11 MA's), (26, 16542), (Start: 38 @16608 has 1 MA's), (55, 16692), (57, 16698), (70, 16770), (76, 16800), (97, 16911), (109, 16974), (110, 16983), (113, 17007), (116, 17019), (119, 17031), (134, 17100), (138, 17112), (145, 17157), (148, 17166), (168, 17280), (191, 17355), (194, 17364), (207, 17421), (211, 17439), (225, 17484), (250, 17580), (258, 17631), (260, 17640), (269, 17673), (281, 17706), (297, 17775), (319, 17862), (334, 17916), (342, 17949), (356, 17997), (360, 18015), (380, 18093), (384, 18108), (404, 18165), (405, 18171), (423, 18243), (439, 18309), (445, 18327), (458, 18375), (459, 18378), (468, 18423), (504, 18585), (538, 18741), (563, 18852), (568, 18873), (586, 18939), (596, 19014), (624, 19113), (631, 19146), (640, 19182), (642, 19191), (657, 19242), (690, 19401), (722, 19518), (728, 19545), (741, 19602), (758, 19695), (763, 19713), (785, 19833), (792, 19869), (807, 19932), (821, 20001), (829, 20055), (859, 20241), (864, 20286), (868, 20325), (870, 20340), (877, 20391), (879, 20418), (882, 20448), (883, 20454), (887, 20478), (892, 20511), (896, 20547),

Gene: Tophat_22 Start: 15729, Stop: 19265, Start Num: 14

Candidate Starts for Tophat_22:

(Start: 13 @15723 has 12 MA's), (Start: 14 @15729 has 7 MA's), (18, 15750), (19, 15753), (32, 15834), (40, 15879), (48, 15912), (50, 15930), (56, 15963), (63, 15993), (65, 16020), (68, 16032), (91, 16149), (95, 16173), (105, 16224), (106, 16227), (124, 16332), (127, 16344), (143, 16419), (149, 16449), (153, 16470), (161, 16512), (188, 16620), (197, 16650), (207, 16695), (209, 16707), (223, 16752), (225, 16761), (234, 16821), (248, 16860), (288, 17040), (290, 17052), (291, 17061), (299, 17094), (301, 17100), (302, 17103), (315, 17154), (317, 17160), (320, 17166), (327, 17190), (333, 17217), (337, 17232), (340, 17244), (360, 17325), (361, 17328), (366, 17349), (370, 17367), (371, 17370), (377, 17391), (383, 17415), (389, 17436), (392, 17445), (393, 17448), (405, 17487), (409, 17511), (420, 17550), (424, 17565), (437, 17622), (445, 17646), (448, 17655), (450, 17661), (460, 17697), (471,

17745), (473, 17754), (482, 17796), (485, 17808), (495, 17865), (502, 17883), (505, 17898), (507, 17904), (550, 18000), (554, 18027), (559, 18048), (576, 18117), (583, 18138), (588, 18159), (611, 18237), (644, 18270), (646, 18273), (653, 18297), (665, 18366), (672, 18402), (673, 18405), (674, 18408), (677, 18423), (689, 18471), (697, 18507), (698, 18510), (717, 18573), (747, 18705), (756, 18771), (767, 18813), (775, 18852), (787, 18897), (803, 18966), (806, 18987), (818, 19032), (826, 19095), (832, 19134), (833, 19149), (842, 19200), (847, 19212),

Gene: UNTPL_25 Start: 16295, Stop: 20395, Start Num: 17

Candidate Starts for UNTPL_25:

(Start: 17 @16295 has 11 MA's), (26, 16361), (Start: 38 @16427 has 1 MA's), (55, 16511), (57, 16517), (70, 16589), (76, 16619), (93, 16712), (97, 16730), (110, 16802), (113, 16826), (116, 16838), (119, 16850), (134, 16919), (138, 16931), (168, 17099), (191, 17174), (207, 17240), (211, 17258), (217, 17273), (219, 17285), (225, 17303), (250, 17399), (258, 17450), (260, 17459), (269, 17492), (281, 17525), (291, 17573), (297, 17594), (319, 17681), (345, 17780), (347, 17786), (365, 17855), (369, 17873), (380, 17912), (384, 17927), (394, 17954), (401, 17972), (423, 18062), (434, 18110), (439, 18128), (440, 18131), (445, 18146), (458, 18194), (459, 18197), (468, 18242), (504, 18404), (563, 18671), (568, 18692), (586, 18758), (596, 18833), (624, 18932), (631, 18965), (640, 19001), (642, 19010), (684, 19190), (690, 19220), (722, 19337), (728, 19364), (741, 19421), (758, 19514), (763, 19532), (785, 19652), (792, 19688), (807, 19751), (821, 19820), (859, 20060), (864, 20105), (868, 20144), (870, 20159), (877, 20210), (879, 20237), (882, 20267), (883, 20273), (887, 20297), (892, 20330), (896, 20366),

Gene: VWB_17 Start: 10120, Stop: 14442, Start Num: 28

Candidate Starts for VWB_17:

(28, 10120), (49, 10222), (60, 10276), (72, 10342), (94, 10459), (109, 10531), (125, 10615), (136, 10660), (202, 10948), (222, 11023), (243, 11107), (254, 11143), (256, 11164), (266, 11206), (270, 11224), (276, 11242), (282, 11257), (297, 11302), (304, 11323), (314, 11356), (340, 11449), (342, 11458), (346, 11479), (351, 11500), (359, 11521), (363, 11542), (364, 11545), (376, 11593), (392, 11644), (414, 11725), (423, 11758), (429, 11788), (438, 11821), (442, 11836), (454, 11875), (481, 11995), (484, 12013), (501, 12091), (510, 12130), (512, 12139), (519, 12169), (523, 12193), (535, 12250), (543, 12283), (556, 12346), (560, 12361), (566, 12382), (595, 12529), (606, 12571), (621, 12619), (648, 12691), (659, 12727), (664, 12760), (670, 12796), (677, 12820), (699, 12910), (706, 12928), (712, 12949), (713, 12952), (723, 12994), (740, 13078), (742, 13084), (749, 13135), (755, 13168), (773, 13270), (779, 13294), (786, 13321), (789, 13342), (790, 13348), (796, 13363), (805, 13411), (812, 13447), (815, 13453), (822, 13504), (830, 13561), (846, 13651), (857, 13723), (863, 13765), (864, 13771), (865, 13792), (876, 13870), (878, 13897), (883, 13942), (890, 13987), (892, 13999), (899, 14077), (903, 14122), (909, 14230), (912, 14248), (913, 14260), (914, 14278), (915, 14347), (916, 14407), (917, 14413),