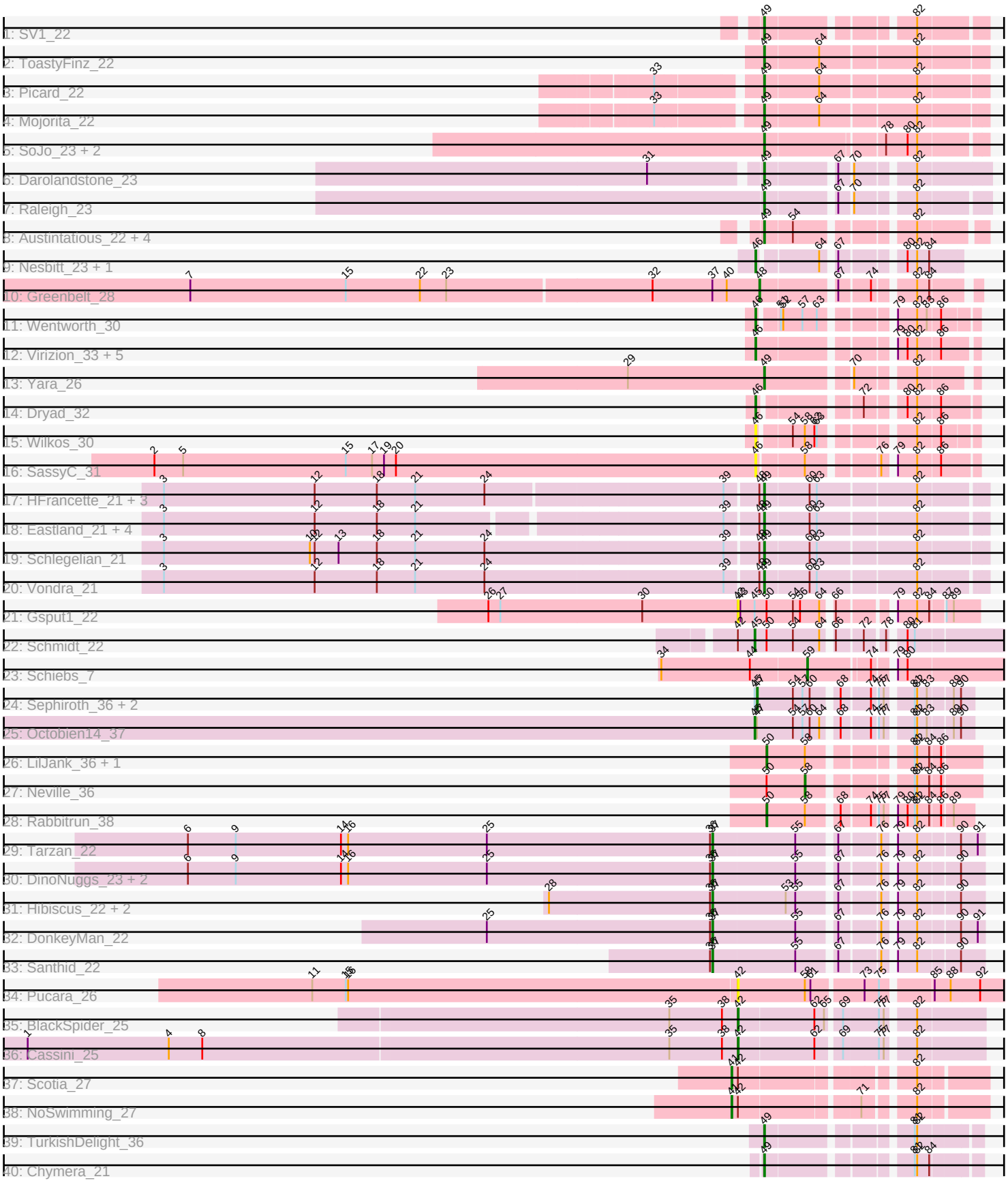
Pham 347595


1: SV1_22
2: ToastyFinz_22
3: Picard_22
4: Mojorita_22
5: SoJo_23 + 2
6: Darolandstone_23
7: Raleigh_23
8: Austintatious_22 + 4
9: Nesbitt_23 + 1
10: Greenbelt_28
11: Wentworth_30
12: Virizion_33 + 5
13: Yara_26
14: Dryad_32
15: Wilkos_30
16: SassyC_31
17: HFrancette_21 + 3
18: Eastland_21 + 4
19: Schlegelian_21
20: Vondra_21
21: Gsput1_22
22: Schmidt_22
23: Schiebs_7
24: Sephiroth_36 + 2
25: Octobien14_37
26: LilJank_36 + 1
27: Neville_36
28: Rabbitrun_38
29: Tarzan_22
30: DinoNuggs_23 + 2
31: Hibiscus_22 + 2
32: DonkeyMan_22
33: Santhid_22
34: Pucara_26
35: BlackSpider_25
36: Cassini_25
37: Scotia_27
38: NoSwimming_27
39: TurkishDelight_36
40: Chymera_21

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 347595 Report

This analysis was run 11/14/26 on database version 672.

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

Pham number 347595 has 66 members, 7 are drafts.

Phages represented in each track:
- Track 1 : SV1_22
- Track 2 : ToastyFinz_22
- Track 3 : Picard_22
- Track 4 : Mojorita_22
- Track 5 : SoJo_23, Tubberson_23, DaRealMyers_23
- Track 6 : Darolandstone_23
- Track 7 : Raleigh_23
- Track 8 : Austintatious_22, Bioscum_22, Ididsumtinwong_22, Lishka_22, PapayaSalad_22
- Track 9 : Nesbitt_23, AbbeyMikolon_23
- Track 10 : Greenbelt_28
- Track 11 : Wentworth_30
- Track 12 : Virizion_33, ShakeNBake_29, PHTowN_29, Rooney_29, Lizz_29, Gibson_29
- Track 13 : Yara_26
- Track 14 : Dryad_32
- Track 15 : Wilkos_30
- Track 16 : SassyC_31
- Track 17 : HFrancette_21, ArizonaGT_21, Cumberbatch_21, Ignacio_21
- Track 18 : Eastland_21, AxeJC_21, Eklok_21, Piccadilly_21, FrumpyGal_21
- Track 19 : Schlegelian_21
- Track 20 : Vondra_21
- Track 21 : Gsput1_22
- Track 22 : Schmidt_22
- Track 23 : Schiebs_7
- Track 24 : Sephiroth_36, Syleon_36, Kudefre_35
- Track 25 : Octobien14_37
- Track 26 : LilJank_36, Trax_36
- Track 27 : Neville_36
- Track 28 : Rabbitrun_38
- Track 29 : Tarzan_22
- Track 30 : DinoNuggs_23, Reyja_23, DearBasketball_25
- Track 31 : Hibiscus_22, Jojo24_22, Heinz_22

• Track 32 : DonkeyMan_22
• Track 33 : Santhid_22
• Track 34 : Pucara_26
• Track 35 : BlackSpider_25
• Track 36 : Cassini_25
• Track 37 : Scotia_27
• Track 38 : NoSwimming_27
• Track 39 : TurkishDelight_36
• Track 40 : Chymera_21

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

The start number called the most often in the published annotations is 49, it was called in 28 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ArizonaGT_21, Austintatious_22, AxeJC_21, Bioscum_22, Chymera_21, Cumberbatch_21, DaRealMyers_23, Darolandstone_23, Eastland_21, Eklok_21, FrumpyGal_21, HFrancette_21, Ididsumtinwong_22, Ignacio_21, Lishka_22, Mojorita_22, PapayaSalad_22, Picard_22, Piccadilly_21, Raleigh_23, SV1_22, Schlegelian_21, SoJo_23, ToastyFinz_22, Tubberson_23, TurkishDelight_36, Vondra_21, Yara_26,

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

Genes that do not have the "Most Annotated" start:
• AbbeyMikolon_23, BlackSpider_25, Cassini_25, DearBasketball_25, DinoNuggs_23, DonkeyMan_22, Dryad_32, Gibson_29, Greenbelt_28, Gsput1_22, Heinz_22, Hibiscus_22, Jojo24_22, Kudefre_35, LilJank_36, Lizz_29, Nesbitt_23, Neville_36, NoSwimming_27, Octobien14_37, PHTowN_29, Pucara_26, Rabbitrun_38, Reyja_23, Rooney_29, Santhid_22, SassyC_31, Schiebs_7, Schmidt_22, Scotia_27, Sephiroth_36, ShakeNBake_29, Syleon_36, Tarzan_22, Trax_36, Virizion_33, Wentworth_30, Wilkos_30,

Summary by start number:

Start 37:
• Found in 10 of 66 (15.2%) of genes in pham
• Manual Annotations of this start: 7 of 59
• Called 90.0% of time when present
• Phage (with cluster) where this start called: DearBasketball_25 (DY), DinoNuggs_23 (DY), DonkeyMan_22 (DY), Heinz_22 (DY), Hibiscus_22 (DY), Jojo24_22 (DY), Reyja_23 (DY), Santhid_22 (DY), Tarzan_22 (DY),

Start 41:
• Found in 2 of 66 (3.0%) of genes in pham
• Manual Annotations of this start: 2 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: NoSwimming_27 (FO), Scotia_27 (FO),

Start 42:
• Found in 7 of 66 (10.6%) of genes in pham
• Manual Annotations of this start: 2 of 59
• Called 57.1% of time when present
• Phage (with cluster) where this start called: BlackSpider_25 (FN), Cassini_25 (FN), Gsput1_22 (CU2), Pucara_26 (FA),

Start 45:
• Found in 6 of 66 (9.1%) of genes in pham
• Manual Annotations of this start: 2 of 59
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Octobien14_37 (DU1), Schmidt_22 (CU4),

Start 46:
• Found in 12 of 66 (18.2%) of genes in pham
• Manual Annotations of this start: 9 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AbbeyMikolon_23 (BL), Dryad_32 (BN), Gibson_29 (BN), Lizz_29 (BN), Nesbitt_23 (BL), PHTowN_29 (BN), Rooney_29 (BN), SassyC_31 (BN), ShakeNBake_29 (BN), Virizion_33 (BN), Wentworth_30 (BN), Wilkos_30 (BN),

Start 47:
• Found in 4 of 66 (6.1%) of genes in pham
• Manual Annotations of this start: 3 of 59
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Kudefre_35 (DU1), Sephiroth_36 (DU1), Syleon_36 (DU1),

Start 48:
• Found in 12 of 66 (18.2%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 8.3% of time when present
• Phage (with cluster) where this start called: Greenbelt_28 (BN),

Start 49:
• Found in 28 of 66 (42.4%) of genes in pham
• Manual Annotations of this start: 28 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ArizonaGT_21 (BP), Austintatious_22 (BC3), AxeJC_21 (BP), Bioscum_22 (BC3), Chymera_21 (singleton), Cumberbatch_21 (BP), DaRealMyers_23 (BC1), Darolandstone_23 (BC2), Eastland_21 (BP), Eklok_21 (BP), FrumpyGal_21 (BP), HFrancette_21 (BP), Ididsumtinwong_22 (BC3), Ignacio_21 (BP), Lishka_22 (BC3), Mojorita_22 (BC1), PapayaSalad_22 (BC3), Picard_22 (BC1), Piccadilly_21 (BP), Raleigh_23 (BC2), SV1_22 (BC1), Schlegelian_21 (BP), SoJo_23 (BC1), ToastyFinz_22 (BC1), Tubberson_23 (BC1), TurkishDelight_36 (singleton), Vondra_21 (BP), Yara_26 (BN),

Start 50:
• Found in 6 of 66 (9.1%) of genes in pham
• Manual Annotations of this start: 3 of 59

• Called 50.0% of time when present
• Phage (with cluster) where this start called: LilJank_36 (DU2), Rabbitrun_38 (DU2), Trax_36 (DU2),

Start 58:
• Found in 7 of 66 (10.6%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Neville_36 (DU2),

Start 59:
• Found in 1 of 66 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Schiebs_7 (CW3),

Summary by clusters:

There are 16 clusters represented in this pham: singleton, CU4, CU2, BL, BN, CW3, FA, BP, BC2, DY, DU1, DU2, FO, BC1, FN, BC3,

Info for manual annotations of cluster BC1:
•Start number 49 was manually annotated 7 times for cluster BC1.

Info for manual annotations of cluster BC2:
•Start number 49 was manually annotated 2 times for cluster BC2.

Info for manual annotations of cluster BC3:
•Start number 49 was manually annotated 5 times for cluster BC3.

Info for manual annotations of cluster BL:
•Start number 46 was manually annotated 2 times for cluster BL.

Info for manual annotations of cluster BN:
•Start number 46 was manually annotated 7 times for cluster BN.
•Start number 48 was manually annotated 1 time for cluster BN.
•Start number 49 was manually annotated 1 time for cluster BN.

Info for manual annotations of cluster BP:
•Start number 49 was manually annotated 11 times for cluster BP.

Info for manual annotations of cluster CU4:
•Start number 45 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CW3:
•Start number 59 was manually annotated 1 time for cluster CW3.

Info for manual annotations of cluster DU1:
•Start number 45 was manually annotated 1 time for cluster DU1.
•Start number 47 was manually annotated 3 times for cluster DU1.

Info for manual annotations of cluster DU2:

•Start number 50 was manually annotated 3 times for cluster DU2.
•Start number 58 was manually annotated 1 time for cluster DU2.

Info for manual annotations of cluster DY:
•Start number 37 was manually annotated 7 times for cluster DY.

Info for manual annotations of cluster FN:
•Start number 42 was manually annotated 2 times for cluster FN.

Info for manual annotations of cluster FO:
•Start number 41 was manually annotated 2 times for cluster FO.

Gene Information:

Gene: AbbeyMikolon_23 Start: 18386, Stop: 18598, Start Num: 46
Candidate Starts for AbbeyMikolon_23:
(Start: 46 @18386 has 9 MA's), (64, 18452), (67, 18464), (80, 18530), (82, 18542), (84, 18557),

Gene: ArizonaGT_21 Start: 17942, Stop: 18202, Start Num: 49
Candidate Starts for ArizonaGT_21:
(3, 17210), (12, 17399), (18, 17477), (21, 17525), (24, 17612), (39, 17897), (Start: 48 @17936 has 1 MA's), (Start: 49 @17942 has 28 MA's), (60, 17996), (63, 18005), (82, 18122),

Gene: Austintatious_22 Start: 17098, Stop: 17331, Start Num: 49
Candidate Starts for Austintatious_22:
(Start: 49 @17098 has 28 MA's), (54, 17131), (82, 17254),

Gene: AxeJC_21 Start: 17926, Stop: 18183, Start Num: 49
Candidate Starts for AxeJC_21:
(3, 17209), (12, 17398), (18, 17476), (21, 17524), (39, 17881), (Start: 48 @17920 has 1 MA's), (Start: 49 @17926 has 28 MA's), (60, 17980), (63, 17989), (82, 18106),

Gene: Bioscum_22 Start: 17134, Stop: 17367, Start Num: 49
Candidate Starts for Bioscum_22:
(Start: 49 @17134 has 28 MA's), (54, 17167), (82, 17290),

Gene: BlackSpider_25 Start: 20146, Stop: 20424, Start Num: 42
Candidate Starts for BlackSpider_25:
(35, 20062), (38, 20128), (Start: 42 @20146 has 2 MA's), (62, 20239), (65, 20251), (69, 20266), (75, 20308), (77, 20314), (82, 20344),

Gene: Cassini_25 Start: 20383, Stop: 20661, Start Num: 42
Candidate Starts for Cassini_25:
(1, 19501), (4, 19678), (8, 19720), (35, 20299), (38, 20365), (Start: 42 @20383 has 2 MA's), (62, 20476), (69, 20503), (75, 20545), (77, 20551), (82, 20581),

Gene: Chymera_21 Start: 17166, Stop: 17393, Start Num: 49
Candidate Starts for Chymera_21:
(Start: 49 @17166 has 28 MA's), (81, 17319), (82, 17322), (84, 17337),

Gene: Cumberbatch_21 Start: 17942, Stop: 18202, Start Num: 49
Candidate Starts for Cumberbatch_21:
(3, 17210), (12, 17399), (18, 17477), (21, 17525), (24, 17612), (39, 17897), (Start: 48 @17936 has 1 MA's), (Start: 49 @17942 has 28 MA's), (60, 17996), (63, 18005), (82, 18122),

Gene: DaRealMyers_23 Start: 19333, Stop: 19587, Start Num: 49
Candidate Starts for DaRealMyers_23:
(Start: 49 @19333 has 28 MA's), (78, 19471), (80, 19498), (82, 19510),

Gene: Darolandstone_23 Start: 19517, Stop: 19762, Start Num: 49
Candidate Starts for Darolandstone_23:
(31, 19388), (Start: 49 @19517 has 28 MA's), (67, 19595), (70, 19610), (82, 19673),

Gene: DearBasketball_25 Start: 18817, Stop: 19116, Start Num: 37
Candidate Starts for DearBasketball_25:
(6, 18160), (9, 18220), (14, 18352), (16, 18361), (25, 18535), (36, 18814), (Start: 37 @18817 has 7 MA's), (55, 18919), (67, 18961), (76, 19006), (79, 19015), (82, 19039), (90, 19087),

Gene: DinoNuggs_23 Start: 18783, Stop: 19082, Start Num: 37
Candidate Starts for DinoNuggs_23:
(6, 18126), (9, 18186), (14, 18318), (16, 18327), (25, 18501), (36, 18780), (Start: 37 @18783 has 7 MA's), (55, 18885), (67, 18927), (76, 18972), (79, 18981), (82, 19005), (90, 19053),

Gene: DonkeyMan_22 Start: 18572, Stop: 18871, Start Num: 37
Candidate Starts for DonkeyMan_22:
(25, 18290), (36, 18569), (Start: 37 @18572 has 7 MA's), (55, 18674), (67, 18716), (76, 18761), (79, 18770), (82, 18794), (90, 18842), (91, 18863),

Gene: Dryad_32 Start: 21653, Stop: 21880, Start Num: 46
Candidate Starts for Dryad_32:
(Start: 46 @21653 has 9 MA's), (72, 21758), (80, 21797), (82, 21809), (86, 21836),

Gene: Eastland_21 Start: 17911, Stop: 18168, Start Num: 49
Candidate Starts for Eastland_21:
(3, 17194), (12, 17383), (18, 17461), (21, 17509), (39, 17866), (Start: 48 @17905 has 1 MA's), (Start: 49 @17911 has 28 MA's), (60, 17965), (63, 17974), (82, 18091),

Gene: Eklok_21 Start: 17926, Stop: 18183, Start Num: 49
Candidate Starts for Eklok_21:
(3, 17209), (12, 17398), (18, 17476), (21, 17524), (39, 17881), (Start: 48 @17920 has 1 MA's), (Start: 49 @17926 has 28 MA's), (60, 17980), (63, 17989), (82, 18106),

Gene: FrumpyGal_21 Start: 17911, Stop: 18168, Start Num: 49
Candidate Starts for FrumpyGal_21:
(3, 17194), (12, 17383), (18, 17461), (21, 17509), (39, 17866), (Start: 48 @17905 has 1 MA's), (Start: 49 @17911 has 28 MA's), (60, 17965), (63, 17974), (82, 18091),

Gene: Gibson_29 Start: 20816, Stop: 21049, Start Num: 46
Candidate Starts for Gibson_29:
(Start: 46 @20816 has 9 MA's), (79, 20957), (80, 20969), (82, 20981), (86, 21008),

Gene: Greenbelt_28 Start: 20069, Stop: 20296, Start Num: 48
Candidate Starts for Greenbelt_28:

(7, 19364), (15, 19559), (22, 19652), (23, 19685), (32, 19937), (Start: 37 @20012 has 7 MA's), (40, 20030), (Start: 48 @20069 has 1 MA's), (67, 20153), (74, 20189), (82, 20231), (84, 20246),

Gene: Gsput1_22 Start: 18136, Stop: 18396, Start Num: 42
Candidate Starts for Gsput1_22:
(26, 17824), (27, 17839), (30, 18016), (Start: 42 @18136 has 2 MA's), (43, 18139), (Start: 45 @18157 has 2 MA's), (Start: 50 @18172 has 3 MA's), (54, 18205), (56, 18214), (64, 18238), (66, 18247), (79, 18301), (82, 18325), (84, 18340), (87, 18355), (89, 18364),

Gene: HFrancette_21 Start: 17957, Stop: 18214, Start Num: 49
Candidate Starts for HFrancette_21:
(3, 17225), (12, 17414), (18, 17492), (21, 17540), (24, 17627), (39, 17912), (Start: 48 @17951 has 1 MA's), (Start: 49 @17957 has 28 MA's), (60, 18011), (63, 18020), (82, 18137),

Gene: Heinz_22 Start: 18664, Stop: 18963, Start Num: 37
Candidate Starts for Heinz_22:
(28, 18460), (36, 18661), (Start: 37 @18664 has 7 MA's), (53, 18754), (55, 18766), (67, 18808), (76, 18853), (79, 18862), (82, 18886), (90, 18934),

Gene: Hibiscus_22 Start: 18612, Stop: 18911, Start Num: 37
Candidate Starts for Hibiscus_22:
(28, 18408), (36, 18609), (Start: 37 @18612 has 7 MA's), (53, 18702), (55, 18714), (67, 18756), (76, 18801), (79, 18810), (82, 18834), (90, 18882),

Gene: Ididsumtinwong_22 Start: 17134, Stop: 17367, Start Num: 49
Candidate Starts for Ididsumtinwong_22:
(Start: 49 @17134 has 28 MA's), (54, 17167), (82, 17290),

Gene: Ignacio_21 Start: 17957, Stop: 18214, Start Num: 49
Candidate Starts for Ignacio_21:
(3, 17225), (12, 17414), (18, 17492), (21, 17540), (24, 17627), (39, 17912), (Start: 48 @17951 has 1 MA's), (Start: 49 @17957 has 28 MA's), (60, 18011), (63, 18020), (82, 18137),

Gene: Jojo24_22 Start: 18609, Stop: 18908, Start Num: 37
Candidate Starts for Jojo24_22:
(28, 18405), (36, 18606), (Start: 37 @18609 has 7 MA's), (53, 18699), (55, 18711), (67, 18753), (76, 18798), (79, 18807), (82, 18831), (90, 18879),

Gene: Kudefre_35 Start: 29727, Stop: 29957, Start Num: 47
Candidate Starts for Kudefre_35:
(Start: 45 @29724 has 2 MA's), (Start: 47 @29727 has 3 MA's), (54, 29772), (57, 29784), (60, 29793), (68, 29820), (74, 29853), (75, 29859), (77, 29865), (81, 29892), (82, 29895), (83, 29907), (89, 29934), (90, 29943),

Gene: LilJank_36 Start: 31388, Stop: 31618, Start Num: 50
Candidate Starts for LilJank_36:
(Start: 50 @31388 has 3 MA's), (Start: 58 @31436 has 1 MA's), (81, 31541), (82, 31544), (84, 31559), (86, 31571),

Gene: Lishka_22 Start: 17098, Stop: 17331, Start Num: 49
Candidate Starts for Lishka_22:
(Start: 49 @17098 has 28 MA's), (54, 17131), (82, 17254),

Gene: Lizz_29 Start: 20625, Stop: 20858, Start Num: 46
Candidate Starts for Lizz_29:
(Start: 46 @20625 has 9 MA's), (79, 20766), (80, 20778), (82, 20790), (86, 20817),

Gene: Mojorita_22 Start: 17147, Stop: 17407, Start Num: 49
Candidate Starts for Mojorita_22:
(33, 17030), (Start: 49 @17147 has 28 MA's), (64, 17213), (82, 17327),

Gene: Nesbitt_23 Start: 18458, Stop: 18670, Start Num: 46
Candidate Starts for Nesbitt_23:
(Start: 46 @18458 has 9 MA's), (64, 18524), (67, 18536), (80, 18602), (82, 18614), (84, 18629),

Gene: Neville_36 Start: 31076, Stop: 31258, Start Num: 58
Candidate Starts for Neville_36:
(Start: 50 @31028 has 3 MA's), (Start: 58 @31076 has 1 MA's), (81, 31181), (82, 31184), (84, 31199), (86, 31211),

Gene: NoSwimming_27 Start: 24543, Stop: 24818, Start Num: 41
Candidate Starts for NoSwimming_27:
(Start: 41 @24543 has 2 MA's), (Start: 42 @24549 has 2 MA's), (71, 24687), (82, 24738),

Gene: Octobien14_37 Start: 30411, Stop: 30644, Start Num: 45
Candidate Starts for Octobien14_37:
(Start: 45 @30411 has 2 MA's), (Start: 47 @30414 has 3 MA's), (54, 30459), (57, 30471), (60, 30480), (64, 30492), (68, 30507), (74, 30540), (75, 30546), (77, 30552), (81, 30579), (82, 30582), (83, 30594), (89, 30621), (90, 30630),

Gene: PHTowN_29 Start: 20623, Stop: 20856, Start Num: 46
Candidate Starts for PHTowN_29:
(Start: 46 @20623 has 9 MA's), (79, 20764), (80, 20776), (82, 20788), (86, 20815),

Gene: PapayaSalad_22 Start: 17109, Stop: 17342, Start Num: 49
Candidate Starts for PapayaSalad_22:
(Start: 49 @17109 has 28 MA's), (54, 17142), (82, 17265),

Gene: Picard_22 Start: 17138, Stop: 17398, Start Num: 49
Candidate Starts for Picard_22:
(33, 17024), (Start: 49 @17138 has 28 MA's), (64, 17204), (82, 17318),

Gene: Piccadilly_21 Start: 17910, Stop: 18167, Start Num: 49
Candidate Starts for Piccadilly_21:
(3, 17193), (12, 17382), (18, 17460), (21, 17508), (39, 17865), (Start: 48 @17904 has 1 MA's), (Start: 49 @17910 has 28 MA's), (60, 17964), (63, 17973), (82, 18090),

Gene: Pucara_26 Start: 20288, Stop: 20599, Start Num: 42
Candidate Starts for Pucara_26:
(11, 19760), (15, 19802), (16, 19805), (Start: 42 @20288 has 2 MA's), (Start: 58 @20372 has 1 MA's), (61, 20378), (73, 20438), (75, 20456), (85, 20510), (88, 20528), (92, 20564),

Gene: Rabbitrun_38 Start: 31471, Stop: 31689, Start Num: 50
Candidate Starts for Rabbitrun_38:
(Start: 50 @31471 has 3 MA's), (Start: 58 @31519 has 1 MA's), (68, 31552), (74, 31585), (75, 31591), (77, 31597), (79, 31603), (80, 31615), (81, 31624), (82, 31627), (84, 31642), (86, 31654), (89, 31666),

Gene: Raleigh_23 Start: 19748, Stop: 19987, Start Num: 49
Candidate Starts for Raleigh_23:
(Start: 49 @19748 has 28 MA's), (67, 19826), (70, 19841), (82, 19904),

Gene: Reyja_23 Start: 18783, Stop: 19082, Start Num: 37
Candidate Starts for Reyja_23:
(6, 18126), (9, 18186), (14, 18318), (16, 18327), (25, 18501), (36, 18780), (Start: 37 @18783 has 7 MA's), (55, 18885), (67, 18927), (76, 18972), (79, 18981), (82, 19005), (90, 19053),

Gene: Rooney_29 Start: 20813, Stop: 21046, Start Num: 46
Candidate Starts for Rooney_29:
(Start: 46 @20813 has 9 MA's), (79, 20954), (80, 20966), (82, 20978), (86, 21005),

Gene: SV1_22 Start: 17352, Stop: 17588, Start Num: 49
Candidate Starts for SV1_22:
(Start: 49 @17352 has 28 MA's), (82, 17508),

Gene: Santhid_22 Start: 18617, Stop: 18916, Start Num: 37
Candidate Starts for Santhid_22:
(36, 18614), (Start: 37 @18617 has 7 MA's), (55, 18719), (67, 18761), (76, 18806), (79, 18815), (82, 18839), (90, 18887),

Gene: SassyC_31 Start: 20941, Stop: 21174, Start Num: 46
Candidate Starts for SassyC_31:
(2, 20191), (5, 20227), (15, 20431), (17, 20464), (19, 20479), (20, 20494), (Start: 46 @20941 has 9 MA's), (Start: 58 @20995 has 1 MA's), (76, 21070), (79, 21079), (82, 21103), (86, 21130),

Gene: Schiebs_7 Start: 3981, Stop: 4202, Start Num: 59
Candidate Starts for Schiebs_7:
(34, 3801), (44, 3912), (Start: 59 @3981 has 1 MA's), (74, 4053), (79, 4071), (80, 4083),

Gene: Schlegelian_21 Start: 17946, Stop: 18206, Start Num: 49
Candidate Starts for Schlegelian_21:
(3, 17208), (10, 17391), (12, 17397), (13, 17427), (18, 17475), (21, 17523), (24, 17610), (39, 17901), (Start: 48 @17940 has 1 MA's), (Start: 49 @17946 has 28 MA's), (60, 18000), (63, 18009), (82, 18126),

Gene: Schmidt_22 Start: 17098, Stop: 17373, Start Num: 45
Candidate Starts for Schmidt_22:
(Start: 42 @17077 has 2 MA's), (Start: 45 @17098 has 2 MA's), (Start: 50 @17113 has 3 MA's), (54, 17146), (64, 17179), (66, 17188), (72, 17218), (78, 17239), (80, 17254), (81, 17263),

Gene: Scotia_27 Start: 24546, Stop: 24821, Start Num: 41
Candidate Starts for Scotia_27:
(Start: 41 @24546 has 2 MA's), (Start: 42 @24552 has 2 MA's), (82, 24741),

Gene: Sephiroth_36 Start: 29898, Stop: 30128, Start Num: 47
Candidate Starts for Sephiroth_36:
(Start: 45 @29895 has 2 MA's), (Start: 47 @29898 has 3 MA's), (54, 29943), (57, 29955), (60, 29964), (68, 29991), (74, 30024), (75, 30030), (77, 30036), (81, 30063), (82, 30066), (83, 30078), (89, 30105), (90, 30114),

Gene: ShakeNBake_29 Start: 20641, Stop: 20874, Start Num: 46
Candidate Starts for ShakeNBake_29:
(Start: 46 @20641 has 9 MA's), (79, 20782), (80, 20794), (82, 20806), (86, 20833),

Gene: SoJo_23 Start: 19328, Stop: 19582, Start Num: 49
Candidate Starts for SoJo_23:
(Start: 49 @19328 has 28 MA's), (78, 19466), (80, 19493), (82, 19505),

Gene: Syleon_36 Start: 29820, Stop: 30050, Start Num: 47
Candidate Starts for Syleon_36:
(Start: 45 @29817 has 2 MA's), (Start: 47 @29820 has 3 MA's), (54, 29865), (57, 29877), (60, 29886), (68, 29913), (74, 29946), (75, 29952), (77, 29958), (81, 29985), (82, 29988), (83, 30000), (89, 30027), (90, 30036),

Gene: Tarzan_22 Start: 18586, Stop: 18885, Start Num: 37
Candidate Starts for Tarzan_22:
(6, 17929), (9, 17989), (14, 18121), (16, 18130), (25, 18304), (36, 18583), (Start: 37 @18586 has 7 MA's), (55, 18688), (67, 18730), (76, 18775), (79, 18784), (82, 18808), (90, 18856), (91, 18877),

Gene: ToastyFinz_22 Start: 19068, Stop: 19331, Start Num: 49
Candidate Starts for ToastyFinz_22:
(Start: 49 @19068 has 28 MA's), (64, 19134), (82, 19248),

Gene: Trax_36 Start: 31334, Stop: 31564, Start Num: 50
Candidate Starts for Trax_36:
(Start: 50 @31334 has 3 MA's), (Start: 58 @31382 has 1 MA's), (81, 31487), (82, 31490), (84, 31505), (86, 31517),

Gene: Tubberson_23 Start: 19333, Stop: 19587, Start Num: 49
Candidate Starts for Tubberson_23:
(Start: 49 @19333 has 28 MA's), (78, 19471), (80, 19498), (82, 19510),

Gene: TurkishDelight_36 Start: 34260, Stop: 34487, Start Num: 49
Candidate Starts for TurkishDelight_36:
(Start: 49 @34260 has 28 MA's), (81, 34413), (82, 34416),

Gene: Virizion_33 Start: 21012, Stop: 21245, Start Num: 46
Candidate Starts for Virizion_33:
(Start: 46 @21012 has 9 MA's), (79, 21153), (80, 21165), (82, 21177), (86, 21204),

Gene: Vondra_21 Start: 17962, Stop: 18219, Start Num: 49
Candidate Starts for Vondra_21:
(3, 17224), (12, 17413), (18, 17491), (21, 17539), (24, 17626), (39, 17917), (Start: 48 @17956 has 1 MA's), (Start: 49 @17962 has 28 MA's), (60, 18016), (63, 18025), (82, 18142),

Gene: Wentworth_30 Start: 20992, Stop: 21219, Start Num: 46
Candidate Starts for Wentworth_30:
(Start: 46 @20992 has 9 MA's), (51, 21013), (52, 21016), (57, 21040), (63, 21058), (79, 21127), (82, 21151), (83, 21163), (86, 21178),

Gene: Wilkos_30 Start: 20904, Stop: 21131, Start Num: 46
Candidate Starts for Wilkos_30:

(Start: 46 @20904 has 9 MA's), (54, 20940), (Start: 58 @20955 has 1 MA's), (62, 20967), (63, 20970), (82, 21063), (86, 21090),

Gene: Yara_26 Start: 20240, Stop: 20461, Start Num: 49
Candidate Starts for Yara_26:
(29, 20069), (Start: 49 @20240 has 28 MA's), (70, 20336), (82, 20399),