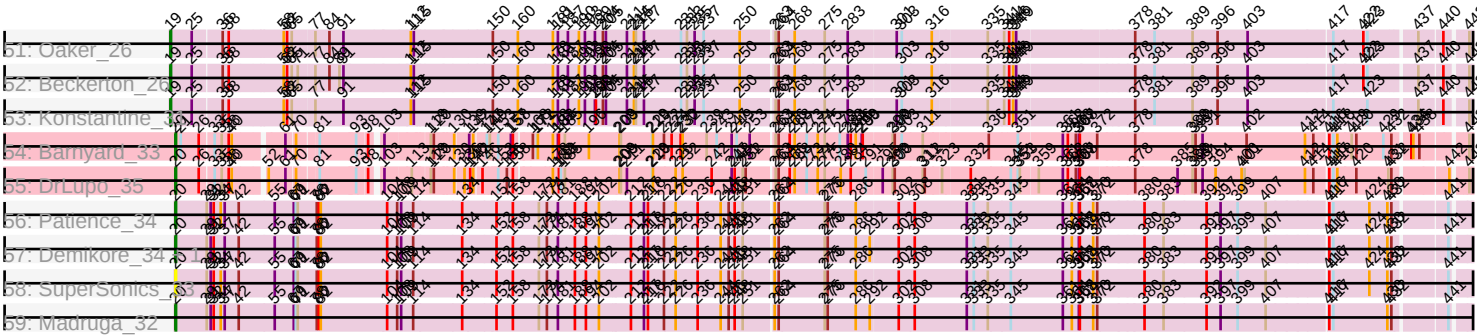


Zoomed Pham 280411

1. Madi_22 + 1	47	69	88	980	124	145	159	173	188	231	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435						
2. Beyoncage_22 + 3	39	41	68	88	980	124	145	159	173	188	231	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435					
3. Suzy_22	39	41	53	88	92	91	92	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435
4. LilyPad_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
5. LittleJelly_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
6. LuckyLe_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
7. Giann_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
8. ChantMal_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
9. Duna_Pick_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
10. Englan_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
11. Gracie_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
12. Ruben_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
13. Zaky_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
14. AlySantana_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
15. MoGyank_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
16. Fulu_23	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
17. Avani_24	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
18. Patus_24	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
19. Wuter_26	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
20. Lili_26	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
21. Xena_26	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
22. AS_26	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
23. Genan_15_27	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
24. Stime_27	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
25. Sapu_10_27	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
26. Ylis_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
27. Bird_10_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
28. NovaStars_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
29. Rumi_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
30. Pais_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
31. Jaden_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
32. Lait_27	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
33. Ours_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
34. Rola_29	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
35. Ranch_27	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
36. Alephian_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
37. Rara_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
38. Nikis_20	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
39. Lay_20_25	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
40. Milla_20	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
41. Dany_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
42. DobbyDoo_28	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
43. Predator_30	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
44. Puissant_25	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
45. Damien_26	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
46. Megatron06_25	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
47. BobumousPh_25	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
48. Thum_26	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
49. Phreeze_26	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419	424	435		
50. Coorch1_27	41	58	88	980	111	124	145	159	173	188	213	221	231	238	255	270	271	283	288	301	306	367	376	378	392	401	419				

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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 280411 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280411 has 69 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Madi_22, Sienna_22
- Track 2 : Beyoncage_22, Djokovic_22, Terapin_22, BiteSize_22
- Track 3 : Suzy_22
- Track 4 : LilyPad_23
- Track 5 : LittleFella_24
- Track 6 : LuckyLeo_26, Apeppi_24
- Track 7 : Gibbin_28
- Track 8 : Charminar_25
- Track 9 : DumpTruck_26
- Track 10 : Erutan_27
- Track 11 : GretelLyn_27, Sadboi_27
- Track 12 : Rukungu_27
- Track 13 : Zany_26
- Track 14 : Alyssamiracle_27
- Track 15 : MoiGyank_29
- Track 16 : Fulcrum_28, GOATification_28
- Track 17 : Avian_24
- Track 18 : ParvusTarda_27
- Track 19 : Wojtek_26
- Track 20 : Lila22_26
- Track 21 : Xenia2_27
- Track 22 : Astralis_24
- Track 23 : Genamy16_27
- Track 24 : Stormer_26
- Track 25 : Sampudon_27, Jalebi_26
- Track 26 : Yikes_28
- Track 27 : BirthdayBoy_28
- Track 28 : NovaSharks_26
- Track 29 : Rumi_26
- Track 30 : Patos_28, NorManre_28
- Track 31 : Jamemuya19_24
- Track 32 : Lambo_27
- Track 33 : OtterstedtS21_27
- Track 34 : Rota_26
- Track 35 : Ranch_27
- Track 36 : Alephilan_24
- Track 37 : RazorC_25

- Track 38 : Tillicus_26
- Track 39 : LavAbarElk_25
- Track 40 : Mima20_25
- Track 41 : DaviePasture_27
- Track 42 : DoobyDoo_26
- Track 43 : Predator_30
- Track 44 : Puissant_25
- Track 45 : Damien_26
- Track 46 : Megatron06_28
- Track 47 : BobtimousPrime_25
- Track 48 : Thumb_26
- Track 49 : Phreeze_26
- Track 50 : Cborch11_27
- Track 51 : Oaker_26
- Track 52 : Beckerton_26
- Track 53 : Konstantine_31
- Track 54 : Barnyard_33
- Track 55 : DrLupo_35
- Track 56 : Patience_34
- Track 57 : Demikore_34, Labelle_33
- Track 58 : SuperSonics_33
- Track 59 : Madruga_32

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

The start number called the most often in the published annotations is 2, it was called in 36 of the 60 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alephilan_24, Alyssamiracle_27, Apeppi_24, Astralis_24, Avian_24, BirthdayBoy_28, DaviePasture_27, DoobyDoo_26, DumpTruck_26, Erutan_27, Fulcrum_28, GOATification_28, Genamy16_27, Gibbin_28, GretelLyn_27, Jalebi_26, Jamemuya19_24, Lambo_27, LavAbarElk_25, Lila22_26, LuckyLeo_26, Mima20_25, MoiGyank_29, NorManre_28, NovaSharks_26, OtterstedtS21_27, ParvusTarda_27, Patos_28, Ranch_27, RazorC_25, Rukungu_27, Rumi_26, Sadboi_27, Sampudon_27, Tillicus_26, Wojtek_26, Xenia2_27, Yikes_28,

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

- Charminar_25, Stormer_26,

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

- Barnyard_33, Beckerton_26, Beyoncage_22, BiteSize_22, BobtimousPrime_25, Cborch11_27, Damien_26, Demikore_34, Djokovic_22, DrLupo_35, Konstantine_31, Labelle_33, LilyPad_23, LittleFella_24, Madi_22, Madruga_32, Megatron06_28, Oaker_26, Patience_34, Phreeze_26, Predator_30, Puissant_25, Rota_26, Sienna_22, SuperSonics_33, Suzy_22, Terapin_22, Thumb_26, Zany_26,

Summary by start number:

Start 2:

- Found in 40 of 69 (58.0%) of genes in pham
- Manual Annotations of this start: 36 of 60
- Called 95.0% of time when present
- Phage (with cluster) where this start called: Alephlan_24 (DV), Alyssamiracle_27 (DV), Apeppi_24 (DV), Astralis_24 (DV), Avian_24 (DV), BirthdayBoy_28 (DV), DaviePasture_27 (DV), DoobyDoo_26 (DV), DumpTruck_26 (DV), Erutan_27 (DV), Fulcrum_28 (DV), GOATification_28 (DV), Genamy16_27 (DV), Gibbin_28 (DV), GretelLyn_27 (DV), Jalebi_26 (DV), Jamemuya19_24 (DV), Lambo_27 (DV), LavAbarElk_25 (DV), Lila22_26 (DV), LuckyLeo_26 (DV), Mima20_25 (DV), MoiGyank_29 (DV), NorManre_28 (DV), NovaSharks_26 (DV), OtterstedtS21_27 (DV), ParvusTarda_27 (DV), Patos_28 (DV), Ranch_27 (DV), RazorC_25 (DV), Rukungu_27 (DV), Rumi_26 (DV), Sadboi_27 (DV), Sampudon_27 (DV), Tillicus_26 (DV), Wojtek_26 (DV), Xenia2_27 (DV), Yikes_28 (DV),

Start 3:

- Found in 2 of 69 (2.9%) of genes in pham
- Manual Annotations of this start: 1 of 60
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rota_26 (DV), Zany_26 (DV),

Start 11:

- Found in 37 of 69 (53.6%) of genes in pham
- No Manual Annotations of this start.
- Called 5.4% of time when present
- Phage (with cluster) where this start called: Charminar_25 (DV), Stormer_26 (DV),

Start 19:

- Found in 11 of 69 (15.9%) of genes in pham
- Manual Annotations of this start: 9 of 60
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beckerton_26 (H1), BobtimousPrime_25 (H1), Cborch11_27 (H1), Damien_26 (H1), Konstantine_31 (H1), Megatron06_28 (H1), Oaker_26 (H1), Phreeze_26 (H1), Predator_30 (H1), Puissant_25 (H1), Thumb_26 (H1),

Start 20:

- Found in 7 of 69 (10.1%) of genes in pham
- Manual Annotations of this start: 5 of 60
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnyard_33 (H2), Demikore_34 (U), DrLupo_35 (H2), Labelle_33 (U), Madruga_32 (U), Patience_34 (U), SuperSonics_33 (U),

Start 47:

- Found in 9 of 69 (13.0%) of genes in pham
- Manual Annotations of this start: 9 of 60
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beyoncage_22 (DG1), BiteSize_22 (DG1), Djokovic_22 (DG1), LilyPad_23 (DG1), LittleFella_24 (DG2), Madi_22 (DG1), Sienna_22 (DG1), Suzy_22 (DG1), Terapin_22 (DG1),

Summary by clusters:

There are 6 clusters represented in this pham: H2, H1, DG2, DG1, U, DV,

Info for manual annotations of cluster DG1:

- Start number 47 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 47 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:

- Start number 2 was manually annotated 36 times for cluster DV.
- Start number 3 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster H1:

- Start number 19 was manually annotated 9 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 20 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster U:

- Start number 20 was manually annotated 3 times for cluster U.

Gene Information:

Gene: Alephilan_24 Start: 16739, Stop: 23944, Start Num: 2

Candidate Starts for Alephilan_24:

(1, 16718), (Start: 2 @16739 has 36 MA's), (9, 17000), (11, 17099), (13, 17135), (15, 17147), (24, 17246), (41, 17378), (45, 17405), (49, 17465), (51, 17474), (56, 17516), (60, 17528), (66, 17552), (68, 17558), (79, 17621), (86, 17675), (88, 17678), (105, 17831), (106, 17834), (120, 17936), (123, 17954), (127, 17981), (138, 18029), (141, 18038), (151, 18107), (156, 18143), (159, 18164), (160, 18176), (162, 18188), (163, 18203), (173, 18239), (186, 18314), (187, 18320), (203, 18419), (212, 18500), (214, 18509), (247, 18800), (252, 18842), (254, 18863), (255, 18872), (258, 18896), (259, 18902), (261, 18923), (278, 19103), (281, 19130), (285, 19163), (289, 19184), (302, 19286), (305, 19313), (312, 19364), (313, 19367), (317, 19391), (321, 19403), (325, 19418), (327, 19442), (334, 19520), (335, 19532), (348, 19607), (360, 19700), (363, 19757), (367, 19787), (381, 19976), (382, 19982), (387, 20054), (388, 20084), (392, 20129), (393, 20138), (398, 20180), (400, 20234), (405, 20276), (410, 20360), (416, 20483), (425, 20603), (431, 20654), (440, 20813), (457, 21104), (460, 21191), (471, 21332), (474, 21344), (481, 21428), (485, 21461), (497, 21590), (537, 22247), (538, 22280), (546, 22370), (568, 22658), (570, 22667), (572, 22676), (606, 23171), (616, 23243), (626, 23333), (628, 23351), (631, 23390), (634, 23432), (637, 23456), (642, 23486), (643, 23495), (646, 23525), (651, 23561), (655, 23579), (663, 23618), (666, 23642), (680, 23807), (681, 23831), (687, 23897), (689, 23909),

Gene: Alyssamiracle_27 Start: 15546, Stop: 22754, Start Num: 2

Candidate Starts for Alyssamiracle_27:

(Start: 2 @15546 has 36 MA's), (4, 15561), (6, 15693), (9, 15807), (11, 15906), (13, 15942), (15, 15954), (22, 16038), (24, 16053), (41, 16185), (45, 16212), (49, 16272), (51, 16281), (56, 16323), (60, 16335), (66, 16359), (68, 16365), (74, 16386), (79, 16428), (86, 16482), (88, 16485), (106, 16641), (120, 16743), (123, 16761), (127, 16788), (138, 16836), (141, 16845), (156, 16950), (159, 16971), (160, 16983), (162, 16995), (163, 17010), (173, 17046), (180, 17091), (186, 17121), (188, 17148), (203, 17226), (211, 17295), (212, 17307), (214, 17316), (245, 17595), (247, 17607), (252, 17649), (254, 17670), (255, 17679), (258, 17703), (259, 17709), (261, 17730), (271, 17814), (278, 17910),

(281, 17937), (285, 17970), (296, 18063), (302, 18093), (312, 18171), (313, 18174), (317, 18198), (321, 18210), (325, 18225), (327, 18249), (334, 18327), (335, 18339), (348, 18414), (350, 18417), (363, 18564), (365, 18579), (367, 18594), (377, 18693), (379, 18741), (381, 18789), (382, 18795), (384, 18840), (387, 18867), (398, 18993), (400, 19047), (405, 19089), (410, 19173), (414, 19260), (416, 19296), (425, 19416), (431, 19467), (440, 19626), (445, 19740), (457, 19917), (460, 20004), (471, 20145), (474, 20157), (481, 20241), (537, 21060), (538, 21093), (540, 21105), (546, 21183), (566, 21459), (569, 21471), (584, 21714), (591, 21765), (596, 21807), (616, 22053), (628, 22161), (631, 22200), (632, 22203), (634, 22242), (637, 22266), (642, 22296), (643, 22305), (644, 22317), (653, 22380), (655, 22389), (663, 22428), (666, 22452), (680, 22617), (681, 22641), (687, 22707), (689, 22719),

Gene: Apeppi_24 Start: 16873, Stop: 24093, Start Num: 2

Candidate Starts for Apeppi_24:

(1, 16852), (Start: 2 @16873 has 36 MA's), (7, 17068), (10, 17143), (12, 17248), (13, 17269), (14, 17272), (17, 17302), (18, 17311), (22, 17365), (28, 17428), (30, 17434), (44, 17530), (48, 17581), (51, 17608), (60, 17662), (63, 17671), (66, 17686), (82, 17764), (85, 17800), (90, 17824), (111, 18019), (116, 18049), (135, 18154), (151, 18244), (155, 18268), (156, 18280), (159, 18301), (160, 18313), (163, 18340), (177, 18409), (184, 18445), (186, 18451), (189, 18481), (197, 18526), (201, 18547), (203, 18556), (206, 18580), (212, 18637), (224, 18757), (245, 18925), (252, 18979), (254, 19000), (256, 19018), (258, 19033), (261, 19060), (271, 19144), (281, 19267), (302, 19423), (305, 19450), (308, 19471), (312, 19501), (319, 19534), (325, 19555), (327, 19579), (328, 19582), (329, 19585), (331, 19606), (332, 19618), (334, 19657), (338, 19693), (348, 19744), (359, 19804), (360, 19837), (366, 19915), (367, 19924), (381, 20113), (382, 20119), (387, 20191), (388, 20221), (393, 20275), (398, 20317), (405, 20413), (410, 20497), (416, 20620), (425, 20740), (431, 20791), (457, 21244), (458, 21274), (460, 21331), (464, 21406), (471, 21472), (474, 21484), (481, 21568), (485, 21601), (486, 21622), (492, 21691), (537, 22387), (546, 22507), (547, 22510), (568, 22807), (572, 22825), (591, 23104), (595, 23131), (606, 23320), (616, 23392), (625, 23479), (628, 23500), (631, 23539), (634, 23581), (642, 23635), (643, 23644), (644, 23656), (653, 23719), (655, 23728), (663, 23767), (666, 23791), (671, 23893), (680, 23956), (681, 23980), (686, 24037), (687, 24046), (689, 24058),

Gene: Astralis_24 Start: 15136, Stop: 22344, Start Num: 2

Candidate Starts for Astralis_24:

(1, 15115), (Start: 2 @15136 has 36 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (186, 16711), (188, 16738), (203, 16816), (211, 16885), (212, 16897), (214, 16906), (245, 17185), (247, 17197), (250, 17221), (252, 17239), (254, 17260), (255, 17269), (258, 17293), (259, 17299), (261, 17320), (271, 17404), (278, 17500), (281, 17527), (285, 17560), (296, 17653), (302, 17683), (312, 17761), (313, 17764), (317, 17788), (321, 17800), (325, 17815), (327, 17839), (334, 17917), (335, 17929), (348, 18004), (350, 18007), (363, 18154), (365, 18169), (367, 18184), (377, 18283), (379, 18331), (381, 18379), (382, 18385), (384, 18430), (387, 18457), (398, 18583), (400, 18637), (405, 18679), (410, 18763), (414, 18850), (416, 18886), (425, 19006), (431, 19057), (440, 19216), (445, 19330), (457, 19507), (460, 19594), (471, 19735), (474, 19747), (481, 19831), (537, 20650), (538, 20683), (540, 20695), (546, 20773), (566, 21049), (569, 21061), (591, 21355), (596, 21397), (616, 21643), (628, 21751), (631, 21790), (632, 21793), (634, 21832), (637, 21856), (642, 21886), (643, 21895), (644, 21907), (653, 21970), (655, 21979), (663, 22018), (666, 22042), (680, 22207), (681, 22231), (687, 22297), (689, 22309),

Gene: Avian_24 Start: 15528, Stop: 22736, Start Num: 2

Candidate Starts for Avian_24:

(Start: 2 @15528 has 36 MA's), (6, 15675), (9, 15789), (11, 15888), (13, 15924), (15, 15936), (22, 16020), (24, 16035), (41, 16167), (45, 16194), (49, 16254), (51, 16263), (56, 16305), (60, 16317), (66,

16341), (68, 16347), (74, 16368), (79, 16410), (86, 16464), (88, 16467), (106, 16623), (120, 16725), (123, 16743), (127, 16770), (138, 16818), (141, 16827), (156, 16932), (159, 16953), (160, 16965), (162, 16977), (163, 16992), (173, 17028), (180, 17073), (186, 17103), (188, 17130), (203, 17208), (211, 17277), (212, 17289), (214, 17298), (245, 17577), (247, 17589), (252, 17631), (254, 17652), (255, 17661), (258, 17685), (259, 17691), (261, 17712), (271, 17796), (278, 17892), (281, 17919), (285, 17952), (296, 18045), (302, 18075), (312, 18153), (313, 18156), (317, 18180), (321, 18192), (325, 18207), (327, 18231), (334, 18309), (335, 18321), (348, 18396), (350, 18399), (363, 18546), (365, 18561), (367, 18576), (377, 18675), (379, 18723), (381, 18771), (382, 18777), (384, 18822), (387, 18849), (398, 18975), (400, 19029), (405, 19071), (410, 19155), (414, 19242), (416, 19278), (425, 19398), (431, 19449), (440, 19608), (445, 19722), (457, 19899), (460, 19986), (471, 20127), (474, 20139), (481, 20223), (537, 21042), (538, 21075), (540, 21087), (546, 21165), (566, 21441), (569, 21453), (584, 21696), (591, 21747), (596, 21789), (616, 22035), (628, 22143), (631, 22182), (632, 22185), (634, 22224), (636, 22236), (642, 22278), (643, 22287), (644, 22299), (646, 22317), (655, 22371), (663, 22410), (666, 22434), (680, 22599), (681, 22623), (687, 22689), (689, 22701),

Gene: Barnyard_33 Start: 18111, Stop: 24254, Start Num: 20

Candidate Starts for Barnyard_33:

(Start: 20 @18111 has 5 MA's), (21, 18126), (26, 18180), (33, 18216), (35, 18237), (38, 18258), (40, 18267), (61, 18384), (70, 18405), (81, 18453), (93, 18555), (98, 18579), (103, 18600), (119, 18714), (120, 18723), (130, 18777), (139, 18807), (142, 18819), (147, 18843), (149, 18849), (153, 18870), (157, 18903), (158, 18909), (168, 18951), (171, 18963), (172, 18966), (178, 19005), (181, 19020), (182, 19023), (185, 19041), (196, 19113), (208, 19203), (209, 19206), (219, 19299), (220, 19302), (222, 19335), (224, 19356), (230, 19383), (232, 19389), (239, 19461), (243, 19491), (247, 19536), (249, 19551), (253, 19590), (263, 19653), (264, 19662), (266, 19692), (268, 19707), (273, 19743), (274, 19773), (275, 19794), (279, 19839), (283, 19863), (284, 19872), (286, 19887), (289, 19905), (290, 19908), (299, 19989), (300, 19995), (303, 20016), (311, 20076), (336, 20253), (351, 20328), (361, 20448), (362, 20463), (366, 20487), (367, 20496), (368, 20499), (372, 20550), (378, 20646), (389, 20814), (390, 20823), (391, 20844), (402, 20976), (412, 21150), (414, 21174), (416, 21210), (417, 21222), (418, 21234), (419, 21276), (420, 21285), (429, 21366), (432, 21387), (434, 21423), (436, 21429), (438, 21447), (443, 21549), (448, 21630), (454, 21681), (458, 21711), (463, 21804), (465, 21843), (482, 21984), (485, 22005), (493, 22095), (494, 22107), (499, 22188), (508, 22275), (512, 22302), (514, 22341), (517, 22359), (523, 22413), (525, 22425), (531, 22566), (533, 22614), (535, 22638), (542, 22728), (549, 22830), (556, 22944), (558, 22956), (561, 22989), (567, 23043), (573, 23073), (580, 23172), (581, 23184), (583, 23232), (597, 23337), (602, 23367), (603, 23388), (609, 23487), (618, 23565), (620, 23586), (621, 23592), (623, 23604), (625, 23637), (630, 23688), (631, 23697), (633, 23733), (634, 23739), (647, 23823), (648, 23826), (655, 23880), (656, 23889), (658, 23901), (661, 23922), (663, 23931), (667, 23988), (670, 24036), (671, 24057), (673, 24078), (679, 24114), (683, 24153), (687, 24204), (688, 24207), (689, 24216),

Gene: Beckerton_26 Start: 16772, Stop: 23095, Start Num: 19

Candidate Starts for Beckerton_26:

(Start: 19 @16772 has 9 MA's), (25, 16835), (36, 16916), (38, 16934), (58, 17081), (62, 17090), (65, 17102), (71, 17120), (77, 17165), (84, 17207), (89, 17237), (91, 17249), (112, 17435), (115, 17444), (150, 17654), (160, 17729), (178, 17831), (181, 17846), (187, 17876), (190, 17909), (193, 17927), (199, 17957), (204, 17981), (205, 17990), (211, 18053), (214, 18074), (215, 18080), (217, 18104), (231, 18215), (233, 18233), (235, 18254), (237, 18281), (250, 18389), (263, 18482), (264, 18491), (268, 18536), (275, 18623), (283, 18692), (303, 18845), (316, 18932), (335, 19079), (341, 19121), (344, 19130), (346, 19142), (349, 19151), (378, 19475), (381, 19532), (389, 19643), (396, 19718), (403, 19808), (417, 20051), (422, 20135), (423, 20147), (437, 20267), (440, 20327), (443, 20375), (444, 20396), (448, 20456), (458, 20537), (467, 20687), (485, 20846), (486, 20867), (489, 20912), (498, 20966), (501, 21074), (515, 21170), (516, 21179), (520, 21209), (521, 21212), (541, 21527), (565, 21800), (567, 21809), (577, 21884), (578, 21917), (579, 21929), (580, 21938), (588, 22061), (600, 22181), (605, 22265), (611, 22331), (617, 22376), (619, 22403), (634, 22565), (635, 22568),

(640, 22607), (642, 22619), (643, 22628), (667, 22835), (678, 22949), (683, 22994), (687, 23045), (688, 23048), (689, 23057), (690, 23072),

Gene: Beyoncage_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Beyoncage_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (192, 13476), (195, 13494), (199, 13515), (228, 13758), (232, 13767), (234, 13800), (235, 13803), (237, 13830), (255, 13986), (270, 14097), (271, 14103), (277, 14190), (288, 14274), (293, 14307), (294, 14325), (300, 14370), (305, 14409), (307, 14421), (309, 14436), (312, 14457), (316, 14478), (318, 14487), (320, 14493), (324, 14502), (327, 14532), (343, 14676), (350, 14709), (355, 14724), (367, 14892), (372, 14937), (374, 14946), (376, 14967), (378, 15021), (392, 15231), (397, 15273), (401, 15345), (419, 15654), (424, 15702), (427, 15723), (435, 15831), (450, 16212), (453, 16287), (460, 16473), (475, 16704), (479, 16752), (484, 16803), (486, 16827), (487, 16836), (496, 16929), (507, 17094), (511, 17118), (513, 17133), (536, 17607), (543, 17685), (557, 17928), (560, 17964), (570, 18057), (582, 18216), (592, 18336), (594, 18351), (598, 18405), (605, 18519), (607, 18552), (608, 18561), (612, 18585), (616, 18609), (629, 18753), (630, 18759), (639, 18846), (643, 18873), (644, 18885), (646, 18903), (652, 18945), (660, 18978), (661, 18987), (663, 18996), (665, 19008), (670, 19104), (675, 19164), (676, 19167), (685, 19263), (686, 19266), (688, 19278), (689, 19287), (691, 19308),

Gene: BirthdayBoy_28 Start: 17583, Stop: 24797, Start Num: 2

Candidate Starts for BirthdayBoy_28:

(1, 17562), (Start: 2 @17583 has 36 MA's), (6, 17730), (9, 17844), (11, 17943), (13, 17979), (15, 17991), (24, 18090), (41, 18222), (51, 18318), (56, 18360), (60, 18372), (66, 18396), (68, 18402), (79, 18465), (86, 18519), (88, 18522), (105, 18675), (106, 18678), (120, 18780), (123, 18798), (127, 18825), (138, 18873), (141, 18882), (151, 18951), (156, 18987), (159, 19008), (160, 19020), (162, 19032), (163, 19047), (173, 19083), (186, 19158), (203, 19263), (211, 19332), (212, 19344), (214, 19353), (245, 19632), (247, 19644), (252, 19686), (254, 19707), (255, 19716), (258, 19740), (259, 19746), (261, 19767), (267, 19830), (271, 19851), (278, 19947), (281, 19974), (285, 20007), (312, 20208), (313, 20211), (317, 20235), (321, 20247), (325, 20262), (327, 20286), (334, 20364), (335, 20376), (348, 20451), (350, 20454), (363, 20601), (365, 20616), (367, 20631), (377, 20730), (379, 20778), (381, 20826), (382, 20832), (386, 20898), (387, 20904), (393, 20988), (398, 21030), (400, 21084), (405, 21126), (410, 21210), (416, 21333), (425, 21453), (431, 21504), (440, 21663), (445, 21777), (457, 21957), (459, 22017), (460, 22044), (464, 22119), (471, 22185), (474, 22197), (481, 22281), (485, 22314), (537, 23100), (538, 23133), (540, 23145), (546, 23223), (568, 23511), (572, 23529), (591, 23808), (616, 24096), (628, 24204), (631, 24243), (632, 24246), (634, 24285), (642, 24339), (643, 24348), (644, 24360), (646, 24378), (649, 24402), (655, 24432), (663, 24471), (666, 24495), (680, 24660), (681, 24684), (687, 24750), (689, 24762),

Gene: BiteSize_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for BiteSize_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (192, 13476), (195, 13494), (199, 13515), (228, 13758), (232, 13767), (234, 13800), (235, 13803), (237, 13830), (255, 13986), (270, 14097), (271, 14103), (277, 14190), (288, 14274), (293, 14307), (294, 14325), (300, 14370), (305, 14409), (307, 14421), (309, 14436), (312, 14457), (316, 14478), (318, 14487), (320, 14493), (324, 14502), (327, 14532), (343, 14676), (350, 14709), (355, 14724), (367, 14892), (372, 14937), (374, 14946), (376, 14967), (378, 15021), (392, 15231), (397, 15273), (401, 15345), (419, 15654), (424, 15702), (427, 15723), (435, 15831), (450, 16212), (453, 16287), (460, 16473), (475, 16704), (479, 16752), (484, 16803), (486, 16827), (487, 16836), (496, 16929), (507, 17094), (511, 17118), (513, 17133), (536, 17607), (543, 17685), (557, 17928), (560, 17964), (570, 18057), (582, 18216), (592, 18336), (594, 18351), (598, 18405), (605, 18519), (607, 18552), (608,

18561), (612, 18585), (616, 18609), (629, 18753), (630, 18759), (639, 18846), (643, 18873), (644, 18885), (646, 18903), (652, 18945), (660, 18978), (661, 18987), (663, 18996), (665, 19008), (670, 19104), (675, 19164), (676, 19167), (685, 19263), (686, 19266), (688, 19278), (689, 19287), (691, 19308),

Gene: BobtimousPrime_25 Start: 16692, Stop: 23015, Start Num: 19

Candidate Starts for BobtimousPrime_25:

(Start: 19 @16692 has 9 MA's), (25, 16755), (36, 16836), (38, 16854), (58, 17001), (62, 17010), (65, 17022), (77, 17085), (91, 17169), (112, 17355), (115, 17364), (150, 17574), (160, 17649), (178, 17751), (181, 17766), (187, 17796), (190, 17829), (193, 17847), (199, 17877), (204, 17901), (205, 17910), (211, 17973), (214, 17994), (215, 18000), (217, 18024), (231, 18135), (233, 18153), (235, 18174), (237, 18201), (250, 18309), (263, 18402), (264, 18411), (268, 18456), (275, 18543), (283, 18612), (301, 18750), (303, 18765), (316, 18852), (335, 18999), (339, 19029), (341, 19041), (344, 19050), (346, 19062), (349, 19071), (378, 19395), (381, 19452), (389, 19563), (396, 19638), (403, 19728), (417, 19971), (422, 20055), (423, 20067), (437, 20187), (440, 20247), (443, 20295), (444, 20316), (448, 20376), (458, 20457), (467, 20607), (485, 20766), (486, 20787), (489, 20832), (498, 20886), (501, 20994), (515, 21090), (516, 21099), (520, 21129), (521, 21132), (541, 21447), (565, 21720), (567, 21729), (574, 21786), (577, 21804), (578, 21837), (579, 21849), (580, 21858), (588, 21981), (600, 22101), (605, 22185), (611, 22251), (617, 22296), (619, 22323), (634, 22485), (635, 22488), (640, 22527), (642, 22539), (643, 22548), (667, 22755), (678, 22869), (683, 22914), (687, 22965), (688, 22968), (689, 22977), (690, 22992),

Gene: Cborch11_27 Start: 16234, Stop: 22557, Start Num: 19

Candidate Starts for Cborch11_27:

(Start: 19 @16234 has 9 MA's), (25, 16297), (36, 16378), (38, 16396), (58, 16543), (62, 16552), (65, 16564), (77, 16627), (91, 16711), (112, 16897), (115, 16906), (121, 16963), (150, 17116), (160, 17191), (178, 17293), (181, 17308), (187, 17338), (190, 17371), (193, 17389), (199, 17419), (204, 17443), (205, 17452), (211, 17515), (214, 17536), (215, 17542), (217, 17566), (231, 17677), (233, 17695), (235, 17716), (237, 17743), (250, 17851), (263, 17944), (264, 17953), (268, 17998), (275, 18085), (283, 18154), (303, 18307), (316, 18394), (335, 18541), (341, 18583), (344, 18592), (346, 18604), (349, 18613), (378, 18937), (381, 18994), (389, 19105), (396, 19180), (403, 19270), (417, 19513), (423, 19609), (437, 19729), (440, 19789), (443, 19837), (444, 19858), (448, 19918), (458, 19999), (467, 20149), (485, 20308), (486, 20329), (489, 20374), (498, 20428), (501, 20536), (515, 20632), (516, 20641), (520, 20671), (521, 20674), (541, 20989), (565, 21262), (567, 21271), (577, 21346), (578, 21379), (579, 21391), (580, 21400), (588, 21523), (600, 21643), (605, 21727), (611, 21793), (617, 21838), (619, 21865), (634, 22027), (635, 22030), (640, 22069), (642, 22081), (643, 22090), (667, 22297), (678, 22411), (683, 22456), (687, 22507), (688, 22510), (689, 22519), (690, 22534),

Gene: Charminar_25 Start: 15496, Stop: 22347, Start Num: 11

Candidate Starts for Charminar_25:

(1, 15115), (Start: 2 @15136 has 36 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (180, 16681), (186, 16711), (188, 16738), (203, 16816), (211, 16885), (212, 16897), (214, 16906), (245, 17185), (247, 17197), (252, 17239), (254, 17260), (255, 17269), (258, 17293), (259, 17299), (261, 17320), (271, 17404), (278, 17500), (281, 17527), (285, 17560), (296, 17653), (302, 17683), (312, 17761), (313, 17764), (317, 17788), (321, 17800), (325, 17815), (327, 17839), (334, 17917), (335, 17929), (348, 18004), (350, 18007), (363, 18154), (365, 18169), (367, 18184), (377, 18283), (379, 18331), (381, 18379), (382, 18385), (384, 18430), (387, 18457), (398, 18583), (400, 18637), (405, 18679), (410, 18763), (414, 18850), (416, 18886), (425, 19006), (431, 19057), (440, 19216), (445, 19330), (457, 19507), (460, 19594),

(471, 19735), (474, 19747), (481, 19831), (537, 20650), (538, 20683), (540, 20695), (546, 20773), (568, 21061), (591, 21358), (596, 21400), (616, 21646), (628, 21754), (631, 21793), (632, 21796), (634, 21835), (637, 21859), (642, 21889), (643, 21898), (644, 21910), (653, 21973), (655, 21982), (663, 22021), (666, 22045), (680, 22210), (681, 22234), (687, 22300), (689, 22312),

Gene: Damien_26 Start: 16235, Stop: 22558, Start Num: 19

Candidate Starts for Damien_26:

(Start: 19 @16235 has 9 MA's), (25, 16298), (36, 16379), (38, 16397), (58, 16544), (62, 16553), (65, 16565), (77, 16628), (91, 16712), (112, 16898), (115, 16907), (150, 17117), (160, 17192), (178, 17294), (181, 17309), (187, 17339), (190, 17372), (193, 17390), (199, 17420), (204, 17444), (205, 17453), (211, 17516), (214, 17537), (215, 17543), (217, 17567), (231, 17678), (233, 17696), (235, 17717), (237, 17744), (250, 17852), (263, 17945), (264, 17954), (268, 17999), (275, 18086), (283, 18155), (301, 18293), (303, 18308), (316, 18395), (335, 18542), (341, 18584), (344, 18593), (346, 18605), (349, 18614), (378, 18938), (381, 18995), (389, 19106), (396, 19181), (403, 19271), (417, 19514), (422, 19598), (423, 19610), (437, 19730), (440, 19790), (443, 19838), (444, 19859), (448, 19919), (458, 20000), (467, 20150), (485, 20309), (486, 20330), (489, 20375), (498, 20429), (501, 20537), (515, 20633), (516, 20642), (520, 20672), (521, 20675), (541, 20990), (565, 21263), (567, 21272), (577, 21347), (578, 21380), (579, 21392), (580, 21401), (588, 21524), (600, 21644), (605, 21728), (611, 21794), (617, 21839), (619, 21866), (634, 22028), (635, 22031), (640, 22070), (642, 22082), (643, 22091), (667, 22298), (678, 22412), (683, 22457), (687, 22508), (688, 22511), (689, 22520), (690, 22535),

Gene: DaviePasture_27 Start: 17352, Stop: 24563, Start Num: 2

Candidate Starts for DaviePasture_27:

(1, 17331), (Start: 2 @17352 has 36 MA's), (6, 17499), (9, 17613), (11, 17712), (13, 17748), (15, 17760), (24, 17859), (41, 17991), (45, 18018), (46, 18021), (49, 18078), (51, 18087), (56, 18129), (60, 18141), (66, 18165), (68, 18171), (79, 18234), (86, 18288), (88, 18291), (105, 18444), (106, 18447), (120, 18549), (123, 18567), (127, 18594), (138, 18642), (141, 18651), (151, 18720), (156, 18756), (159, 18777), (160, 18789), (162, 18801), (163, 18816), (173, 18852), (180, 18897), (186, 18927), (203, 19032), (211, 19101), (212, 19113), (214, 19122), (247, 19413), (250, 19437), (252, 19455), (254, 19476), (255, 19485), (258, 19509), (259, 19515), (261, 19536), (271, 19620), (278, 19716), (281, 19743), (285, 19776), (289, 19797), (302, 19899), (312, 19977), (313, 19980), (317, 20004), (321, 20016), (325, 20031), (327, 20055), (334, 20133), (335, 20145), (348, 20220), (350, 20223), (363, 20370), (365, 20385), (367, 20400), (377, 20499), (379, 20547), (381, 20595), (382, 20601), (387, 20673), (393, 20757), (398, 20799), (400, 20853), (405, 20895), (410, 20979), (416, 21102), (425, 21222), (426, 21228), (431, 21273), (440, 21432), (445, 21546), (451, 21660), (457, 21714), (460, 21801), (461, 21810), (469, 21933), (471, 21942), (474, 21954), (481, 22038), (505, 22347), (537, 22857), (540, 22902), (546, 22977), (568, 23277), (572, 23295), (591, 23574), (596, 23616), (616, 23862), (628, 23970), (631, 24009), (632, 24012), (634, 24051), (642, 24105), (643, 24114), (644, 24126), (646, 24144), (649, 24168), (655, 24198), (663, 24237), (666, 24261), (680, 24426), (681, 24450), (687, 24516), (689, 24528),

Gene: Demikore_34 Start: 19565, Stop: 26212, Start Num: 20

Candidate Starts for Demikore_34:

(Start: 20 @19565 has 5 MA's), (29, 19658), (31, 19670), (32, 19679), (37, 19712), (42, 19754), (55, 19859), (67, 19916), (69, 19922), (71, 19928), (78, 19985), (80, 19991), (82, 19997), (104, 20195), (108, 20225), (109, 20237), (114, 20273), (134, 20414), (152, 20510), (158, 20558), (173, 20636), (174, 20660), (181, 20693), (188, 20744), (194, 20777), (202, 20816), (212, 20906), (217, 20945), (218, 20957), (222, 21005), (226, 21038), (236, 21104), (244, 21173), (246, 21197), (248, 21215), (251, 21239), (262, 21320), (264, 21332), (275, 21467), (276, 21476), (286, 21560), (292, 21602), (302, 21680), (308, 21725), (331, 21881), (333, 21902), (335, 21944), (345, 22007), (361, 22163), (364, 22190), (367, 22211), (368, 22214), (370, 22253), (372, 22265), (380, 22400), (383, 22457), (392, 22583), (397, 22625), (399, 22676), (407, 22760), (416, 22931), (417, 22943), (424, 23051),

(430, 23105), (432, 23117), (441, 23255), (468, 23618), (483, 23753), (490, 23837), (519, 24167), (522, 24200), (524, 24209), (552, 24719), (554, 24746), (559, 24794), (563, 24851), (576, 24950), (587, 25136), (604, 25322), (622, 25532), (634, 25673), (638, 25703), (649, 25805), (656, 25844), (659, 25859), (670, 25991), (672, 26015), (674, 26039), (682, 26099), (684, 26117), (685, 26150), (687, 26162), (688, 26165), (690, 26189),

Gene: Djokovic_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Djokovic_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (192, 13476), (195, 13494), (199, 13515), (228, 13758), (232, 13767), (234, 13800), (235, 13803), (237, 13830), (255, 13986), (270, 14097), (271, 14103), (277, 14190), (288, 14274), (293, 14307), (294, 14325), (300, 14370), (305, 14409), (307, 14421), (309, 14436), (312, 14457), (316, 14478), (318, 14487), (320, 14493), (324, 14502), (327, 14532), (343, 14676), (350, 14709), (355, 14724), (367, 14892), (372, 14937), (374, 14946), (376, 14967), (378, 15021), (392, 15231), (397, 15273), (401, 15345), (419, 15654), (424, 15702), (427, 15723), (435, 15831), (450, 16212), (453, 16287), (460, 16473), (475, 16704), (479, 16752), (484, 16803), (486, 16827), (487, 16836), (496, 16929), (507, 17094), (511, 17118), (513, 17133), (536, 17607), (543, 17685), (557, 17928), (560, 17964), (570, 18057), (582, 18216), (592, 18336), (594, 18351), (598, 18405), (605, 18519), (607, 18552), (608, 18561), (612, 18585), (616, 18609), (629, 18753), (630, 18759), (639, 18846), (643, 18873), (644, 18885), (646, 18903), (652, 18945), (660, 18978), (661, 18987), (663, 18996), (665, 19008), (670, 19104), (675, 19164), (676, 19167), (685, 19263), (686, 19266), (688, 19278), (689, 19287), (691, 19308),

Gene: DoobyDoo_26 Start: 16517, Stop: 23719, Start Num: 2

Candidate Starts for DoobyDoo_26:

(1, 16496), (Start: 2 @16517 has 36 MA's), (6, 16664), (9, 16778), (11, 16877), (13, 16913), (15, 16925), (24, 17024), (41, 17156), (45, 17183), (46, 17186), (51, 17252), (56, 17294), (60, 17306), (66, 17330), (68, 17336), (79, 17399), (86, 17453), (88, 17456), (105, 17609), (106, 17612), (120, 17714), (123, 17732), (127, 17759), (138, 17807), (141, 17816), (151, 17885), (156, 17921), (159, 17942), (160, 17954), (162, 17966), (163, 17981), (173, 18017), (186, 18092), (187, 18098), (203, 18197), (211, 18266), (212, 18278), (214, 18287), (247, 18578), (252, 18620), (254, 18641), (255, 18650), (258, 18674), (259, 18680), (261, 18701), (267, 18764), (271, 18785), (278, 18881), (281, 18908), (285, 18941), (312, 19142), (313, 19145), (317, 19169), (321, 19181), (325, 19196), (327, 19220), (334, 19298), (335, 19310), (350, 19388), (363, 19535), (365, 19550), (367, 19565), (377, 19664), (379, 19712), (381, 19760), (382, 19766), (384, 19811), (387, 19838), (393, 19922), (398, 19964), (400, 20018), (405, 20060), (410, 20144), (416, 20267), (425, 20387), (431, 20438), (440, 20597), (445, 20711), (457, 20879), (460, 20966), (461, 20975), (471, 21107), (474, 21119), (481, 21203), (485, 21236), (505, 21512), (537, 22022), (538, 22055), (540, 22067), (546, 22145), (568, 22433), (570, 22442), (572, 22451), (591, 22730), (596, 22772), (616, 23018), (628, 23126), (631, 23165), (632, 23168), (634, 23207), (642, 23261), (643, 23270), (644, 23282), (646, 23300), (649, 23324), (655, 23354), (663, 23393), (666, 23417), (680, 23582), (681, 23606), (687, 23672), (689, 23684),

Gene: DrLupo_35 Start: 18517, Stop: 24654, Start Num: 20

Candidate Starts for DrLupo_35:

(Start: 20 @18517 has 5 MA's), (26, 18586), (33, 18622), (35, 18643), (38, 18664), (40, 18673), (52, 18748), (61, 18790), (70, 18811), (81, 18859), (93, 18961), (98, 18985), (103, 19006), (113, 19078), (119, 19120), (120, 19129), (130, 19183), (136, 19204), (140, 19216), (142, 19225), (146, 19240), (153, 19276), (156, 19297), (158, 19315), (178, 19411), (182, 19429), (183, 19435), (185, 19447), (208, 19609), (209, 19612), (211, 19630), (219, 19705), (220, 19708), (226, 19774), (232, 19795), (242, 19882), (247, 19942), (248, 19951), (251, 19975), (252, 19984), (263, 20059), (264, 20068), (266, 20098), (268, 20113), (273, 20149), (274, 20179), (275, 20200), (280, 20248), (284, 20278), (291, 20323), (295, 20365), (299, 20395), (300, 20401), (311, 20482), (312, 20488), (323, 20530),

(332, 20605), (345, 20713), (351, 20734), (353, 20740), (359, 20782), (361, 20854), (362, 20869), (366, 20893), (367, 20902), (368, 20905), (378, 21052), (385, 21178), (389, 21220), (390, 21229), (391, 21250), (394, 21289), (400, 21367), (401, 21376), (412, 21556), (414, 21580), (416, 21616), (417, 21628), (418, 21640), (420, 21691), (431, 21787), (432, 21793), (442, 21925), (443, 21955), (445, 21997), (447, 22030), (458, 22117), (485, 22411), (489, 22477), (495, 22522), (502, 22642), (503, 22657), (518, 22762), (520, 22780), (523, 22813), (531, 22966), (535, 23038), (544, 23167), (551, 23272), (557, 23347), (558, 23356), (561, 23389), (562, 23401), (565, 23434), (567, 23443), (573, 23473), (578, 23551), (580, 23572), (581, 23584), (602, 23767), (613, 23917), (614, 23926), (618, 23965), (624, 24007), (625, 24037), (630, 24088), (631, 24097), (633, 24133), (634, 24139), (647, 24223), (656, 24289), (657, 24292), (658, 24301), (661, 24322), (667, 24388), (668, 24412), (670, 24436), (671, 24457), (673, 24478), (679, 24514), (684, 24559), (687, 24604), (688, 24607), (689, 24616),

Gene: DumpTruck_26 Start: 16770, Stop: 24029, Start Num: 2

Candidate Starts for DumpTruck_26:

(1, 16749), (Start: 2 @16770 has 36 MA's), (5, 16914), (6, 16917), (8, 16989), (13, 17166), (14, 17169), (15, 17178), (16, 17193), (17, 17199), (22, 17262), (23, 17271), (25, 17283), (28, 17325), (48, 17478), (49, 17496), (54, 17517), (56, 17547), (64, 17577), (66, 17583), (72, 17598), (76, 17640), (79, 17652), (82, 17661), (83, 17685), (86, 17706), (90, 17721), (92, 17739), (95, 17775), (99, 17802), (105, 17862), (117, 17964), (118, 17967), (120, 17988), (123, 18006), (126, 18021), (129, 18042), (131, 18051), (137, 18087), (141, 18099), (148, 18153), (155, 18192), (156, 18204), (159, 18225), (163, 18264), (164, 18267), (167, 18279), (172, 18297), (175, 18321), (186, 18375), (200, 18465), (203, 18480), (212, 18561), (221, 18636), (227, 18699), (245, 18849), (252, 18903), (254, 18924), (255, 18933), (260, 18972), (263, 18990), (271, 19065), (285, 19221), (286, 19224), (312, 19431), (327, 19509), (334, 19587), (340, 19641), (352, 19683), (359, 19734), (366, 19845), (367, 19854), (371, 19896), (375, 19929), (377, 19953), (381, 20043), (382, 20049), (387, 20121), (388, 20151), (398, 20247), (405, 20343), (409, 20415), (410, 20427), (416, 20550), (425, 20670), (461, 21288), (470, 21414), (472, 21423), (473, 21429), (474, 21432), (476, 21462), (477, 21486), (479, 21495), (481, 21516), (486, 21570), (488, 21612), (506, 21831), (509, 21849), (528, 22125), (530, 22173), (532, 22224), (537, 22335), (538, 22368), (540, 22380), (546, 22458), (571, 22758), (572, 22761), (599, 23145), (616, 23328), (626, 23418), (642, 23571), (653, 23655), (660, 23685), (680, 23892), (681, 23916), (686, 23973),

Gene: Erutan_27 Start: 17030, Stop: 24241, Start Num: 2

Candidate Starts for Erutan_27:

(1, 17009), (Start: 2 @17030 has 36 MA's), (6, 17177), (9, 17291), (11, 17390), (13, 17426), (15, 17438), (24, 17537), (41, 17669), (45, 17696), (49, 17756), (51, 17765), (56, 17807), (60, 17819), (66, 17843), (68, 17849), (79, 17912), (82, 17921), (86, 17966), (88, 17969), (105, 18122), (106, 18125), (120, 18227), (123, 18245), (127, 18272), (138, 18320), (141, 18329), (151, 18398), (156, 18434), (159, 18455), (160, 18467), (162, 18479), (163, 18494), (173, 18530), (186, 18605), (203, 18710), (211, 18779), (212, 18791), (214, 18800), (247, 19091), (252, 19133), (254, 19154), (255, 19163), (258, 19187), (259, 19193), (261, 19214), (267, 19277), (271, 19298), (278, 19394), (281, 19421), (285, 19454), (296, 19547), (302, 19577), (312, 19655), (313, 19658), (317, 19682), (321, 19694), (325, 19709), (327, 19733), (334, 19811), (335, 19823), (350, 19901), (363, 20048), (365, 20063), (367, 20078), (377, 20177), (379, 20225), (381, 20273), (382, 20279), (387, 20351), (393, 20435), (398, 20477), (400, 20531), (405, 20573), (410, 20657), (416, 20780), (425, 20900), (431, 20951), (440, 21110), (445, 21224), (457, 21404), (460, 21491), (464, 21566), (471, 21632), (474, 21644), (481, 21728), (485, 21761), (486, 21782), (537, 22547), (538, 22580), (540, 22592), (546, 22670), (566, 22946), (569, 22958), (575, 23024), (595, 23279), (612, 23516), (616, 23540), (628, 23648), (631, 23687), (634, 23729), (641, 23774), (642, 23783), (643, 23792), (644, 23804), (653, 23867), (655, 23876), (663, 23915), (666, 23939), (680, 24104), (681, 24128), (686, 24185), (687, 24194), (689, 24206),

Gene: Fulcrum_28 Start: 17563, Stop: 24765, Start Num: 2

Candidate Starts for Fulcrum_28:

(1, 17542), (Start: 2 @17563 has 36 MA's), (6, 17710), (9, 17824), (11, 17923), (13, 17959), (15, 17971), (24, 18070), (41, 18202), (51, 18298), (56, 18340), (60, 18352), (66, 18376), (68, 18382), (79, 18445), (86, 18499), (88, 18502), (105, 18655), (106, 18658), (123, 18778), (127, 18805), (141, 18862), (151, 18931), (156, 18967), (159, 18988), (160, 19000), (162, 19012), (163, 19027), (173, 19063), (186, 19138), (187, 19144), (203, 19243), (211, 19312), (212, 19324), (214, 19333), (247, 19624), (252, 19666), (254, 19687), (255, 19696), (258, 19720), (259, 19726), (261, 19747), (267, 19810), (271, 19831), (278, 19927), (281, 19954), (285, 19987), (296, 20080), (302, 20110), (305, 20137), (312, 20188), (313, 20191), (314, 20197), (317, 20215), (321, 20227), (325, 20242), (327, 20266), (334, 20344), (335, 20356), (348, 20431), (350, 20434), (363, 20581), (365, 20596), (367, 20611), (377, 20710), (379, 20758), (381, 20806), (382, 20812), (387, 20884), (393, 20968), (398, 21010), (400, 21064), (405, 21106), (410, 21190), (416, 21313), (425, 21433), (431, 21484), (440, 21643), (445, 21757), (457, 21925), (459, 21985), (460, 22012), (461, 22021), (471, 22153), (474, 22165), (481, 22249), (505, 22558), (507, 22570), (537, 23068), (538, 23101), (540, 23113), (546, 23191), (568, 23479), (572, 23497), (591, 23776), (616, 24064), (628, 24172), (631, 24211), (632, 24214), (634, 24253), (642, 24307), (643, 24316), (644, 24328), (646, 24346), (649, 24370), (655, 24400), (663, 24439), (666, 24463), (680, 24628), (681, 24652), (687, 24718), (689, 24730),

Gene: GOATification_28 Start: 17563, Stop: 24765, Start Num: 2

Candidate Starts for GOATification_28:

(1, 17542), (Start: 2 @17563 has 36 MA's), (6, 17710), (9, 17824), (11, 17923), (13, 17959), (15, 17971), (24, 18070), (41, 18202), (51, 18298), (56, 18340), (60, 18352), (66, 18376), (68, 18382), (79, 18445), (86, 18499), (88, 18502), (105, 18655), (106, 18658), (123, 18778), (127, 18805), (141, 18862), (151, 18931), (156, 18967), (159, 18988), (160, 19000), (162, 19012), (163, 19027), (173, 19063), (186, 19138), (187, 19144), (203, 19243), (211, 19312), (212, 19324), (214, 19333), (247, 19624), (252, 19666), (254, 19687), (255, 19696), (258, 19720), (259, 19726), (261, 19747), (267, 19810), (271, 19831), (278, 19927), (281, 19954), (285, 19987), (296, 20080), (302, 20110), (305, 20137), (312, 20188), (313, 20191), (314, 20197), (317, 20215), (321, 20227), (325, 20242), (327, 20266), (334, 20344), (335, 20356), (348, 20431), (350, 20434), (363, 20581), (365, 20596), (367, 20611), (377, 20710), (379, 20758), (381, 20806), (382, 20812), (387, 20884), (393, 20968), (398, 21010), (400, 21064), (405, 21106), (410, 21190), (416, 21313), (425, 21433), (431, 21484), (440, 21643), (445, 21757), (457, 21925), (459, 21985), (460, 22012), (461, 22021), (471, 22153), (474, 22165), (481, 22249), (505, 22558), (507, 22570), (537, 23068), (538, 23101), (540, 23113), (546, 23191), (568, 23479), (572, 23497), (591, 23776), (616, 24064), (628, 24172), (631, 24211), (632, 24214), (634, 24253), (642, 24307), (643, 24316), (644, 24328), (646, 24346), (649, 24370), (655, 24400), (663, 24439), (666, 24463), (680, 24628), (681, 24652), (687, 24718), (689, 24730),

Gene: Genamy16_27 Start: 15546, Stop: 22754, Start Num: 2

Candidate Starts for Genamy16_27:

(Start: 2 @15546 has 36 MA's), (4, 15561), (6, 15693), (9, 15807), (11, 15906), (13, 15942), (15, 15954), (22, 16038), (24, 16053), (41, 16185), (45, 16212), (49, 16272), (51, 16281), (56, 16323), (60, 16335), (66, 16359), (68, 16365), (74, 16386), (79, 16428), (86, 16482), (88, 16485), (106, 16641), (120, 16743), (123, 16761), (127, 16788), (138, 16836), (141, 16845), (156, 16950), (159, 16971), (160, 16983), (162, 16995), (163, 17010), (173, 17046), (186, 17121), (188, 17148), (203, 17226), (211, 17295), (212, 17307), (214, 17316), (245, 17595), (247, 17607), (252, 17649), (254, 17670), (255, 17679), (258, 17703), (259, 17709), (261, 17730), (271, 17814), (278, 17910), (281, 17937), (285, 17970), (296, 18063), (302, 18093), (312, 18171), (313, 18174), (317, 18198), (321, 18210), (325, 18225), (327, 18249), (334, 18327), (335, 18339), (348, 18414), (350, 18417), (363, 18564), (365, 18579), (367, 18594), (377, 18693), (379, 18741), (381, 18789), (382, 18795), (384, 18840), (387, 18867), (398, 18993), (400, 19047), (405, 19089), (410, 19173), (414, 19260), (416, 19296), (425, 19416), (431, 19467), (440, 19626), (445, 19740), (457, 19917), (460, 20004), (471, 20145), (474, 20157), (481, 20241), (537, 21060), (538, 21093), (540, 21105), (546, 21183), (566, 21459),

(569, 21471), (584, 21714), (591, 21765), (596, 21807), (616, 22053), (628, 22161), (631, 22200), (632, 22203), (634, 22242), (637, 22266), (642, 22296), (643, 22305), (644, 22317), (653, 22380), (655, 22389), (663, 22428), (666, 22452), (680, 22617), (681, 22641), (687, 22707), (689, 22719),

Gene: Gibbin_28 Start: 17635, Stop: 24846, Start Num: 2

Candidate Starts for Gibbin_28:

(1, 17614), (Start: 2 @17635 has 36 MA's), (6, 17782), (9, 17896), (11, 17995), (13, 18031), (15, 18043), (24, 18142), (41, 18274), (45, 18301), (46, 18304), (51, 18370), (56, 18412), (60, 18424), (66, 18448), (68, 18454), (79, 18517), (86, 18571), (88, 18574), (105, 18727), (106, 18730), (123, 18850), (127, 18877), (141, 18934), (151, 19003), (156, 19039), (159, 19060), (160, 19072), (162, 19084), (163, 19099), (173, 19135), (186, 19210), (203, 19315), (211, 19384), (212, 19396), (214, 19405), (247, 19696), (252, 19738), (254, 19759), (255, 19768), (258, 19792), (259, 19798), (261, 19819), (271, 19903), (278, 19999), (281, 20026), (285, 20059), (296, 20152), (302, 20182), (305, 20209), (312, 20260), (313, 20263), (317, 20287), (318, 20290), (321, 20299), (325, 20314), (327, 20338), (334, 20416), (335, 20428), (348, 20503), (350, 20506), (363, 20653), (365, 20668), (367, 20683), (377, 20782), (379, 20830), (381, 20878), (382, 20884), (387, 20956), (393, 21040), (398, 21082), (400, 21136), (405, 21178), (410, 21262), (416, 21385), (425, 21505), (431, 21556), (440, 21715), (445, 21829), (457, 21997), (460, 22084), (461, 22093), (471, 22225), (474, 22237), (481, 22321), (485, 22354), (505, 22630), (537, 23140), (540, 23185), (546, 23260), (568, 23560), (572, 23578), (591, 23857), (596, 23899), (616, 24145), (628, 24253), (631, 24292), (632, 24295), (634, 24334), (642, 24388), (643, 24397), (644, 24409), (646, 24427), (649, 24451), (653, 24472), (655, 24481), (663, 24520), (666, 24544), (680, 24709), (681, 24733), (687, 24799), (689, 24811),

Gene: Gretellyn_27 Start: 17897, Stop: 25108, Start Num: 2

Candidate Starts for Gretellyn_27:

(1, 17876), (Start: 2 @17897 has 36 MA's), (6, 18044), (9, 18158), (11, 18257), (13, 18293), (15, 18305), (24, 18404), (41, 18536), (45, 18563), (46, 18566), (51, 18632), (56, 18674), (60, 18686), (66, 18710), (68, 18716), (79, 18779), (86, 18833), (88, 18836), (105, 18989), (106, 18992), (120, 19094), (123, 19112), (127, 19139), (138, 19187), (141, 19196), (151, 19265), (156, 19301), (159, 19322), (160, 19334), (162, 19346), (163, 19361), (173, 19397), (177, 19430), (180, 19442), (186, 19472), (203, 19577), (211, 19646), (212, 19658), (214, 19667), (247, 19958), (250, 19982), (252, 20000), (254, 20021), (255, 20030), (258, 20054), (259, 20060), (261, 20081), (271, 20165), (278, 20261), (281, 20288), (285, 20321), (289, 20342), (296, 20414), (302, 20444), (305, 20471), (312, 20522), (313, 20525), (317, 20549), (321, 20561), (325, 20576), (327, 20600), (334, 20678), (335, 20690), (348, 20765), (350, 20768), (363, 20915), (365, 20930), (367, 20945), (377, 21044), (379, 21092), (381, 21140), (382, 21146), (387, 21218), (393, 21302), (398, 21344), (400, 21398), (405, 21440), (410, 21524), (416, 21647), (425, 21767), (431, 21818), (440, 21977), (445, 22091), (457, 22259), (460, 22346), (461, 22355), (471, 22487), (474, 22499), (481, 22583), (505, 22892), (537, 23402), (540, 23447), (546, 23522), (568, 23822), (572, 23840), (591, 24119), (616, 24407), (628, 24515), (631, 24554), (632, 24557), (634, 24596), (642, 24650), (643, 24659), (644, 24671), (646, 24689), (649, 24713), (655, 24743), (663, 24782), (666, 24806), (680, 24971), (681, 24995), (687, 25061), (689, 25073),

Gene: Jalebi_26 Start: 18073, Stop: 25275, Start Num: 2

Candidate Starts for Jalebi_26:

(1, 18052), (Start: 2 @18073 has 36 MA's), (6, 18220), (9, 18334), (11, 18433), (13, 18469), (15, 18481), (24, 18580), (41, 18712), (45, 18739), (46, 18742), (49, 18799), (51, 18808), (56, 18850), (60, 18862), (66, 18886), (68, 18892), (74, 18913), (79, 18955), (86, 19009), (88, 19012), (105, 19165), (106, 19168), (120, 19270), (123, 19288), (127, 19315), (138, 19363), (141, 19372), (151, 19441), (156, 19477), (159, 19498), (160, 19510), (162, 19522), (163, 19537), (173, 19573), (186, 19648), (203, 19753), (211, 19822), (212, 19834), (214, 19843), (247, 20134), (250, 20158), (252, 20176), (254, 20197), (255, 20206), (258, 20230), (259, 20236), (261, 20257), (271, 20341), (278, 20437), (281, 20464), (285, 20497), (296, 20590), (302, 20620), (305, 20647), (312, 20698), (313, 20701),

(317, 20725), (321, 20737), (325, 20752), (327, 20776), (334, 20854), (335, 20866), (348, 20941), (350, 20944), (363, 21091), (365, 21106), (367, 21121), (377, 21220), (379, 21268), (381, 21316), (382, 21322), (387, 21394), (393, 21478), (398, 21520), (400, 21574), (405, 21616), (410, 21700), (416, 21823), (425, 21943), (431, 21994), (440, 22153), (445, 22267), (457, 22435), (460, 22522), (461, 22531), (471, 22663), (474, 22675), (481, 22759), (485, 22792), (505, 23068), (537, 23578), (538, 23611), (540, 23623), (546, 23701), (568, 23989), (572, 24007), (591, 24286), (596, 24328), (616, 24574), (628, 24682), (631, 24721), (632, 24724), (634, 24763), (642, 24817), (643, 24826), (644, 24838), (646, 24856), (649, 24880), (655, 24910), (663, 24949), (666, 24973), (680, 25138), (681, 25162), (687, 25228), (689, 25240),

Gene: Jamemuya19_24 Start: 15136, Stop: 22344, Start Num: 2

Candidate Starts for Jamemuya19_24:

(1, 15115), (Start: 2 @15136 has 36 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (180, 16681), (186, 16711), (188, 16738), (203, 16816), (211, 16885), (212, 16897), (214, 16906), (245, 17185), (247, 17197), (252, 17239), (254, 17260), (255, 17269), (258, 17293), (259, 17299), (261, 17320), (271, 17404), (278, 17500), (281, 17527), (285, 17560), (296, 17653), (302, 17683), (312, 17761), (313, 17764), (317, 17788), (321, 17800), (325, 17815), (327, 17839), (334, 17917), (335, 17929), (348, 18004), (350, 18007), (363, 18154), (365, 18169), (367, 18184), (377, 18283), (379, 18331), (381, 18379), (382, 18385), (384, 18430), (387, 18457), (398, 18583), (400, 18637), (405, 18679), (410, 18763), (414, 18850), (416, 18886), (425, 19006), (431, 19057), (440, 19216), (445, 19330), (457, 19507), (460, 19594), (471, 19735), (474, 19747), (481, 19831), (537, 20650), (538, 20683), (540, 20695), (546, 20773), (566, 21049), (569, 21061), (591, 21355), (596, 21397), (616, 21643), (628, 21751), (631, 21790), (632, 21793), (634, 21832), (637, 21856), (642, 21886), (643, 21895), (644, 21907), (653, 21970), (655, 21979), (663, 22018), (666, 22042), (680, 22207), (681, 22231), (687, 22297), (689, 22309),

Gene: Konstantine_31 Start: 17436, Stop: 23759, Start Num: 19

Candidate Starts for Konstantine_31:

(Start: 19 @17436 has 9 MA's), (25, 17499), (36, 17580), (38, 17598), (58, 17745), (62, 17754), (65, 17766), (77, 17829), (91, 17913), (112, 18099), (115, 18108), (150, 18318), (160, 18393), (178, 18495), (181, 18510), (187, 18540), (190, 18573), (193, 18591), (199, 18621), (200, 18624), (204, 18645), (205, 18654), (211, 18717), (214, 18738), (215, 18744), (217, 18768), (231, 18879), (233, 18897), (235, 18918), (237, 18945), (250, 19053), (263, 19146), (264, 19155), (268, 19200), (275, 19287), (283, 19356), (301, 19494), (303, 19509), (316, 19596), (335, 19743), (341, 19785), (344, 19794), (346, 19806), (349, 19815), (378, 20139), (381, 20196), (389, 20307), (396, 20382), (403, 20472), (417, 20715), (423, 20811), (437, 20931), (440, 20991), (443, 21039), (444, 21060), (448, 21120), (458, 21201), (467, 21351), (485, 21510), (486, 21531), (489, 21576), (498, 21630), (501, 21738), (515, 21834), (516, 21843), (520, 21873), (521, 21876), (541, 22191), (565, 22464), (567, 22473), (577, 22548), (578, 22581), (579, 22593), (580, 22602), (588, 22725), (600, 22845), (605, 22929), (611, 22995), (617, 23040), (619, 23067), (634, 23229), (635, 23232), (640, 23271), (642, 23283), (643, 23292), (667, 23499), (678, 23613), (683, 23658), (687, 23709), (688, 23712), (689, 23721), (690, 23736),

Gene: Labelle_33 Start: 19567, Stop: 26214, Start Num: 20

Candidate Starts for Labelle_33:

(Start: 20 @19567 has 5 MA's), (29, 19660), (31, 19672), (32, 19681), (37, 19714), (42, 19756), (55, 19861), (67, 19918), (69, 19924), (71, 19930), (78, 19987), (80, 19993), (82, 19999), (104, 20197), (108, 20227), (109, 20239), (114, 20275), (134, 20416), (152, 20512), (158, 20560), (173, 20638), (174, 20662), (181, 20695), (188, 20746), (194, 20779), (202, 20818), (212, 20908), (217, 20947), (218, 20959), (222, 21007), (226, 21040), (236, 21106), (244, 21175), (246, 21199), (248, 21217),

(251, 21241), (262, 21322), (264, 21334), (275, 21469), (276, 21478), (286, 21562), (292, 21604), (302, 21682), (308, 21727), (331, 21883), (333, 21904), (335, 21946), (345, 22009), (361, 22165), (364, 22192), (367, 22213), (368, 22216), (370, 22255), (372, 22267), (380, 22402), (383, 22459), (392, 22585), (397, 22627), (399, 22678), (407, 22762), (416, 22933), (417, 22945), (424, 23053), (430, 23107), (432, 23119), (441, 23257), (468, 23620), (483, 23755), (490, 23839), (519, 24169), (522, 24202), (524, 24211), (552, 24721), (554, 24748), (559, 24796), (563, 24853), (576, 24952), (587, 25138), (604, 25324), (622, 25534), (634, 25675), (638, 25705), (649, 25807), (656, 25846), (659, 25861), (670, 25993), (672, 26017), (674, 26041), (682, 26101), (684, 26119), (685, 26152), (687, 26164), (688, 26167), (690, 26191),

Gene: Lambo_27 Start: 17575, Stop: 24783, Start Num: 2

Candidate Starts for Lambo_27:

(1, 17554), (Start: 2 @17575 has 36 MA's), (6, 17722), (9, 17836), (11, 17935), (13, 17971), (15, 17983), (24, 18082), (41, 18214), (49, 18301), (51, 18310), (56, 18352), (60, 18364), (66, 18388), (68, 18394), (79, 18457), (82, 18466), (86, 18511), (88, 18514), (105, 18667), (106, 18670), (120, 18772), (123, 18790), (127, 18817), (138, 18865), (141, 18874), (151, 18943), (156, 18979), (159, 19000), (160, 19012), (162, 19024), (163, 19039), (173, 19075), (186, 19150), (203, 19255), (211, 19324), (212, 19336), (214, 19345), (247, 19636), (252, 19678), (254, 19699), (255, 19708), (258, 19732), (259, 19738), (261, 19759), (271, 19843), (278, 19939), (281, 19966), (285, 19999), (296, 20092), (302, 20122), (305, 20149), (312, 20200), (313, 20203), (317, 20227), (321, 20239), (325, 20254), (327, 20278), (334, 20356), (335, 20368), (348, 20443), (363, 20593), (365, 20608), (367, 20623), (377, 20722), (379, 20770), (381, 20818), (382, 20824), (387, 20896), (393, 20980), (398, 21022), (400, 21076), (405, 21118), (410, 21202), (416, 21325), (425, 21445), (431, 21496), (445, 21769), (457, 21946), (460, 22033), (464, 22108), (471, 22174), (474, 22186), (481, 22270), (485, 22303), (486, 22324), (537, 23089), (538, 23122), (540, 23134), (546, 23212), (564, 23476), (566, 23488), (569, 23500), (596, 23836), (616, 24082), (625, 24169), (628, 24190), (631, 24229), (634, 24271), (641, 24316), (642, 24325), (643, 24334), (644, 24346), (653, 24409), (655, 24418), (663, 24457), (666, 24481), (680, 24646), (681, 24670), (686, 24727), (687, 24736), (689, 24748),

Gene: LavAbarElk_25 Start: 16012, Stop: 23214, Start Num: 2

Candidate Starts for LavAbarElk_25:

(1, 15991), (Start: 2 @16012 has 36 MA's), (6, 16159), (9, 16273), (11, 16372), (13, 16408), (15, 16420), (24, 16519), (41, 16651), (45, 16678), (46, 16681), (51, 16747), (56, 16789), (60, 16801), (66, 16825), (68, 16831), (79, 16894), (86, 16948), (88, 16951), (105, 17104), (106, 17107), (120, 17209), (123, 17227), (127, 17254), (138, 17302), (141, 17311), (151, 17380), (156, 17416), (159, 17437), (160, 17449), (162, 17461), (163, 17476), (173, 17512), (186, 17587), (187, 17593), (203, 17692), (211, 17761), (212, 17773), (214, 17782), (247, 18073), (252, 18115), (254, 18136), (255, 18145), (258, 18169), (259, 18175), (261, 18196), (271, 18280), (278, 18376), (281, 18403), (285, 18436), (296, 18529), (302, 18559), (305, 18586), (312, 18637), (313, 18640), (317, 18664), (321, 18676), (325, 18691), (327, 18715), (334, 18793), (335, 18805), (348, 18880), (350, 18883), (363, 19030), (365, 19045), (367, 19060), (377, 19159), (379, 19207), (381, 19255), (382, 19261), (387, 19333), (393, 19417), (398, 19459), (400, 19513), (405, 19555), (410, 19639), (416, 19762), (425, 19882), (431, 19933), (440, 20092), (445, 20206), (457, 20374), (459, 20434), (460, 20461), (461, 20470), (471, 20602), (474, 20614), (481, 20698), (485, 20731), (505, 21007), (537, 21517), (538, 21550), (540, 21562), (546, 21640), (568, 21928), (572, 21946), (591, 22225), (596, 22267), (616, 22513), (628, 22621), (631, 22660), (632, 22663), (634, 22702), (642, 22756), (643, 22765), (644, 22777), (646, 22795), (649, 22819), (655, 22849), (663, 22888), (666, 22912), (680, 23077), (681, 23101), (687, 23167), (689, 23179),

Gene: Lila22_26 Start: 17521, Stop: 24735, Start Num: 2

Candidate Starts for Lila22_26:

(1, 17500), (Start: 2 @17521 has 36 MA's), (6, 17668), (9, 17782), (11, 17881), (13, 17917), (15, 17929), (24, 18028), (41, 18160), (51, 18256), (56, 18298), (60, 18310), (66, 18334), (68, 18340), (79,

18403), (86, 18457), (88, 18460), (105, 18613), (106, 18616), (120, 18718), (123, 18736), (127, 18763), (138, 18811), (141, 18820), (151, 18889), (156, 18925), (159, 18946), (160, 18958), (162, 18970), (163, 18985), (173, 19021), (186, 19096), (203, 19201), (211, 19270), (212, 19282), (214, 19291), (247, 19582), (252, 19624), (254, 19645), (255, 19654), (258, 19678), (259, 19684), (261, 19705), (271, 19789), (278, 19885), (281, 19912), (285, 19945), (289, 19966), (302, 20068), (312, 20146), (313, 20149), (317, 20173), (321, 20185), (325, 20200), (327, 20224), (334, 20302), (335, 20314), (350, 20392), (363, 20539), (365, 20554), (367, 20569), (377, 20668), (379, 20716), (381, 20764), (382, 20770), (387, 20842), (393, 20926), (398, 20968), (400, 21022), (405, 21064), (410, 21148), (416, 21271), (425, 21391), (431, 21442), (440, 21601), (445, 21715), (457, 21895), (460, 21982), (461, 21991), (471, 22123), (474, 22135), (481, 22219), (485, 22252), (505, 22528), (537, 23038), (538, 23071), (540, 23083), (546, 23161), (568, 23449), (572, 23467), (591, 23746), (596, 23788), (616, 24034), (628, 24142), (631, 24181), (632, 24184), (634, 24223), (642, 24277), (643, 24286), (644, 24298), (646, 24316), (649, 24340), (655, 24370), (663, 24409), (666, 24433), (677, 24583), (680, 24598), (681, 24622), (687, 24688), (689, 24700),

Gene: LilyPad_23 Start: 13210, Stop: 19905, Start Num: 47

Candidate Starts for LilyPad_23:

(43, 13186), (Start: 47 @13210 has 9 MA's), (53, 13279), (59, 13321), (69, 13354), (75, 13384), (82, 13426), (97, 13552), (98, 13558), (102, 13606), (124, 13744), (128, 13771), (129, 13777), (157, 13945), (159, 13954), (164, 13996), (173, 14029), (184, 14086), (192, 14140), (213, 14281), (223, 14386), (237, 14494), (238, 14497), (241, 14512), (249, 14593), (254, 14641), (256, 14659), (262, 14692), (266, 14734), (271, 14767), (277, 14854), (281, 14890), (282, 14893), (288, 14938), (289, 14944), (294, 14989), (304, 15061), (310, 15112), (312, 15121), (315, 15139), (318, 15151), (320, 15157), (327, 15196), (330, 15220), (337, 15295), (342, 15337), (343, 15340), (350, 15373), (355, 15388), (356, 15415), (357, 15424), (367, 15556), (369, 15577), (372, 15601), (376, 15631), (378, 15691), (379, 15700), (395, 15931), (397, 15943), (399, 15994), (400, 16006), (401, 16015), (411, 16186), (415, 16237), (417, 16258), (421, 16330), (422, 16342), (450, 16846), (459, 17026), (478, 17326), (481, 17350), (485, 17383), (486, 17404), (488, 17446), (496, 17506), (507, 17671), (511, 17695), (536, 18184), (539, 18226), (540, 18235), (543, 18262), (557, 18505), (560, 18541), (570, 18634), (586, 18874), (592, 18919), (594, 18934), (598, 18988), (607, 19135), (608, 19144), (612, 19168), (616, 19192), (630, 19342), (635, 19396), (643, 19456), (644, 19468), (646, 19486), (652, 19528), (655, 19540), (661, 19570), (663, 19579), (665, 19591), (670, 19687), (676, 19750), (685, 19846), (686, 19849), (688, 19861), (691, 19891),

Gene: LittleFella_24 Start: 15083, Stop: 21778, Start Num: 47

Candidate Starts for LittleFella_24:

(Start: 47 @15083 has 9 MA's), (57, 15185), (59, 15194), (69, 15227), (82, 15299), (83, 15320), (94, 15404), (96, 15419), (98, 15431), (100, 15437), (111, 15548), (122, 15602), (129, 15647), (132, 15656), (144, 15710), (145, 15716), (148, 15752), (154, 15782), (159, 15824), (161, 15845), (165, 15869), (167, 15878), (179, 15929), (191, 16004), (192, 16010), (195, 16028), (201, 16058), (237, 16364), (251, 16481), (257, 16538), (270, 16631), (277, 16724), (281, 16760), (286, 16796), (287, 16805), (288, 16808), (289, 16814), (291, 16826), (294, 16859), (298, 16895), (312, 16991), (315, 17009), (316, 17012), (320, 17027), (322, 17033), (324, 17036), (327, 17066), (337, 17165), (342, 17207), (343, 17210), (355, 17258), (356, 17285), (357, 17294), (358, 17303), (367, 17426), (372, 17471), (376, 17501), (378, 17558), (389, 17726), (397, 17810), (399, 17861), (401, 17882), (406, 17924), (413, 18062), (428, 18260), (439, 18386), (446, 18596), (449, 18662), (455, 18824), (462, 18989), (479, 19229), (480, 19238), (482, 19262), (486, 19304), (487, 19313), (496, 19406), (506, 19565), (507, 19571), (510, 19589), (511, 19595), (536, 20078), (543, 20156), (557, 20399), (570, 20528), (592, 20804), (594, 20819), (607, 21011), (608, 21020), (612, 21044), (616, 21068), (629, 21212), (630, 21218), (635, 21272), (644, 21344), (646, 21362), (652, 21404), (661, 21446), (663, 21455), (670, 21563), (675, 21623), (685, 21722), (686, 21725), (688, 21737), (691, 21767),

Gene: LuckyLeo_26 Start: 16873, Stop: 24093, Start Num: 2

Candidate Starts for LuckyLeo_26:

(1, 16852), (Start: 2 @16873 has 36 MA's), (7, 17068), (10, 17143), (12, 17248), (13, 17269), (14, 17272), (17, 17302), (18, 17311), (22, 17365), (28, 17428), (30, 17434), (44, 17530), (48, 17581), (51, 17608), (60, 17662), (63, 17671), (66, 17686), (82, 17764), (85, 17800), (90, 17824), (111, 18019), (116, 18049), (135, 18154), (151, 18244), (155, 18268), (156, 18280), (159, 18301), (160, 18313), (163, 18340), (177, 18409), (184, 18445), (186, 18451), (189, 18481), (197, 18526), (201, 18547), (203, 18556), (206, 18580), (212, 18637), (224, 18757), (245, 18925), (252, 18979), (254, 19000), (256, 19018), (258, 19033), (261, 19060), (271, 19144), (281, 19267), (302, 19423), (305, 19450), (308, 19471), (312, 19501), (319, 19534), (325, 19555), (327, 19579), (328, 19582), (329, 19585), (331, 19606), (332, 19618), (334, 19657), (338, 19693), (348, 19744), (359, 19804), (360, 19837), (366, 19915), (367, 19924), (381, 20113), (382, 20119), (387, 20191), (388, 20221), (393, 20275), (398, 20317), (405, 20413), (410, 20497), (416, 20620), (425, 20740), (431, 20791), (457, 21244), (458, 21274), (460, 21331), (464, 21406), (471, 21472), (474, 21484), (481, 21568), (485, 21601), (486, 21622), (492, 21691), (537, 22387), (546, 22507), (547, 22510), (568, 22807), (572, 22825), (591, 23104), (595, 23131), (606, 23320), (616, 23392), (625, 23479), (628, 23500), (631, 23539), (634, 23581), (642, 23635), (643, 23644), (644, 23656), (653, 23719), (655, 23728), (663, 23767), (666, 23791), (671, 23893), (680, 23956), (681, 23980), (686, 24037), (687, 24046), (689, 24058),

Gene: Madi_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Madi_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (124, 13080), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (192, 13476), (195, 13494), (199, 13515), (228, 13758), (232, 13767), (234, 13800), (235, 13803), (237, 13830), (255, 13986), (270, 14097), (271, 14103), (277, 14190), (288, 14274), (293, 14307), (294, 14325), (300, 14370), (305, 14409), (307, 14421), (309, 14436), (312, 14457), (316, 14478), (318, 14487), (320, 14493), (324, 14502), (327, 14532), (343, 14676), (350, 14709), (355, 14724), (367, 14892), (372, 14937), (374, 14946), (376, 14967), (378, 15021), (392, 15231), (397, 15273), (401, 15345), (419, 15654), (424, 15702), (427, 15723), (435, 15831), (450, 16212), (453, 16287), (460, 16473), (475, 16704), (479, 16752), (484, 16803), (486, 16827), (487, 16836), (496, 16929), (507, 17094), (511, 17118), (513, 17133), (536, 17607), (539, 17649), (543, 17685), (557, 17928), (560, 17964), (570, 18057), (582, 18216), (592, 18336), (594, 18351), (598, 18405), (605, 18519), (607, 18552), (608, 18561), (612, 18585), (616, 18609), (629, 18753), (630, 18759), (639, 18846), (643, 18873), (644, 18885), (646, 18903), (652, 18945), (660, 18978), (661, 18987), (663, 18996), (665, 19008), (670, 19104), (675, 19164), (676, 19167), (685, 19263), (686, 19266), (688, 19278), (689, 19287), (691, 19308),

Gene: Madrugua_32 Start: 19236, Stop: 25883, Start Num: 20

Candidate Starts for Madrugua_32:

(Start: 20 @19236 has 5 MA's), (29, 19329), (31, 19341), (32, 19350), (34, 19371), (37, 19383), (42, 19425), (55, 19530), (67, 19587), (69, 19593), (71, 19599), (78, 19656), (80, 19662), (82, 19668), (104, 19866), (108, 19896), (109, 19908), (114, 19944), (134, 20085), (152, 20181), (158, 20229), (173, 20307), (174, 20331), (181, 20364), (188, 20415), (194, 20448), (202, 20487), (212, 20577), (217, 20616), (218, 20628), (222, 20676), (226, 20709), (236, 20775), (244, 20844), (246, 20868), (248, 20886), (251, 20910), (262, 20991), (264, 21003), (275, 21138), (276, 21147), (286, 21231), (292, 21273), (302, 21351), (308, 21396), (331, 21552), (333, 21573), (335, 21615), (345, 21678), (361, 21834), (364, 21861), (367, 21882), (368, 21885), (370, 21924), (372, 21936), (380, 22071), (383, 22128), (392, 22254), (397, 22296), (399, 22347), (407, 22431), (416, 22602), (417, 22614), (430, 22776), (432, 22788), (441, 22926), (468, 23289), (483, 23424), (490, 23508), (519, 23838), (522, 23871), (524, 23880), (527, 23934), (552, 24390), (554, 24417), (559, 24465), (563, 24522), (576, 24621), (587, 24807), (604, 24993), (622, 25203), (634, 25344), (638, 25374), (649, 25476), (656, 25515), (659, 25530), (670, 25662), (672, 25686), (674, 25710), (682, 25770), (684, 25788), (685, 25821), (687, 25833), (688, 25836), (690, 25860),

Gene: Megatron06_28 Start: 16768, Stop: 23091, Start Num: 19

Candidate Starts for Megatron06_28:

(Start: 19 @16768 has 9 MA's), (25, 16831), (36, 16912), (38, 16930), (58, 17077), (62, 17086), (65, 17098), (77, 17161), (91, 17245), (112, 17431), (115, 17440), (121, 17497), (150, 17650), (160, 17725), (178, 17827), (181, 17842), (187, 17872), (190, 17905), (193, 17923), (199, 17953), (204, 17977), (205, 17986), (211, 18049), (214, 18070), (215, 18076), (217, 18100), (231, 18211), (233, 18229), (235, 18250), (237, 18277), (250, 18385), (263, 18478), (264, 18487), (268, 18532), (275, 18619), (283, 18688), (303, 18841), (316, 18928), (335, 19075), (341, 19117), (344, 19126), (346, 19138), (349, 19147), (378, 19471), (381, 19528), (396, 19714), (403, 19804), (417, 20047), (422, 20131), (423, 20143), (437, 20263), (440, 20323), (443, 20371), (444, 20392), (448, 20452), (458, 20533), (467, 20683), (476, 20761), (485, 20842), (486, 20863), (489, 20908), (498, 20962), (501, 21070), (515, 21166), (516, 21175), (520, 21205), (521, 21208), (541, 21523), (565, 21796), (567, 21805), (577, 21880), (578, 21913), (579, 21925), (580, 21934), (588, 22057), (600, 22177), (605, 22261), (611, 22327), (617, 22372), (619, 22399), (634, 22561), (635, 22564), (640, 22603), (642, 22615), (643, 22624), (667, 22831), (678, 22945), (683, 22990), (687, 23041), (688, 23044), (689, 23053), (690, 23068),

Gene: Mima20_25 Start: 17262, Stop: 24464, Start Num: 2

Candidate Starts for Mima20_25:

(1, 17241), (Start: 2 @17262 has 36 MA's), (6, 17409), (9, 17523), (11, 17622), (13, 17658), (15, 17670), (24, 17769), (41, 17901), (45, 17928), (46, 17931), (51, 17997), (56, 18039), (60, 18051), (66, 18075), (68, 18081), (79, 18144), (86, 18198), (88, 18201), (105, 18354), (106, 18357), (120, 18459), (123, 18477), (127, 18504), (141, 18561), (151, 18630), (156, 18666), (159, 18687), (160, 18699), (162, 18711), (163, 18726), (173, 18762), (186, 18837), (203, 18942), (211, 19011), (212, 19023), (214, 19032), (247, 19323), (252, 19365), (254, 19386), (255, 19395), (258, 19419), (259, 19425), (261, 19446), (271, 19530), (278, 19626), (281, 19653), (285, 19686), (296, 19779), (302, 19809), (305, 19836), (312, 19887), (313, 19890), (317, 19914), (321, 19926), (325, 19941), (327, 19965), (334, 20043), (335, 20055), (350, 20133), (363, 20280), (365, 20295), (367, 20310), (377, 20409), (379, 20457), (381, 20505), (382, 20511), (384, 20556), (387, 20583), (393, 20667), (398, 20709), (400, 20763), (405, 20805), (410, 20889), (416, 21012), (425, 21132), (431, 21183), (440, 21342), (445, 21456), (457, 21624), (460, 21711), (471, 21852), (474, 21864), (481, 21948), (485, 21981), (505, 22257), (537, 22767), (538, 22800), (540, 22812), (546, 22890), (568, 23178), (572, 23196), (591, 23475), (596, 23517), (616, 23763), (628, 23871), (631, 23910), (632, 23913), (634, 23952), (642, 24006), (643, 24015), (644, 24027), (646, 24045), (649, 24069), (663, 24138), (666, 24162), (680, 24327), (681, 24351), (687, 24417), (689, 24429),

Gene: MoiGyank_29 Start: 17934, Stop: 25145, Start Num: 2

Candidate Starts for MoiGyank_29:

(1, 17913), (Start: 2 @17934 has 36 MA's), (6, 18081), (9, 18195), (11, 18294), (13, 18330), (15, 18342), (24, 18441), (41, 18573), (45, 18600), (46, 18603), (51, 18669), (56, 18711), (60, 18723), (66, 18747), (68, 18753), (79, 18816), (86, 18870), (88, 18873), (105, 19026), (106, 19029), (123, 19149), (127, 19176), (141, 19233), (151, 19302), (156, 19338), (159, 19359), (160, 19371), (162, 19383), (163, 19398), (173, 19434), (186, 19509), (203, 19614), (211, 19683), (212, 19695), (214, 19704), (247, 19995), (252, 20037), (254, 20058), (255, 20067), (258, 20091), (259, 20097), (261, 20118), (271, 20202), (278, 20298), (281, 20325), (285, 20358), (296, 20451), (302, 20481), (305, 20508), (312, 20559), (313, 20562), (317, 20586), (321, 20598), (325, 20613), (327, 20637), (334, 20715), (335, 20727), (348, 20802), (350, 20805), (363, 20952), (365, 20967), (367, 20982), (377, 21081), (379, 21129), (381, 21177), (382, 21183), (387, 21255), (393, 21339), (398, 21381), (400, 21435), (405, 21477), (410, 21561), (416, 21684), (425, 21804), (431, 21855), (440, 22014), (445, 22128), (457, 22296), (460, 22383), (461, 22392), (469, 22515), (471, 22524), (474, 22536), (481, 22620), (505, 22929), (537, 23439), (540, 23484), (546, 23559), (568, 23859), (572, 23877), (591, 24156), (596, 24198), (616, 24444), (628, 24552), (631, 24591), (632, 24594), (634, 24633), (642, 24687), (643, 24696), (644, 24708), (646, 24726), (649, 24750), (653, 24771), (655, 24780), (663, 24819),

(666, 24843), (680, 25008), (681, 25032), (687, 25098), (689, 25110),

Gene: NorManre_28 Start: 17141, Stop: 24352, Start Num: 2

Candidate Starts for NorManre_28:

(1, 17120), (Start: 2 @17141 has 36 MA's), (6, 17288), (9, 17402), (11, 17501), (13, 17537), (15, 17549), (22, 17633), (24, 17648), (41, 17780), (45, 17807), (46, 17810), (51, 17876), (56, 17918), (60, 17930), (66, 17954), (68, 17960), (79, 18023), (86, 18077), (88, 18080), (105, 18233), (106, 18236), (123, 18356), (127, 18383), (138, 18431), (141, 18440), (151, 18509), (156, 18545), (159, 18566), (160, 18578), (162, 18590), (163, 18605), (173, 18641), (177, 18674), (180, 18686), (186, 18716), (203, 18821), (211, 18890), (212, 18902), (214, 18911), (226, 19034), (247, 19202), (250, 19226), (252, 19244), (254, 19265), (255, 19274), (258, 19298), (259, 19304), (261, 19325), (271, 19409), (278, 19505), (281, 19532), (285, 19565), (296, 19658), (302, 19688), (305, 19715), (312, 19766), (313, 19769), (317, 19793), (321, 19805), (325, 19820), (327, 19844), (334, 19922), (335, 19934), (348, 20009), (350, 20012), (363, 20159), (365, 20174), (367, 20189), (377, 20288), (379, 20336), (381, 20384), (382, 20390), (387, 20462), (393, 20546), (398, 20588), (400, 20642), (405, 20684), (410, 20768), (416, 20891), (425, 21011), (431, 21062), (440, 21221), (445, 21335), (457, 21503), (460, 21590), (461, 21599), (471, 21731), (474, 21743), (481, 21827), (485, 21860), (505, 22136), (537, 22646), (540, 22691), (546, 22766), (568, 23066), (572, 23084), (591, 23363), (596, 23405), (616, 23651), (628, 23759), (631, 23798), (632, 23801), (634, 23840), (642, 23894), (643, 23903), (644, 23915), (646, 23933), (649, 23957), (655, 23987), (663, 24026), (666, 24050), (680, 24215), (681, 24239), (687, 24305), (689, 24317),

Gene: NovaSharks_26 Start: 15136, Stop: 22344, Start Num: 2

Candidate Starts for NovaSharks_26:

(1, 15115), (Start: 2 @15136 has 36 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (180, 16681), (186, 16711), (188, 16738), (203, 16816), (211, 16885), (212, 16897), (214, 16906), (245, 17185), (247, 17197), (252, 17239), (254, 17260), (255, 17269), (258, 17293), (259, 17299), (261, 17320), (271, 17404), (278, 17500), (281, 17527), (285, 17560), (296, 17653), (302, 17683), (312, 17761), (313, 17764), (317, 17788), (321, 17800), (325, 17815), (327, 17839), (334, 17917), (335, 17929), (348, 18004), (350, 18007), (363, 18154), (365, 18169), (367, 18184), (377, 18283), (379, 18331), (381, 18379), (382, 18385), (384, 18430), (387, 18457), (398, 18583), (400, 18637), (405, 18679), (410, 18763), (414, 18850), (416, 18886), (425, 19006), (431, 19057), (440, 19216), (445, 19330), (457, 19507), (460, 19594), (471, 19735), (474, 19747), (481, 19831), (537, 20650), (538, 20683), (540, 20695), (546, 20773), (566, 21049), (569, 21061), (584, 21304), (591, 21355), (596, 21397), (616, 21643), (628, 21751), (631, 21790), (632, 21793), (634, 21832), (637, 21856), (642, 21886), (643, 21895), (644, 21907), (653, 21970), (655, 21979), (663, 22018), (666, 22042), (680, 22207), (681, 22231), (687, 22297), (689, 22309),

Gene: Oaker_26 Start: 16492, Stop: 22815, Start Num: 19

Candidate Starts for Oaker_26:

(Start: 19 @16492 has 9 MA's), (25, 16555), (36, 16636), (38, 16654), (58, 16801), (62, 16810), (65, 16822), (77, 16885), (84, 16927), (91, 16969), (112, 17155), (115, 17164), (150, 17374), (160, 17449), (178, 17551), (181, 17566), (187, 17596), (190, 17629), (193, 17647), (199, 17677), (204, 17701), (205, 17710), (211, 17773), (214, 17794), (215, 17800), (217, 17824), (231, 17935), (233, 17953), (235, 17974), (237, 18001), (250, 18109), (263, 18202), (264, 18211), (268, 18256), (275, 18343), (283, 18412), (301, 18550), (303, 18565), (316, 18652), (335, 18799), (341, 18841), (344, 18850), (346, 18862), (349, 18871), (378, 19195), (381, 19252), (389, 19363), (396, 19438), (403, 19528), (417, 19771), (422, 19855), (423, 19867), (437, 19987), (440, 20047), (443, 20095), (444, 20116), (448, 20176), (458, 20257), (467, 20407), (485, 20566), (486, 20587), (489, 20632), (498, 20686),

(501, 20794), (515, 20890), (516, 20899), (520, 20929), (521, 20932), (541, 21247), (565, 21520), (567, 21529), (577, 21604), (578, 21637), (579, 21649), (580, 21658), (588, 21781), (600, 21901), (605, 21985), (611, 22051), (617, 22096), (619, 22123), (634, 22285), (635, 22288), (640, 22327), (642, 22339), (643, 22348), (667, 22555), (678, 22669), (683, 22714), (687, 22765), (688, 22768), (689, 22777), (690, 22792),

Gene: OtterstedtS21_27 Start: 17219, Stop: 24430, Start Num: 2

Candidate Starts for OtterstedtS21_27:

(1, 17198), (Start: 2 @17219 has 36 MA's), (6, 17366), (9, 17480), (11, 17579), (13, 17615), (15, 17627), (24, 17726), (41, 17858), (45, 17885), (46, 17888), (51, 17954), (56, 17996), (60, 18008), (66, 18032), (68, 18038), (79, 18101), (86, 18155), (88, 18158), (105, 18311), (106, 18314), (120, 18416), (123, 18434), (127, 18461), (138, 18509), (141, 18518), (151, 18587), (156, 18623), (159, 18644), (160, 18656), (162, 18668), (163, 18683), (173, 18719), (186, 18794), (203, 18899), (211, 18968), (212, 18980), (214, 18989), (247, 19280), (252, 19322), (254, 19343), (255, 19352), (258, 19376), (259, 19382), (261, 19403), (271, 19487), (278, 19583), (281, 19610), (285, 19643), (289, 19664), (296, 19736), (302, 19766), (305, 19793), (312, 19844), (313, 19847), (317, 19871), (321, 19883), (325, 19898), (327, 19922), (334, 20000), (335, 20012), (363, 20237), (365, 20252), (367, 20267), (377, 20366), (379, 20414), (381, 20462), (382, 20468), (387, 20540), (393, 20624), (398, 20666), (400, 20720), (405, 20762), (410, 20846), (416, 20969), (425, 21089), (431, 21140), (440, 21299), (445, 21413), (457, 21581), (460, 21668), (461, 21677), (469, 21800), (471, 21809), (474, 21821), (481, 21905), (505, 22214), (537, 22724), (540, 22769), (546, 22844), (568, 23144), (572, 23162), (591, 23441), (596, 23483), (616, 23729), (628, 23837), (631, 23876), (632, 23879), (634, 23918), (642, 23972), (643, 23981), (644, 23993), (646, 24011), (649, 24035), (653, 24056), (655, 24065), (663, 24104), (666, 24128), (680, 24293), (681, 24317), (687, 24383), (689, 24395),

Gene: ParvusTarda_27 Start: 16701, Stop: 23912, Start Num: 2

Candidate Starts for ParvusTarda_27:

(1, 16680), (Start: 2 @16701 has 36 MA's), (6, 16848), (9, 16962), (11, 17061), (13, 17097), (15, 17109), (24, 17208), (41, 17340), (45, 17367), (49, 17427), (51, 17436), (56, 17478), (60, 17490), (66, 17514), (68, 17520), (79, 17583), (82, 17592), (86, 17637), (88, 17640), (105, 17793), (106, 17796), (123, 17916), (127, 17943), (141, 18000), (151, 18069), (156, 18105), (159, 18126), (160, 18138), (162, 18150), (163, 18165), (173, 18201), (186, 18276), (203, 18381), (211, 18450), (212, 18462), (214, 18471), (247, 18762), (252, 18804), (254, 18825), (255, 18834), (258, 18858), (259, 18864), (261, 18885), (267, 18948), (271, 18969), (278, 19065), (281, 19092), (285, 19125), (296, 19218), (302, 19248), (305, 19275), (312, 19326), (313, 19329), (314, 19335), (317, 19353), (321, 19365), (325, 19380), (327, 19404), (334, 19482), (335, 19494), (348, 19569), (350, 19572), (363, 19719), (365, 19734), (367, 19749), (377, 19848), (379, 19896), (381, 19944), (382, 19950), (387, 20022), (393, 20106), (398, 20148), (400, 20202), (405, 20244), (410, 20328), (416, 20451), (425, 20571), (431, 20622), (440, 20781), (445, 20895), (457, 21072), (460, 21159), (464, 21234), (471, 21300), (474, 21312), (481, 21396), (485, 21429), (486, 21450), (537, 22215), (538, 22248), (540, 22260), (546, 22338), (568, 22626), (572, 22644), (596, 22965), (616, 23211), (625, 23298), (628, 23319), (631, 23358), (634, 23400), (641, 23445), (642, 23454), (643, 23463), (644, 23475), (653, 23538), (655, 23547), (663, 23586), (666, 23610), (680, 23775), (681, 23799), (687, 23865), (689, 23877),

Gene: Patience_34 Start: 20117, Stop: 26764, Start Num: 20

Candidate Starts for Patience_34:

(Start: 20 @20117 has 5 MA's), (29, 20210), (31, 20222), (32, 20231), (34, 20252), (37, 20264), (42, 20306), (55, 20411), (67, 20468), (69, 20474), (71, 20480), (78, 20537), (80, 20543), (82, 20549), (104, 20747), (108, 20777), (109, 20789), (114, 20825), (134, 20966), (152, 21062), (158, 21110), (173, 21188), (174, 21212), (181, 21245), (188, 21296), (194, 21329), (202, 21368), (212, 21458), (217, 21497), (218, 21509), (222, 21557), (226, 21590), (236, 21656), (244, 21725), (246, 21749), (248, 21767), (251, 21791), (262, 21872), (264, 21884), (275, 22019), (276, 22028), (286, 22112), (302, 22232), (308, 22277), (331, 22433), (333, 22454), (335, 22496), (345, 22559), (361, 22715), (364,

22742), (367, 22763), (368, 22766), (370, 22805), (372, 22817), (380, 22952), (383, 23009), (392, 23135), (397, 23177), (399, 23228), (407, 23312), (416, 23483), (417, 23495), (424, 23603), (430, 23657), (432, 23669), (441, 23807), (468, 24170), (483, 24305), (490, 24389), (519, 24719), (522, 24752), (524, 24761), (527, 24815), (552, 25271), (554, 25298), (559, 25346), (563, 25403), (576, 25502), (587, 25688), (604, 25874), (622, 26084), (634, 26225), (638, 26255), (649, 26357), (659, 26411), (670, 26543), (672, 26567), (674, 26591), (682, 26651), (684, 26669), (685, 26702), (687, 26714), (688, 26717), (690, 26741),

Gene: Patos_28 Start: 17141, Stop: 24352, Start Num: 2

Candidate Starts for Patos_28:

(1, 17120), (Start: 2 @17141 has 36 MA's), (6, 17288), (9, 17402), (11, 17501), (13, 17537), (15, 17549), (22, 17633), (24, 17648), (41, 17780), (45, 17807), (46, 17810), (51, 17876), (56, 17918), (60, 17930), (66, 17954), (68, 17960), (79, 18023), (86, 18077), (88, 18080), (105, 18233), (106, 18236), (123, 18356), (127, 18383), (138, 18431), (141, 18440), (151, 18509), (156, 18545), (159, 18566), (160, 18578), (162, 18590), (163, 18605), (173, 18641), (177, 18674), (180, 18686), (186, 18716), (203, 18821), (211, 18890), (212, 18902), (214, 18911), (226, 19034), (247, 19202), (250, 19226), (252, 19244), (254, 19265), (255, 19274), (258, 19298), (259, 19304), (261, 19325), (271, 19409), (278, 19505), (281, 19532), (285, 19565), (296, 19658), (302, 19688), (305, 19715), (312, 19766), (313, 19769), (317, 19793), (321, 19805), (325, 19820), (327, 19844), (334, 19922), (335, 19934), (348, 20009), (350, 20012), (363, 20159), (365, 20174), (367, 20189), (377, 20288), (379, 20336), (381, 20384), (382, 20390), (387, 20462), (393, 20546), (398, 20588), (400, 20642), (405, 20684), (410, 20768), (416, 20891), (425, 21011), (431, 21062), (440, 21221), (445, 21335), (457, 21503), (460, 21590), (461, 21599), (471, 21731), (474, 21743), (481, 21827), (485, 21860), (505, 22136), (537, 22646), (540, 22691), (546, 22766), (568, 23066), (572, 23084), (591, 23363), (596, 23405), (616, 23651), (628, 23759), (631, 23798), (632, 23801), (634, 23840), (642, 23894), (643, 23903), (644, 23915), (646, 23933), (649, 23957), (655, 23987), (663, 24026), (666, 24050), (680, 24215), (681, 24239), (687, 24305), (689, 24317),

Gene: Phreeze_26 Start: 16235, Stop: 22558, Start Num: 19

Candidate Starts for Phreeze_26:

(Start: 19 @16235 has 9 MA's), (25, 16298), (36, 16379), (38, 16397), (58, 16544), (62, 16553), (65, 16565), (77, 16628), (91, 16712), (112, 16898), (115, 16907), (150, 17117), (160, 17192), (178, 17294), (181, 17309), (187, 17339), (190, 17372), (193, 17390), (199, 17420), (204, 17444), (205, 17453), (211, 17516), (214, 17537), (215, 17543), (217, 17567), (231, 17678), (233, 17696), (235, 17717), (237, 17744), (250, 17852), (263, 17945), (264, 17954), (268, 17999), (275, 18086), (283, 18155), (301, 18293), (303, 18308), (312, 18374), (316, 18395), (323, 18416), (335, 18542), (341, 18584), (344, 18593), (346, 18605), (349, 18614), (378, 18938), (381, 18995), (389, 19106), (396, 19181), (402, 19268), (403, 19271), (404, 19286), (417, 19514), (418, 19526), (423, 19610), (433, 19679), (437, 19730), (440, 19790), (443, 19838), (444, 19859), (448, 19919), (458, 20000), (467, 20150), (476, 20228), (485, 20309), (486, 20330), (489, 20375), (498, 20429), (501, 20537), (515, 20633), (516, 20642), (520, 20672), (521, 20675), (541, 20990), (565, 21263), (567, 21272), (574, 21329), (577, 21347), (578, 21380), (579, 21392), (580, 21401), (588, 21524), (600, 21644), (605, 21728), (611, 21794), (617, 21839), (619, 21866), (634, 22028), (635, 22031), (640, 22070), (643, 22091), (667, 22298), (678, 22412), (683, 22457), (687, 22508), (688, 22511), (689, 22520), (690, 22535),

Gene: Predator_30 Start: 17750, Stop: 24115, Start Num: 19

Candidate Starts for Predator_30:

(Start: 19 @17750 has 9 MA's), (40, 17921), (50, 18005), (57, 18053), (77, 18143), (84, 18185), (87, 18206), (91, 18227), (94, 18266), (101, 18317), (107, 18374), (108, 18377), (110, 18389), (112, 18410), (143, 18581), (159, 18692), (160, 18704), (161, 18713), (169, 18755), (170, 18758), (187, 18851), (190, 18884), (207, 18989), (210, 19019), (216, 19073), (219, 19103), (220, 19106), (225, 19163), (229, 19187), (233, 19208), (235, 19229), (240, 19271), (247, 19340), (250, 19364), (254,

19403), (263, 19457), (264, 19466), (273, 19547), (275, 19598), (283, 19667), (292, 19733), (297, 19784), (303, 19820), (306, 19841), (316, 19907), (318, 19916), (326, 19946), (330, 19988), (339, 20084), (347, 20123), (353, 20135), (354, 20138), (385, 20591), (389, 20636), (400, 20783), (403, 20801), (408, 20876), (417, 21044), (418, 21056), (423, 21140), (447, 21443), (476, 21779), (482, 21839), (485, 21860), (486, 21881), (489, 21926), (491, 21929), (498, 21980), (500, 22067), (501, 22088), (504, 22109), (515, 22184), (516, 22193), (517, 22202), (518, 22205), (529, 22370), (534, 22463), (535, 22472), (545, 22592), (548, 22613), (550, 22658), (553, 22691), (555, 22721), (567, 22826), (573, 22856), (579, 22946), (580, 22955), (589, 23099), (600, 23198), (601, 23201), (603, 23231), (605, 23282), (610, 23345), (617, 23393), (619, 23420), (632, 23543), (634, 23582), (640, 23624), (667, 23852), (668, 23873), (670, 23897), (678, 23966), (683, 24014), (684, 24020), (687, 24065), (688, 24068), (689, 24077), (690, 24092),

Gene: Puissant_25 Start: 16698, Stop: 23021, Start Num: 19

Candidate Starts for Puissant_25:

(Start: 19 @16698 has 9 MA's), (27, 16797), (38, 16860), (50, 16953), (62, 17016), (65, 17028), (71, 17046), (73, 17058), (77, 17091), (84, 17133), (91, 17175), (112, 17361), (125, 17448), (133, 17484), (157, 17634), (166, 17694), (178, 17757), (181, 17772), (182, 17775), (187, 17802), (190, 17835), (198, 17877), (199, 17883), (204, 17907), (205, 17916), (207, 17940), (211, 17979), (214, 18000), (217, 18030), (231, 18141), (233, 18159), (235, 18180), (237, 18207), (250, 18315), (263, 18408), (264, 18417), (268, 18462), (275, 18549), (283, 18618), (287, 18651), (297, 18735), (303, 18771), (307, 18801), (316, 18858), (335, 19005), (339, 19035), (341, 19047), (344, 19056), (346, 19068), (349, 19077), (373, 19314), (378, 19401), (381, 19458), (389, 19569), (396, 19644), (403, 19734), (413, 19914), (417, 19977), (418, 19989), (423, 20073), (433, 20142), (437, 20193), (440, 20253), (443, 20301), (444, 20322), (448, 20382), (458, 20463), (476, 20691), (485, 20772), (486, 20793), (489, 20838), (498, 20892), (501, 21000), (515, 21096), (516, 21105), (541, 21453), (562, 21693), (565, 21726), (567, 21735), (573, 21765), (578, 21843), (580, 21864), (588, 21987), (590, 22014), (593, 22032), (597, 22056), (600, 22107), (603, 22140), (605, 22191), (617, 22302), (619, 22329), (634, 22491), (643, 22554), (645, 22578), (683, 22920), (684, 22926), (687, 22971), (688, 22974), (689, 22983), (690, 22998),

Gene: Ranch_27 Start: 16067, Stop: 23266, Start Num: 2

Candidate Starts for Ranch_27:

(1, 16046), (Start: 2 @16067 has 36 MA's), (6, 16214), (9, 16328), (11, 16427), (13, 16463), (15, 16475), (24, 16574), (49, 16793), (51, 16802), (56, 16844), (60, 16856), (66, 16880), (68, 16886), (79, 16949), (86, 17003), (88, 17006), (106, 17162), (120, 17264), (123, 17282), (127, 17309), (138, 17357), (141, 17366), (156, 17471), (159, 17492), (160, 17504), (162, 17516), (163, 17531), (173, 17567), (186, 17642), (187, 17648), (203, 17747), (211, 17816), (212, 17828), (214, 17837), (245, 18116), (247, 18128), (252, 18170), (254, 18191), (255, 18200), (258, 18224), (259, 18230), (261, 18251), (271, 18335), (278, 18431), (281, 18458), (285, 18491), (289, 18512), (312, 18692), (313, 18695), (317, 18719), (321, 18731), (325, 18746), (327, 18770), (334, 18848), (335, 18860), (348, 18935), (350, 18938), (363, 19085), (365, 19100), (367, 19115), (377, 19214), (379, 19262), (381, 19310), (382, 19316), (387, 19388), (393, 19472), (398, 19514), (400, 19568), (405, 19610), (410, 19694), (416, 19817), (425, 19937), (431, 19988), (440, 20147), (445, 20261), (457, 20429), (460, 20516), (471, 20657), (474, 20669), (481, 20753), (485, 20786), (509, 21086), (537, 21572), (538, 21605), (540, 21617), (546, 21695), (566, 21971), (569, 21983), (591, 22277), (596, 22319), (616, 22565), (628, 22673), (631, 22712), (632, 22715), (634, 22754), (636, 22766), (642, 22808), (643, 22817), (644, 22829), (646, 22847), (649, 22871), (655, 22901), (663, 22940), (666, 22964), (680, 23129), (681, 23153), (687, 23219), (689, 23231),

Gene: RazorC_25 Start: 15528, Stop: 22736, Start Num: 2

Candidate Starts for RazorC_25:

(Start: 2 @15528 has 36 MA's), (6, 15675), (9, 15789), (11, 15888), (13, 15924), (15, 15936), (22, 16020), (24, 16035), (41, 16167), (45, 16194), (49, 16254), (51, 16263), (56, 16305), (60, 16317), (66,

16341), (68, 16347), (74, 16368), (79, 16410), (86, 16464), (88, 16467), (106, 16623), (120, 16725), (123, 16743), (127, 16770), (138, 16818), (141, 16827), (156, 16932), (159, 16953), (160, 16965), (162, 16977), (163, 16992), (173, 17028), (180, 17073), (186, 17103), (188, 17130), (203, 17208), (211, 17277), (212, 17289), (214, 17298), (245, 17577), (247, 17589), (252, 17631), (254, 17652), (255, 17661), (258, 17685), (259, 17691), (261, 17712), (271, 17796), (278, 17892), (281, 17919), (285, 17952), (296, 18045), (302, 18075), (312, 18153), (313, 18156), (317, 18180), (321, 18192), (325, 18207), (327, 18231), (334, 18309), (335, 18321), (348, 18396), (350, 18399), (363, 18546), (365, 18561), (367, 18576), (377, 18675), (379, 18723), (381, 18771), (382, 18777), (384, 18822), (387, 18849), (398, 18975), (400, 19029), (405, 19071), (410, 19155), (414, 19242), (416, 19278), (425, 19398), (431, 19449), (440, 19608), (445, 19722), (457, 19899), (460, 19986), (471, 20127), (474, 20139), (481, 20223), (537, 21042), (538, 21075), (540, 21087), (546, 21165), (566, 21441), (569, 21453), (584, 21696), (591, 21747), (596, 21789), (616, 22035), (628, 22143), (631, 22182), (632, 22185), (634, 22224), (637, 22248), (642, 22278), (643, 22287), (644, 22299), (653, 22362), (655, 22371), (663, 22410), (666, 22434), (680, 22599), (681, 22623), (687, 22689), (689, 22701),

Gene: Rota_26 Start: 17417, Stop: 24619, Start Num: 3

Candidate Starts for Rota_26:

(Start: 3 @17417 has 1 MA's), (6, 17564), (9, 17678), (11, 17777), (13, 17813), (15, 17825), (24, 17924), (41, 18056), (45, 18083), (46, 18086), (49, 18143), (51, 18152), (56, 18194), (60, 18206), (66, 18230), (68, 18236), (79, 18299), (86, 18353), (88, 18356), (105, 18509), (106, 18512), (120, 18614), (123, 18632), (127, 18659), (138, 18707), (141, 18716), (151, 18785), (156, 18821), (159, 18842), (160, 18854), (162, 18866), (163, 18881), (173, 18917), (186, 18992), (187, 18998), (203, 19097), (211, 19166), (212, 19178), (214, 19187), (245, 19466), (247, 19478), (252, 19520), (254, 19541), (255, 19550), (258, 19574), (259, 19580), (261, 19601), (267, 19664), (271, 19685), (278, 19781), (281, 19808), (285, 19841), (296, 19934), (302, 19964), (305, 19991), (312, 20042), (313, 20045), (317, 20069), (321, 20081), (325, 20096), (327, 20120), (334, 20198), (335, 20210), (348, 20285), (350, 20288), (363, 20435), (365, 20450), (367, 20465), (377, 20564), (379, 20612), (381, 20660), (382, 20666), (387, 20738), (393, 20822), (398, 20864), (400, 20918), (405, 20960), (410, 21044), (411, 21107), (416, 21167), (425, 21287), (431, 21338), (440, 21497), (445, 21611), (457, 21779), (460, 21866), (461, 21875), (471, 22007), (474, 22019), (481, 22103), (485, 22136), (492, 22226), (537, 22922), (538, 22955), (540, 22967), (546, 23045), (568, 23333), (570, 23342), (572, 23351), (591, 23630), (596, 23672), (616, 23918), (625, 24005), (628, 24026), (631, 24065), (634, 24107), (641, 24152), (642, 24161), (643, 24170), (644, 24182), (653, 24245), (655, 24254), (663, 24293), (666, 24317), (680, 24482), (681, 24506), (687, 24572), (689, 24584),

Gene: Rukungu_27 Start: 17766, Stop: 24968, Start Num: 2

Candidate Starts for Rukungu_27:

(1, 17745), (Start: 2 @17766 has 36 MA's), (6, 17913), (9, 18027), (11, 18126), (13, 18162), (15, 18174), (24, 18273), (41, 18405), (45, 18432), (46, 18435), (51, 18501), (56, 18543), (60, 18555), (66, 18579), (68, 18585), (79, 18648), (86, 18702), (88, 18705), (105, 18858), (106, 18861), (123, 18981), (127, 19008), (138, 19056), (141, 19065), (151, 19134), (156, 19170), (159, 19191), (160, 19203), (162, 19215), (163, 19230), (173, 19266), (186, 19341), (203, 19446), (211, 19515), (212, 19527), (214, 19536), (247, 19827), (250, 19851), (252, 19869), (254, 19890), (255, 19899), (258, 19923), (259, 19929), (261, 19950), (271, 20034), (278, 20130), (281, 20157), (285, 20190), (289, 20211), (302, 20313), (312, 20391), (313, 20394), (317, 20418), (321, 20430), (325, 20445), (327, 20469), (334, 20547), (335, 20559), (348, 20634), (350, 20637), (363, 20784), (365, 20799), (367, 20814), (377, 20913), (379, 20961), (381, 21009), (382, 21015), (387, 21087), (393, 21171), (398, 21213), (400, 21267), (405, 21309), (410, 21393), (416, 21516), (425, 21636), (431, 21687), (440, 21846), (445, 21960), (457, 22128), (459, 22188), (460, 22215), (461, 22224), (471, 22356), (474, 22368), (481, 22452), (505, 22761), (507, 22773), (537, 23271), (538, 23304), (540, 23316), (546, 23394), (568, 23682), (572, 23700), (591, 23979), (616, 24267), (628, 24375), (631, 24414), (632, 24417), (634, 24456), (642, 24510), (643, 24519), (644, 24531), (646, 24549), (649, 24573), (655, 24603), (663, 24642), (666, 24666), (680, 24831), (681, 24855), (687, 24921), (689, 24933),

Gene: Rumi_26 Start: 15136, Stop: 22347, Start Num: 2

Candidate Starts for Rumi_26:

(1, 15115), (Start: 2 @15136 has 36 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (180, 16681), (186, 16711), (188, 16738), (203, 16816), (211, 16885), (212, 16897), (214, 16906), (245, 17185), (247, 17197), (252, 17239), (254, 17260), (255, 17269), (258, 17293), (259, 17299), (261, 17320), (271, 17404), (278, 17500), (281, 17527), (285, 17560), (296, 17653), (302, 17683), (312, 17761), (313, 17764), (317, 17788), (321, 17800), (325, 17815), (327, 17839), (334, 17917), (335, 17929), (348, 18004), (350, 18007), (363, 18154), (365, 18169), (367, 18184), (377, 18283), (379, 18331), (381, 18379), (382, 18385), (384, 18430), (387, 18457), (398, 18583), (400, 18637), (405, 18679), (410, 18763), (414, 18850), (416, 18886), (425, 19006), (431, 19057), (440, 19216), (445, 19330), (457, 19507), (460, 19594), (471, 19735), (474, 19747), (481, 19831), (537, 20650), (538, 20683), (540, 20695), (546, 20773), (568, 21061), (584, 21307), (591, 21358), (596, 21400), (616, 21646), (628, 21754), (631, 21793), (632, 21796), (634, 21835), (636, 21847), (642, 21889), (643, 21898), (644, 21910), (646, 21928), (655, 21982), (663, 22021), (666, 22045), (680, 22210), (681, 22234), (687, 22300), (689, 22312),

Gene: Sadboi_27 Start: 17897, Stop: 25108, Start Num: 2

Candidate Starts for Sadboi_27:

(1, 17876), (Start: 2 @17897 has 36 MA's), (6, 18044), (9, 18158), (11, 18257), (13, 18293), (15, 18305), (24, 18404), (41, 18536), (45, 18563), (46, 18566), (51, 18632), (56, 18674), (60, 18686), (66, 18710), (68, 18716), (79, 18779), (86, 18833), (88, 18836), (105, 18989), (106, 18992), (120, 19094), (123, 19112), (127, 19139), (138, 19187), (141, 19196), (151, 19265), (156, 19301), (159, 19322), (160, 19334), (162, 19346), (163, 19361), (173, 19397), (177, 19430), (180, 19442), (186, 19472), (203, 19577), (211, 19646), (212, 19658), (214, 19667), (247, 19958), (250, 19982), (252, 20000), (254, 20021), (255, 20030), (258, 20054), (259, 20060), (261, 20081), (271, 20165), (278, 20261), (281, 20288), (285, 20321), (289, 20342), (296, 20414), (302, 20444), (305, 20471), (312, 20522), (313, 20525), (317, 20549), (321, 20561), (325, 20576), (327, 20600), (334, 20678), (335, 20690), (348, 20765), (350, 20768), (363, 20915), (365, 20930), (367, 20945), (377, 21044), (379, 21092), (381, 21140), (382, 21146), (387, 21218), (393, 21302), (398, 21344), (400, 21398), (405, 21440), (410, 21524), (416, 21647), (425, 21767), (431, 21818), (440, 21977), (445, 22091), (457, 22259), (460, 22346), (461, 22355), (471, 22487), (474, 22499), (481, 22583), (505, 22892), (537, 23402), (540, 23447), (546, 23522), (568, 23822), (572, 23840), (591, 24119), (616, 24407), (628, 24515), (631, 24554), (632, 24557), (634, 24596), (642, 24650), (643, 24659), (644, 24671), (646, 24689), (649, 24713), (655, 24743), (663, 24782), (666, 24806), (680, 24971), (681, 24995), (687, 25061), (689, 25073),

Gene: Sampudon_27 Start: 18073, Stop: 25275, Start Num: 2

Candidate Starts for Sampudon_27:

(1, 18052), (Start: 2 @18073 has 36 MA's), (6, 18220), (9, 18334), (11, 18433), (13, 18469), (15, 18481), (24, 18580), (41, 18712), (45, 18739), (46, 18742), (49, 18799), (51, 18808), (56, 18850), (60, 18862), (66, 18886), (68, 18892), (74, 18913), (79, 18955), (86, 19009), (88, 19012), (105, 19165), (106, 19168), (120, 19270), (123, 19288), (127, 19315), (138, 19363), (141, 19372), (151, 19441), (156, 19477), (159, 19498), (160, 19510), (162, 19522), (163, 19537), (173, 19573), (186, 19648), (203, 19753), (211, 19822), (212, 19834), (214, 19843), (247, 20134), (250, 20158), (252, 20176), (254, 20197), (255, 20206), (258, 20230), (259, 20236), (261, 20257), (271, 20341), (278, 20437), (281, 20464), (285, 20497), (296, 20590), (302, 20620), (305, 20647), (312, 20698), (313, 20701), (317, 20725), (321, 20737), (325, 20752), (327, 20776), (334, 20854), (335, 20866), (348, 20941), (350, 20944), (363, 21091), (365, 21106), (367, 21121), (377, 21220), (379, 21268), (381, 21316), (382, 21322), (387, 21394), (393, 21478), (398, 21520), (400, 21574), (405, 21616), (410, 21700),

(416, 21823), (425, 21943), (431, 21994), (440, 22153), (445, 22267), (457, 22435), (460, 22522), (461, 22531), (471, 22663), (474, 22675), (481, 22759), (485, 22792), (505, 23068), (537, 23578), (538, 23611), (540, 23623), (546, 23701), (568, 23989), (572, 24007), (591, 24286), (596, 24328), (616, 24574), (628, 24682), (631, 24721), (632, 24724), (634, 24763), (642, 24817), (643, 24826), (644, 24838), (646, 24856), (649, 24880), (655, 24910), (663, 24949), (666, 24973), (680, 25138), (681, 25162), (687, 25228), (689, 25240),

Gene: Sienna_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Sienna_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (124, 13080), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (192, 13476), (195, 13494), (199, 13515), (228, 13758), (232, 13767), (234, 13800), (235, 13803), (237, 13830), (255, 13986), (270, 14097), (271, 14103), (277, 14190), (288, 14274), (293, 14307), (294, 14325), (300, 14370), (305, 14409), (307, 14421), (309, 14436), (312, 14457), (316, 14478), (318, 14487), (320, 14493), (324, 14502), (327, 14532), (343, 14676), (350, 14709), (355, 14724), (367, 14892), (372, 14937), (374, 14946), (376, 14967), (378, 15021), (392, 15231), (397, 15273), (401, 15345), (419, 15654), (424, 15702), (427, 15723), (435, 15831), (450, 16212), (453, 16287), (460, 16473), (475, 16704), (479, 16752), (484, 16803), (486, 16827), (487, 16836), (496, 16929), (507, 17094), (511, 17118), (513, 17133), (536, 17607), (539, 17649), (543, 17685), (557, 17928), (560, 17964), (570, 18057), (582, 18216), (592, 18336), (594, 18351), (598, 18405), (605, 18519), (607, 18552), (608, 18561), (612, 18585), (616, 18609), (629, 18753), (630, 18759), (639, 18846), (643, 18873), (644, 18885), (646, 18903), (652, 18945), (660, 18978), (661, 18987), (663, 18996), (665, 19008), (670, 19104), (675, 19164), (676, 19167), (685, 19263), (686, 19266), (688, 19278), (689, 19287), (691, 19308),

Gene: Stormer_26 Start: 15496, Stop: 22347, Start Num: 11

Candidate Starts for Stormer_26:

(1, 15115), (Start: 2 @15136 has 36 MA's), (6, 15283), (9, 15397), (11, 15496), (13, 15532), (15, 15544), (22, 15628), (24, 15643), (41, 15775), (45, 15802), (49, 15862), (51, 15871), (56, 15913), (60, 15925), (66, 15949), (68, 15955), (74, 15976), (79, 16018), (86, 16072), (88, 16075), (106, 16231), (120, 16333), (123, 16351), (127, 16378), (138, 16426), (141, 16435), (156, 16540), (159, 16561), (160, 16573), (162, 16585), (163, 16600), (173, 16636), (180, 16681), (186, 16711), (188, 16738), (203, 16816), (211, 16885), (212, 16897), (214, 16906), (245, 17185), (247, 17197), (252, 17239), (254, 17260), (255, 17269), (258, 17293), (259, 17299), (261, 17320), (271, 17404), (278, 17500), (281, 17527), (285, 17560), (296, 17653), (302, 17683), (312, 17761), (313, 17764), (317, 17788), (321, 17800), (325, 17815), (327, 17839), (334, 17917), (335, 17929), (348, 18004), (350, 18007), (363, 18154), (365, 18169), (367, 18184), (377, 18283), (379, 18331), (381, 18379), (382, 18385), (384, 18430), (387, 18457), (398, 18583), (400, 18637), (405, 18679), (410, 18763), (414, 18850), (416, 18886), (425, 19006), (431, 19057), (440, 19216), (445, 19330), (457, 19507), (460, 19594), (471, 19735), (474, 19747), (481, 19831), (537, 20650), (538, 20683), (540, 20695), (546, 20773), (568, 21061), (584, 21307), (591, 21358), (596, 21400), (616, 21646), (628, 21754), (631, 21793), (632, 21796), (634, 21835), (636, 21847), (642, 21889), (643, 21898), (644, 21910), (646, 21928), (655, 21982), (663, 22021), (666, 22045), (680, 22210), (681, 22234), (687, 22300), (689, 22312),

Gene: SuperSonics_33 Start: 19293, Stop: 25940, Start Num: 20

Candidate Starts for SuperSonics_33:

(Start: 20 @19293 has 5 MA's), (29, 19386), (31, 19398), (32, 19407), (34, 19428), (37, 19440), (42, 19482), (55, 19587), (67, 19644), (69, 19650), (71, 19656), (78, 19713), (80, 19719), (82, 19725), (104, 19923), (108, 19953), (109, 19965), (114, 20001), (134, 20142), (152, 20238), (158, 20286), (173, 20364), (174, 20388), (181, 20421), (188, 20472), (194, 20505), (202, 20544), (212, 20634), (217, 20673), (218, 20685), (222, 20733), (226, 20766), (236, 20832), (244, 20901), (246, 20925), (248, 20943), (251, 20967), (262, 21048), (264, 21060), (275, 21195), (276, 21204), (286, 21288), (302, 21408), (308, 21453), (331, 21609), (333, 21630), (335, 21672), (345, 21735), (361, 21891), (364,

21918), (367, 21939), (368, 21942), (370, 21981), (372, 21993), (380, 22128), (383, 22185), (392, 22311), (397, 22353), (399, 22404), (407, 22488), (416, 22659), (417, 22671), (424, 22779), (430, 22833), (432, 22845), (441, 22983), (468, 23346), (483, 23481), (490, 23565), (519, 23895), (522, 23928), (524, 23937), (552, 24447), (554, 24474), (559, 24522), (563, 24579), (576, 24678), (587, 24864), (604, 25050), (622, 25260), (634, 25401), (638, 25431), (649, 25533), (656, 25572), (659, 25587), (670, 25719), (672, 25743), (674, 25767), (682, 25827), (684, 25845), (685, 25878), (687, 25890), (688, 25893), (690, 25917),

Gene: Suzy_22 Start: 13782, Stop: 20483, Start Num: 47

Candidate Starts for Suzy_22:

(39, 13731), (Start: 47 @13782 has 9 MA's), (69, 13926), (82, 13998), (83, 14019), (96, 14118), (98, 14130), (100, 14136), (129, 14346), (132, 14355), (145, 14415), (152, 14472), (159, 14523), (160, 14535), (173, 14598), (192, 14709), (195, 14727), (228, 14991), (234, 15033), (235, 15036), (237, 15063), (241, 15081), (249, 15162), (267, 15315), (269, 15324), (270, 15330), (272, 15345), (277, 15423), (293, 15540), (294, 15558), (300, 15603), (305, 15642), (307, 15654), (309, 15669), (312, 15690), (316, 15711), (318, 15720), (320, 15726), (324, 15735), (327, 15765), (333, 15813), (342, 15906), (343, 15909), (350, 15942), (355, 15957), (367, 16125), (372, 16170), (374, 16179), (376, 16200), (378, 16254), (392, 16464), (397, 16506), (401, 16578), (419, 16887), (424, 16935), (427, 16956), (435, 17064), (456, 17511), (460, 17631), (466, 17769), (479, 17910), (484, 17961), (486, 17985), (487, 17994), (496, 18087), (507, 18252), (511, 18276), (513, 18291), (526, 18513), (536, 18771), (539, 18813), (540, 18822), (543, 18849), (557, 19092), (560, 19128), (574, 19266), (575, 19281), (582, 19377), (585, 19455), (592, 19497), (594, 19512), (598, 19566), (605, 19680), (607, 19713), (608, 19722), (612, 19746), (615, 19767), (616, 19770), (627, 19878), (629, 19914), (630, 19920), (637, 19995), (643, 20034), (650, 20097), (660, 20139), (661, 20148), (663, 20157), (664, 20160), (665, 20169), (669, 20262), (670, 20265), (676, 20328), (685, 20424), (686, 20427), (688, 20439), (689, 20448), (691, 20469),

Gene: Terapin_22 Start: 12549, Stop: 19319, Start Num: 47

Candidate Starts for Terapin_22:

(Start: 47 @12549 has 9 MA's), (69, 12693), (82, 12765), (83, 12786), (96, 12885), (98, 12897), (100, 12903), (129, 13113), (132, 13122), (145, 13182), (152, 13239), (159, 13290), (173, 13365), (192, 13476), (195, 13494), (199, 13515), (228, 13758), (232, 13767), (234, 13800), (235, 13803), (237, 13830), (255, 13986), (270, 14097), (271, 14103), (277, 14190), (288, 14274), (293, 14307), (294, 14325), (300, 14370), (305, 14409), (307, 14421), (309, 14436), (312, 14457), (316, 14478), (318, 14487), (320, 14493), (324, 14502), (327, 14532), (343, 14676), (350, 14709), (355, 14724), (367, 14892), (372, 14937), (374, 14946), (376, 14967), (378, 15021), (392, 15231), (397, 15273), (401, 15345), (419, 15654), (424, 15702), (427, 15723), (435, 15831), (450, 16212), (453, 16287), (460, 16473), (475, 16704), (479, 16752), (484, 16803), (486, 16827), (487, 16836), (496, 16929), (507, 17094), (511, 17118), (513, 17133), (536, 17607), (543, 17685), (557, 17928), (560, 17964), (570, 18057), (582, 18216), (592, 18336), (594, 18351), (598, 18405), (605, 18519), (607, 18552), (608, 18561), (612, 18585), (616, 18609), (629, 18753), (630, 18759), (639, 18846), (643, 18873), (644, 18885), (646, 18903), (652, 18945), (660, 18978), (661, 18987), (663, 18996), (665, 19008), (670, 19104), (675, 19164), (676, 19167), (685, 19263), (686, 19266), (688, 19278), (689, 19287), (691, 19308),

Gene: Thumb_26 Start: 16235, Stop: 22558, Start Num: 19

Candidate Starts for Thumb_26:

(Start: 19 @16235 has 9 MA's), (25, 16298), (36, 16379), (38, 16397), (58, 16544), (62, 16553), (65, 16565), (71, 16583), (77, 16628), (84, 16670), (89, 16700), (91, 16712), (112, 16898), (115, 16907), (150, 17117), (160, 17192), (178, 17294), (181, 17309), (187, 17339), (190, 17372), (193, 17390), (199, 17420), (204, 17444), (205, 17453), (207, 17477), (211, 17516), (214, 17537), (215, 17543), (217, 17567), (231, 17678), (233, 17696), (235, 17717), (237, 17744), (250, 17852), (263, 17945), (264, 17954), (265, 17966), (268, 17999), (275, 18086), (283, 18155), (301, 18293), (303, 18308),

(312, 18374), (316, 18395), (323, 18416), (335, 18542), (341, 18584), (344, 18593), (346, 18605), (349, 18614), (378, 18938), (381, 18995), (389, 19106), (396, 19181), (402, 19268), (403, 19271), (404, 19286), (417, 19514), (418, 19526), (423, 19610), (433, 19679), (437, 19730), (440, 19790), (443, 19838), (444, 19859), (448, 19919), (458, 20000), (467, 20150), (476, 20228), (485, 20309), (486, 20330), (489, 20375), (498, 20429), (501, 20537), (515, 20633), (516, 20642), (520, 20672), (521, 20675), (541, 20990), (565, 21263), (567, 21272), (573, 21302), (577, 21347), (578, 21380), (579, 21392), (580, 21401), (588, 21524), (600, 21644), (603, 21677), (605, 21728), (611, 21794), (614, 21815), (617, 21839), (619, 21866), (634, 22028), (635, 22031), (640, 22070), (643, 22091), (667, 22298), (678, 22412), (683, 22457), (687, 22508), (688, 22511), (689, 22520), (690, 22535),

Gene: Tillicus_26 Start: 16467, Stop: 23687, Start Num: 2

Candidate Starts for Tillicus_26:

(1, 16446), (Start: 2 @16467 has 36 MA's), (7, 16662), (10, 16737), (12, 16842), (13, 16863), (14, 16866), (17, 16896), (18, 16905), (22, 16959), (28, 17022), (30, 17028), (44, 17124), (48, 17175), (51, 17202), (60, 17256), (63, 17265), (66, 17280), (82, 17358), (85, 17394), (90, 17418), (111, 17613), (116, 17643), (135, 17748), (151, 17838), (155, 17862), (156, 17874), (159, 17895), (163, 17934), (176, 18000), (177, 18003), (184, 18039), (186, 18045), (187, 18051), (189, 18075), (197, 18120), (203, 18150), (204, 18156), (206, 18174), (212, 18231), (224, 18351), (245, 18519), (252, 18573), (254, 18594), (256, 18612), (258, 18627), (261, 18654), (271, 18738), (281, 18861), (302, 19017), (305, 19044), (308, 19065), (312, 19095), (319, 19128), (325, 19149), (327, 19173), (328, 19176), (329, 19179), (331, 19200), (332, 19212), (334, 19251), (338, 19287), (348, 19338), (359, 19398), (360, 19431), (366, 19509), (367, 19518), (381, 19707), (382, 19713), (387, 19785), (388, 19815), (393, 19869), (398, 19911), (405, 20007), (410, 20091), (416, 20214), (425, 20334), (431, 20385), (457, 20838), (458, 20868), (460, 20925), (464, 21000), (471, 21066), (474, 21078), (481, 21162), (485, 21195), (486, 21216), (492, 21285), (537, 21981), (540, 22026), (546, 22101), (568, 22401), (572, 22419), (595, 22725), (606, 22914), (616, 22986), (625, 23073), (628, 23094), (631, 23133), (634, 23175), (641, 23220), (642, 23229), (643, 23238), (644, 23250), (646, 23268), (654, 23319), (662, 23355), (663, 23361), (666, 23385), (671, 23487), (677, 23535), (680, 23550), (681, 23574), (686, 23631), (687, 23640), (689, 23652),

Gene: Wojtek_26 Start: 16774, Stop: 23985, Start Num: 2

Candidate Starts for Wojtek_26:

(1, 16753), (Start: 2 @16774 has 36 MA's), (6, 16921), (9, 17035), (11, 17134), (13, 17170), (15, 17182), (24, 17281), (41, 17413), (49, 17500), (51, 17509), (56, 17551), (60, 17563), (66, 17587), (68, 17593), (79, 17656), (86, 17710), (88, 17713), (105, 17866), (106, 17869), (120, 17971), (123, 17989), (127, 18016), (138, 18064), (141, 18073), (151, 18142), (156, 18178), (159, 18199), (160, 18211), (162, 18223), (163, 18238), (186, 18349), (203, 18454), (211, 18523), (212, 18535), (214, 18544), (247, 18835), (252, 18877), (254, 18898), (255, 18907), (258, 18931), (259, 18937), (261, 18958), (267, 19021), (271, 19042), (278, 19138), (281, 19165), (285, 19198), (302, 19321), (305, 19348), (312, 19399), (313, 19402), (317, 19426), (321, 19438), (325, 19453), (327, 19477), (334, 19555), (335, 19567), (348, 19642), (350, 19645), (363, 19792), (365, 19807), (367, 19822), (377, 19921), (379, 19969), (381, 20017), (382, 20023), (384, 20068), (387, 20095), (393, 20179), (398, 20221), (400, 20275), (405, 20317), (410, 20401), (416, 20524), (425, 20644), (431, 20695), (440, 20854), (457, 21148), (458, 21178), (460, 21235), (464, 21310), (471, 21376), (474, 21388), (481, 21472), (485, 21505), (486, 21526), (537, 22291), (538, 22324), (540, 22336), (546, 22414), (566, 22690), (569, 22702), (591, 22996), (596, 23038), (616, 23284), (625, 23371), (628, 23392), (631, 23431), (634, 23473), (641, 23518), (642, 23527), (643, 23536), (644, 23548), (653, 23611), (655, 23620), (663, 23659), (666, 23683), (680, 23848), (681, 23872), (686, 23929), (687, 23938), (689, 23950),

Gene: Xenia2_27 Start: 16812, Stop: 24071, Start Num: 2

Candidate Starts for Xenia2_27:

(1, 16791), (Start: 2 @16812 has 36 MA's), (5, 16956), (6, 16959), (8, 17031), (13, 17208), (14, 17211), (15, 17220), (16, 17235), (17, 17241), (22, 17304), (23, 17313), (25, 17325), (28, 17367), (48, 17520),

(49, 17538), (54, 17559), (56, 17589), (64, 17619), (66, 17625), (72, 17640), (76, 17682), (79, 17694), (82, 17703), (83, 17727), (86, 17748), (90, 17763), (92, 17781), (95, 17817), (99, 17844), (105, 17904), (117, 18006), (118, 18009), (120, 18030), (123, 18048), (126, 18063), (129, 18084), (131, 18093), (137, 18129), (141, 18141), (148, 18195), (155, 18234), (156, 18246), (159, 18267), (164, 18309), (167, 18321), (172, 18339), (175, 18363), (186, 18417), (200, 18507), (203, 18522), (212, 18603), (221, 18678), (227, 18741), (245, 18891), (252, 18945), (254, 18966), (255, 18975), (260, 19014), (263, 19032), (271, 19107), (285, 19263), (286, 19266), (312, 19473), (327, 19551), (334, 19629), (340, 19683), (352, 19725), (359, 19776), (366, 19887), (367, 19896), (371, 19938), (375, 19971), (377, 19995), (381, 20085), (382, 20091), (387, 20163), (388, 20193), (398, 20289), (405, 20385), (409, 20457), (410, 20469), (416, 20592), (425, 20712), (452, 21183), (461, 21330), (470, 21456), (472, 21465), (473, 21471), (474, 21474), (476, 21504), (477, 21528), (479, 21537), (481, 21558), (486, 21612), (488, 21654), (506, 21873), (509, 21891), (528, 22167), (532, 22266), (537, 22377), (538, 22410), (540, 22422), (546, 22500), (571, 22800), (572, 22803), (599, 23187), (616, 23370), (642, 23613), (653, 23697), (660, 23727), (680, 23934), (681, 23958), (686, 24015),

Gene: Yikes_28 Start: 18158, Stop: 25360, Start Num: 2

Candidate Starts for Yikes_28:

(1, 18137), (Start: 2 @18158 has 36 MA's), (6, 18305), (9, 18419), (11, 18518), (13, 18554), (15, 18566), (24, 18665), (41, 18797), (45, 18824), (46, 18827), (51, 18893), (56, 18935), (60, 18947), (66, 18971), (68, 18977), (79, 19040), (86, 19094), (88, 19097), (105, 19250), (106, 19253), (120, 19355), (123, 19373), (127, 19400), (138, 19448), (141, 19457), (151, 19526), (156, 19562), (159, 19583), (160, 19595), (162, 19607), (163, 19622), (173, 19658), (186, 19733), (203, 19838), (211, 19907), (212, 19919), (214, 19928), (247, 20219), (252, 20261), (254, 20282), (255, 20291), (258, 20315), (259, 20321), (261, 20342), (271, 20426), (278, 20522), (281, 20549), (285, 20582), (296, 20675), (302, 20705), (305, 20732), (312, 20783), (313, 20786), (317, 20810), (321, 20822), (325, 20837), (327, 20861), (334, 20939), (335, 20951), (350, 21029), (363, 21176), (365, 21191), (367, 21206), (377, 21305), (379, 21353), (381, 21401), (382, 21407), (387, 21479), (393, 21563), (398, 21605), (400, 21659), (405, 21701), (410, 21785), (416, 21908), (425, 22028), (431, 22079), (440, 22238), (445, 22352), (457, 22520), (460, 22607), (461, 22616), (469, 22739), (471, 22748), (474, 22760), (481, 22844), (505, 23153), (537, 23663), (538, 23696), (540, 23708), (546, 23786), (568, 24074), (572, 24092), (591, 24371), (596, 24413), (616, 24659), (628, 24767), (631, 24806), (632, 24809), (634, 24848), (642, 24902), (643, 24911), (644, 24923), (646, 24941), (649, 24965), (655, 24995), (663, 25034), (666, 25058), (680, 25223), (681, 25247), (687, 25313), (689, 25325),

Gene: Zany_26 Start: 17679, Stop: 24881, Start Num: 3

Candidate Starts for Zany_26:

(Start: 3 @17679 has 1 MA's), (6, 17826), (9, 17940), (11, 18039), (13, 18075), (15, 18087), (24, 18186), (41, 18318), (51, 18414), (56, 18456), (60, 18468), (66, 18492), (68, 18498), (79, 18561), (86, 18615), (88, 18618), (105, 18771), (106, 18774), (120, 18876), (123, 18894), (127, 18921), (138, 18969), (141, 18978), (151, 19047), (156, 19083), (159, 19104), (160, 19116), (162, 19128), (163, 19143), (173, 19179), (186, 19254), (203, 19359), (211, 19428), (212, 19440), (214, 19449), (247, 19740), (252, 19782), (254, 19803), (255, 19812), (258, 19836), (259, 19842), (261, 19863), (271, 19947), (278, 20043), (281, 20070), (285, 20103), (296, 20196), (302, 20226), (305, 20253), (312, 20304), (313, 20307), (317, 20331), (321, 20343), (325, 20358), (327, 20382), (334, 20460), (335, 20472), (348, 20547), (350, 20550), (363, 20697), (365, 20712), (367, 20727), (377, 20826), (379, 20874), (381, 20922), (382, 20928), (387, 21000), (393, 21084), (398, 21126), (400, 21180), (405, 21222), (410, 21306), (416, 21429), (425, 21549), (431, 21600), (440, 21759), (445, 21873), (457, 22041), (459, 22101), (460, 22128), (461, 22137), (471, 22269), (474, 22281), (481, 22365), (505, 22674), (507, 22686), (537, 23184), (538, 23217), (540, 23229), (546, 23307), (568, 23595), (572, 23613), (591, 23892), (616, 24180), (628, 24288), (631, 24327), (632, 24330), (634, 24369), (642, 24423), (643, 24432), (644, 24444), (646, 24462), (649, 24486), (653, 24507), (655, 24516), (663, 24555), (666, 24579), (680, 24744), (681, 24768), (687, 24834), (689, 24846),