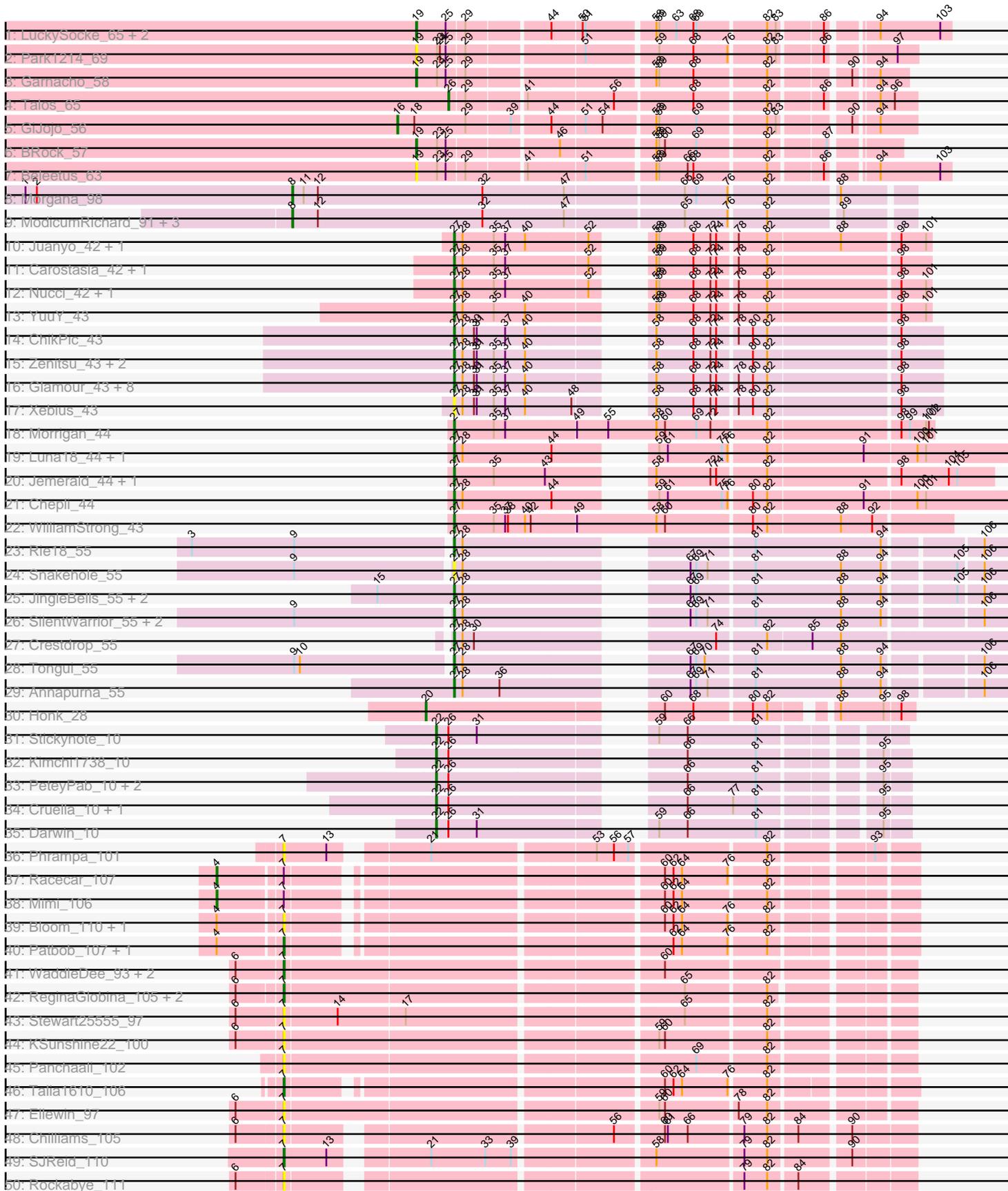Pham 283700

Pham 283700

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 283700 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283700 has 88 members, 25 are drafts.

Phages represented in each track:
- Track 1 : LuckySocke_65, Alone3_66, Fudan_67
- Track 2 : Park1214_69
- Track 3 : Garnacho_58
- Track 4 : Talos_65
- Track 5 : GiJojo_56
- Track 6 : BRock_57
- Track 7 : Beleetus_63
- Track 8 : Morgana_98
- Track 9 : ModicumRichard_91, Cafasso_91, ObLaDi_91, Aleemily_90
- Track 10 : Juanyo_42, MiniVolent_41
- Track 11 : Carostasia_42, Quartz_43
- Track 12 : Nucci_42, Mandalorian_42
- Track 13 : YuuY_43
- Track 14 : ChikPic_43
- Track 15 : Zenitsu_43, MCubed_43, Sansa_42
- Track 16 : Glamour_43, Shamu_44, Eleri_43, ColaCorta_43, Phanita_44, PSirce_43, Andromedas_43, Saratos_43, Finny_44
- Track 17 : Xebius_43
- Track 18 : Morrigan_44
- Track 19 : Luna18_44, KatChan_44
- Track 20 : Jemerald_44, Juicer_44
- Track 21 : Chepli_44
- Track 22 : WilliamStrong_43
- Track 23 : Rie18_55
- Track 24 : Snakehole_55
- Track 25 : JingleBells_55, FreddieHg_55, DannyDe_55
- Track 26 : SilentWarrior_55, Hiddenleaf_55, Chivey_55
- Track 27 : Crestdrop_55
- Track 28 : Tongui_55
- Track 29 : Annapurna_55
- Track 30 : Honk_28
- Track 31 : Stickynote_10
- Track 32 : Kimchi1738_10
- Track 33 : PeteyPab_10, Zion_10, PotatoChip_10
- Track 34 : Cruella_10, C3PO_10
- Track 35 : Darwin_10
- Track 36 : Phrampa_101

• Track 37 : Racecar_107
• Track 38 : Mimi_106
• Track 39 : Bloom_110, FrostedClock_109
• Track 40 : Patbob_107, GoldenEssence_92
• Track 41 : WaddleDee_93, Emmetator_98, DunneganBoMo_95
• Track 42 : ReginaGlobina_105, LeoJr_105, Atuin_100
• Track 43 : Stewart25555_97
• Track 44 : KSunshine22_100
• Track 45 : Panchaali_102
• Track 46 : Talia1610_106
• Track 47 : Ellewin_97
• Track 48 : Chilliams_105
• Track 49 : SJReid_110
• Track 50 : Rockabye_111
• Track 51 : BooTeria_102
• Track 52 : FloraSnap32_106
• Track 53 : Artu_98
• Track 54 : Laure_110
• Track 55 : P1201_23

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

The start number called the most often in the published annotations is 27, it was called in 36 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Andromedas_43, Annapurna_55, Carostasia_42, Chepli_44, ChikPic_43, Chivey_55, ColaCorta_43, Crestdrop_55, DannyDe_55, Eleri_43, Finny_44, FreddieHg_55, Glamour_43, Hiddenleaf_55, Jemerald_44, JingleBells_55, Juanyo_42, Juicer_44, KatChan_44, Luna18_44, MCubed_43, Mandalorian_42, MiniVolent_41, Morrigan_44, Nucci_42, PSirce_43, Phanita_44, Quartz_43, Rie18_55, Sansa_42, Saratos_43, Shamu_44, SilentWarrior_55, Snakehole_55, Tongui_55, WilliamStrong_43, Xebius_43, YuuY_43, Zenitsu_43,

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

Genes that do not have the "Most Annotated" start:
• Aleemily_90, Alone3_66, Artu_98, Atuin_100, BRock_57, Beleetus_63, Bloom_110, BooTeria_102, C3PO_10, Cafasso_91, Chilliams_105, Cruella_10, Darwin_10, DunneganBoMo_95, Ellewin_97, Emmetator_98, FloraSnap32_106, FrostedClock_109, Fudan_67, Garnacho_58, GiJojo_56, GoldenEssence_92, Honk_28, KSunshine22_100, Kimchi1738_10, Laure_110, LeoJr_105, LuckySocke_65, Mimi_106, ModicumRichard_91, Morgana_98, ObLaDi_91, P1201_23, Panchaali_102, Park1214_69, Patbob_107, PeteyPab_10, Phrampa_101, PotatoChip_10, Racecar_107, ReginaGlobina_105, Rockabye_111, SJReid_110, Stewart25555_97, Stickynote_10, Talia1610_106, Talos_65, WaddleDee_93, Zion_10,

Summary by start number:

Start 4:
• Found in 7 of 88 (8.0%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 28.6% of time when present
• Phage (with cluster) where this start called: Mimi_106 (FC), Racecar_107 (FC),

Start 7:
• Found in 25 of 88 (28.4%) of genes in pham
• Manual Annotations of this start: 6 of 63
• Called 92.0% of time when present
• Phage (with cluster) where this start called: Artu_98 (FC), Atuin_100 (FC), Bloom_110 (FC), BooTeria_102 (FC), Chilliams_105 (FC), DunneganBoMo_95 (FC), Ellewin_97 (FC), Emmetator_98 (FC), FloraSnap32_106 (FC), FrostedClock_109 (FC), GoldenEssence_92 (FC), KSunshine22_100 (FC), Laure_110 (UNK), LeoJr_105 (FC), Panchaali_102 (FC), Patbob_107 (FC), Phrampa_101 (FC), ReginaGlobina_105 (FC), Rockabye_111 (FC), SJReid_110 (FC), Stewart25555_97 (FC), Talia1610_106 (FC), WaddleDee_93 (FC),

Start 8:
• Found in 5 of 88 (5.7%) of genes in pham
• Manual Annotations of this start: 4 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aleemily_90 (DZ), Cafasso_91 (DZ), ModicumRichard_91 (DZ), Morgana_98 (DZ), ObLaDi_91 (DZ),

Start 16:
• Found in 1 of 88 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GiJojo_56 (BS),

Start 19:
• Found in 8 of 88 (9.1%) of genes in pham
• Manual Annotations of this start: 4 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alone3_66 (BS), BRock_57 (BS), Beleetus_63 (BS), Fudan_67 (BS), Garnacho_58 (BS), LuckySocke_65 (BS), P1201_23 (singleton), Park1214_69 (BS),

Start 20:
• Found in 1 of 88 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Honk_28 (EH),

Start 22:
• Found in 8 of 88 (9.1%) of genes in pham
• Manual Annotations of this start: 8 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: C3PO_10 (EN), Cruella_10 (EN), Darwin_10 (EN), Kimchi1738_10 (EN), PeteyPab_10 (EN), PotatoChip_10 (EN), Stickynote_10 (EN), Zion_10 (EN),

Start 26:
• Found in 9 of 88 (10.2%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Talos_65 (BS),

Start 27:
• Found in 39 of 88 (44.3%) of genes in pham
• Manual Annotations of this start: 36 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Andromedas_43 (EA2), Annapurna_55 (EF), Carostasia_42 (EA10), Chepli_44 (EA6), ChikPic_43 (EA2), Chivey_55 (EF), ColaCorta_43 (EA2), Crestdrop_55 (EF), DannyDe_55 (EF), Eleri_43 (EA2), Finny_44 (EA2), FreddieHg_55 (EF), Glamour_43 (EA2), Hiddenleaf_55 (EF), Jemerald_44 (EA6), JingleBells_55 (EF), Juanyo_42 (EA10), Juicer_44 (EA6), KatChan_44 (EA6), Luna18_44 (EA6), MCubed_43 (EA2), Mandalorian_42 (EA10), MiniVolent_41 (EA10), Morrigan_44 (EA6), Nucci_42 (EA10), PSirce_43 (EA2), Phanita_44 (EA2), Quartz_43 (EA10), Rie18_55 (EF), Sansa_42 (EA2), Saratos_43 (EA2), Shamu_44 (EA2), SilentWarrior_55 (EF), Snakehole_55 (EF), Tongui_55 (EF), WilliamStrong_43 (EA6), Xebius_43 (EA2), YuuY_43 (EA10), Zenitsu_43 (EA2),

Summary by clusters:

There are 11 clusters represented in this pham: singleton, EN, EA10, UNK, EF, EH, FC, DZ, BS, EA2, EA6,

Info for manual annotations of cluster BS:
•Start number 16 was manually annotated 1 time for cluster BS.
•Start number 19 was manually annotated 4 times for cluster BS.
•Start number 26 was manually annotated 1 time for cluster BS.

Info for manual annotations of cluster DZ:
•Start number 8 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EA10:
•Start number 27 was manually annotated 6 times for cluster EA10.

Info for manual annotations of cluster EA2:
•Start number 27 was manually annotated 13 times for cluster EA2.

Info for manual annotations of cluster EA6:
•Start number 27 was manually annotated 7 times for cluster EA6.

Info for manual annotations of cluster EF:
•Start number 27 was manually annotated 10 times for cluster EF.

Info for manual annotations of cluster EH:
•Start number 20 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster EN:
•Start number 22 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster FC:
•Start number 4 was manually annotated 2 times for cluster FC.
•Start number 7 was manually annotated 6 times for cluster FC.

Gene Information:

Gene: Aleemily_90 Start: 53699, Stop: 54325, Start Num: 8
Candidate Starts for Aleemily_90:
(Start: 8 @53699 has 4 MA's), (12, 53726), (32, 53900), (47, 53984), (65, 54104), (76, 54149), (82, 54185), (89, 54257),

Gene: Alone3_66 Start: 23782, Stop: 24288, Start Num: 19
Candidate Starts for Alone3_66:
(Start: 19 @23782 has 4 MA's), (25, 23812), (29, 23830), (44, 23911), (50, 23941), (51, 23944), (58, 24010), (59, 24013), (63, 24031), (68, 24049), (69, 24052), (82, 24121), (83, 24130), (86, 24172), (94, 24214), (103, 24277),

Gene: Andromedas_43 Start: 31962, Stop: 31519, Start Num: 27
Candidate Starts for Andromedas_43:
(Start: 27 @31962 has 36 MA's), (28, 31953), (30, 31941), (31, 31938), (35, 31920), (37, 31908), (40, 31887), (58, 31803), (68, 31764), (72, 31746), (74, 31740), (78, 31722), (80, 31707), (82, 31692), (98, 31560),

Gene: Annapurna_55 Start: 39067, Stop: 39576, Start Num: 27
Candidate Starts for Annapurna_55:
(Start: 27 @39067 has 36 MA's), (28, 39076), (36, 39115), (67, 39265), (69, 39271), (71, 39283), (81, 39328), (88, 39418), (94, 39460), (106, 39550),

Gene: Artu_98 Start: 82489, Stop: 83100, Start Num: 7
Candidate Starts for Artu_98:
(6, 82441), (Start: 7 @82489 has 6 MA's), (60, 82864),

Gene: Atuin_100 Start: 85986, Stop: 86594, Start Num: 7
Candidate Starts for Atuin_100:
(6, 85941), (Start: 7 @85986 has 6 MA's), (65, 86382), (82, 86463),

Gene: BRock_57 Start: 20332, Stop: 20787, Start Num: 19
Candidate Starts for BRock_57:
(Start: 19 @20332 has 4 MA's), (23, 20353), (25, 20362), (46, 20470), (58, 20560), (59, 20563), (60, 20569), (69, 20602), (82, 20671), (87, 20725),

Gene: Beleetus_63 Start: 22462, Stop: 22968, Start Num: 19
Candidate Starts for Beleetus_63:
(Start: 19 @22462 has 4 MA's), (23, 22483), (25, 22492), (29, 22510), (41, 22567), (51, 22624), (58, 22690), (59, 22693), (66, 22723), (68, 22729), (82, 22801), (86, 22852), (94, 22894), (103, 22957),

Gene: Bloom_110 Start: 86089, Stop: 86679, Start Num: 7
Candidate Starts for Bloom_110:
(Start: 4 @86026 has 2 MA's), (Start: 7 @86089 has 6 MA's), (60, 86443), (62, 86452), (64, 86461), (76, 86509), (82, 86545),

Gene: BooTeria_102 Start: 82602, Stop: 83213, Start Num: 7
Candidate Starts for BooTeria_102:
(6, 82554), (Start: 7 @82602 has 6 MA's), (59, 82971),

Gene: C3PO_10 Start: 5555, Stop: 5971, Start Num: 22
Candidate Starts for C3PO_10:
(Start: 22 @5555 has 8 MA's), (Start: 26 @5567 has 1 MA's), (66, 5765), (77, 5813), (81, 5837), (95, 5945),

Gene: Cafasso_91 Start: 53851, Stop: 54477, Start Num: 8
Candidate Starts for Cafasso_91:
(Start: 8 @53851 has 4 MA's), (12, 53878), (32, 54052), (47, 54136), (65, 54256), (76, 54301), (82, 54337), (89, 54409),

Gene: Carostasia_42 Start: 31495, Stop: 31064, Start Num: 27
Candidate Starts for Carostasia_42:
(Start: 27 @31495 has 36 MA's), (28, 31486), (35, 31453), (37, 31441), (52, 31357), (58, 31336), (59, 31333), (68, 31297), (72, 31279), (74, 31273), (78, 31255), (82, 31225), (98, 31093),

Gene: Chepli_44 Start: 31401, Stop: 30856, Start Num: 27
Candidate Starts for Chepli_44:
(Start: 27 @31401 has 36 MA's), (28, 31392), (44, 31299), (59, 31236), (61, 31227), (75, 31170), (76, 31164), (80, 31143), (82, 31128), (91, 31029), (100, 30975), (101, 30966),

Gene: ChikPic_43 Start: 31816, Stop: 31373, Start Num: 27
Candidate Starts for ChikPic_43:
(Start: 27 @31816 has 36 MA's), (28, 31807), (30, 31795), (31, 31792), (37, 31762), (40, 31741), (58, 31657), (68, 31618), (72, 31600), (74, 31594), (78, 31576), (80, 31561), (82, 31546), (98, 31414),

Gene: Chilliams_105 Start: 78852, Stop: 79442, Start Num: 7
Candidate Starts for Chilliams_105:
(6, 78807), (Start: 7 @78852 has 6 MA's), (56, 79158), (60, 79203), (61, 79206), (66, 79227), (79, 79281), (82, 79305), (84, 79332), (90, 79380),

Gene: Chivey_55 Start: 39021, Stop: 39530, Start Num: 27
Candidate Starts for Chivey_55:
(9, 38862), (Start: 27 @39021 has 36 MA's), (28, 39030), (67, 39219), (69, 39225), (71, 39237), (81, 39282), (88, 39372), (94, 39414), (106, 39504),

Gene: ColaCorta_43 Start: 31962, Stop: 31519, Start Num: 27
Candidate Starts for ColaCorta_43:
(Start: 27 @31962 has 36 MA's), (28, 31953), (30, 31941), (31, 31938), (35, 31920), (37, 31908), (40, 31887), (58, 31803), (68, 31764), (72, 31746), (74, 31740), (78, 31722), (80, 31707), (82, 31692), (98, 31560),

Gene: Crestdrop_55 Start: 39188, Stop: 39706, Start Num: 27
Candidate Starts for Crestdrop_55:
(Start: 27 @39188 has 36 MA's), (28, 39197), (30, 39209), (74, 39413), (82, 39461), (85, 39506), (88, 39536),

Gene: Cruella_10 Start: 5555, Stop: 5971, Start Num: 22
Candidate Starts for Cruella_10:

(Start: 22 @5555 has 8 MA's), (Start: 26 @5567 has 1 MA's), (66, 5765), (77, 5813), (81, 5837), (95, 5945),

Gene: DannyDe_55 Start: 39022, Stop: 39531, Start Num: 27
Candidate Starts for DannyDe_55:
(15, 38941), (Start: 27 @39022 has 36 MA's), (28, 39031), (67, 39220), (69, 39226), (81, 39283), (88, 39373), (94, 39415), (105, 39481), (106, 39505),

Gene: Darwin_10 Start: 5554, Stop: 5970, Start Num: 22
Candidate Starts for Darwin_10:
(Start: 22 @5554 has 8 MA's), (Start: 26 @5566 has 1 MA's), (31, 5596), (59, 5734), (66, 5764), (81, 5836), (95, 5944),

Gene: DunneganBoMo_95 Start: 81871, Stop: 82482, Start Num: 7
Candidate Starts for DunneganBoMo_95:
(6, 81823), (Start: 7 @81871 has 6 MA's), (60, 82246),

Gene: Eleri_43 Start: 31806, Stop: 31363, Start Num: 27
Candidate Starts for Eleri_43:
(Start: 27 @31806 has 36 MA's), (28, 31797), (30, 31785), (31, 31782), (35, 31764), (37, 31752), (40, 31731), (58, 31647), (68, 31608), (72, 31590), (74, 31584), (78, 31566), (80, 31551), (82, 31536), (98, 31404),

Gene: Ellewin_97 Start: 81282, Stop: 81893, Start Num: 7
Candidate Starts for Ellewin_97:
(6, 81234), (Start: 7 @81282 has 6 MA's), (59, 81651), (60, 81657), (78, 81729), (82, 81759),

Gene: Emmetator_98 Start: 81826, Stop: 82437, Start Num: 7
Candidate Starts for Emmetator_98:
(6, 81778), (Start: 7 @81826 has 6 MA's), (60, 82201),

Gene: Finny_44 Start: 31800, Stop: 31357, Start Num: 27
Candidate Starts for Finny_44:
(Start: 27 @31800 has 36 MA's), (28, 31791), (30, 31779), (31, 31776), (35, 31758), (37, 31746), (40, 31725), (58, 31641), (68, 31602), (72, 31584), (74, 31578), (78, 31560), (80, 31545), (82, 31530), (98, 31398),

Gene: FloraSnap32_106 Start: 84986, Stop: 85579, Start Num: 7
Candidate Starts for FloraSnap32_106:
(Start: 4 @84923 has 2 MA's), (Start: 7 @84986 has 6 MA's), (60, 85340), (69, 85373), (73, 85391), (82, 85442),

Gene: FreddieHg_55 Start: 39038, Stop: 39547, Start Num: 27
Candidate Starts for FreddieHg_55:
(15, 38957), (Start: 27 @39038 has 36 MA's), (28, 39047), (67, 39236), (69, 39242), (81, 39299), (88, 39389), (94, 39431), (105, 39497), (106, 39521),

Gene: FrostedClock_109 Start: 86286, Stop: 86876, Start Num: 7
Candidate Starts for FrostedClock_109:
(Start: 4 @86223 has 2 MA's), (Start: 7 @86286 has 6 MA's), (60, 86640), (62, 86649), (64, 86658), (76, 86706), (82, 86742),

Gene: Fudan_67 Start: 23143, Stop: 23649, Start Num: 19

Candidate Starts for Fudan_67:
(Start: 19 @23143 has 4 MA's), (25, 23173), (29, 23191), (44, 23272), (50, 23302), (51, 23305), (58, 23371), (59, 23374), (63, 23392), (68, 23410), (69, 23413), (82, 23482), (83, 23491), (86, 23533), (94, 23575), (103, 23638),

Gene: Garnacho_58 Start: 22022, Stop: 22483, Start Num: 19
Candidate Starts for Garnacho_58:
(Start: 19 @22022 has 4 MA's), (23, 22043), (25, 22052), (29, 22070), (58, 22250), (59, 22253), (68, 22289), (82, 22361), (90, 22433), (94, 22454),

Gene: GiJojo_56 Start: 22495, Stop: 22989, Start Num: 16
Candidate Starts for GiJojo_56:
(Start: 16 @22495 has 1 MA's), (18, 22513), (29, 22567), (39, 22612), (44, 22648), (51, 22681), (54, 22699), (58, 22747), (59, 22750), (69, 22789), (82, 22858), (83, 22867), (90, 22930), (94, 22951),

Gene: Glamour_43 Start: 31954, Stop: 31511, Start Num: 27
Candidate Starts for Glamour_43:
(Start: 27 @31954 has 36 MA's), (28, 31945), (30, 31933), (31, 31930), (35, 31912), (37, 31900), (40, 31879), (58, 31795), (68, 31756), (72, 31738), (74, 31732), (78, 31714), (80, 31699), (82, 31684), (98, 31552),

Gene: GoldenEssence_92 Start: 79881, Stop: 80471, Start Num: 7
Candidate Starts for GoldenEssence_92:
(Start: 4 @79818 has 2 MA's), (Start: 7 @79881 has 6 MA's), (62, 80244), (64, 80253), (76, 80301), (82, 80337),

Gene: Hiddenleaf_55 Start: 39021, Stop: 39530, Start Num: 27
Candidate Starts for Hiddenleaf_55:
(9, 38862), (Start: 27 @39021 has 36 MA's), (28, 39030), (67, 39219), (69, 39225), (71, 39237), (81, 39282), (88, 39372), (94, 39414), (106, 39504),

Gene: Honk_28 Start: 20768, Stop: 21193, Start Num: 20
Candidate Starts for Honk_28:
(Start: 20 @20768 has 1 MA's), (60, 20966), (68, 20996), (80, 21053), (82, 21068), (88, 21119), (95, 21164), (98, 21179),

Gene: Jemerald_44 Start: 32468, Stop: 31968, Start Num: 27
Candidate Starts for Jemerald_44:
(Start: 27 @32468 has 36 MA's), (35, 32426), (43, 32372), (58, 32306), (72, 32249), (74, 32243), (82, 32195), (98, 32063), (104, 32015), (105, 32006),

Gene: JingleBells_55 Start: 39130, Stop: 39639, Start Num: 27
Candidate Starts for JingleBells_55:
(15, 39049), (Start: 27 @39130 has 36 MA's), (28, 39139), (67, 39328), (69, 39334), (81, 39391), (88, 39481), (94, 39523), (105, 39589), (106, 39613),

Gene: Juanyo_42 Start: 31426, Stop: 30995, Start Num: 27
Candidate Starts for Juanyo_42:
(Start: 27 @31426 has 36 MA's), (28, 31417), (35, 31384), (37, 31372), (40, 31351), (52, 31288), (58, 31267), (59, 31264), (68, 31228), (72, 31210), (74, 31204), (78, 31186), (82, 31156), (88, 31081), (98, 31024), (101, 31000),

Gene: Juicer_44 Start: 32468, Stop: 31968, Start Num: 27

Candidate Starts for Juicer_44:
(Start: 27 @32468 has 36 MA's), (35, 32426), (43, 32372), (58, 32306), (72, 32249), (74, 32243), (82, 32195), (98, 32063), (104, 32015), (105, 32006),

Gene: KSunshine22_100 Start: 82883, Stop: 83494, Start Num: 7
Candidate Starts for KSunshine22_100:
(6, 82835), (Start: 7 @82883 has 6 MA's), (59, 83252), (60, 83258), (82, 83360),

Gene: KatChan_44 Start: 31413, Stop: 30868, Start Num: 27
Candidate Starts for KatChan_44:
(Start: 27 @31413 has 36 MA's), (28, 31404), (44, 31311), (59, 31248), (61, 31239), (75, 31182), (76, 31176), (82, 31140), (91, 31041), (100, 30987), (101, 30978),

Gene: Kimchi1738_10 Start: 5556, Stop: 5972, Start Num: 22
Candidate Starts for Kimchi1738_10:
(Start: 22 @5556 has 8 MA's), (Start: 26 @5568 has 1 MA's), (66, 5766), (81, 5838), (95, 5946),

Gene: Laure_110 Start: 78788, Stop: 79390, Start Num: 7
Candidate Starts for Laure_110:
(5, 78734), (Start: 7 @78788 has 6 MA's), (34, 78977), (45, 79046), (69, 79181), (87, 79307), (96, 79367),

Gene: LeoJr_105 Start: 86221, Stop: 86829, Start Num: 7
Candidate Starts for LeoJr_105:
(6, 86176), (Start: 7 @86221 has 6 MA's), (65, 86617), (82, 86698),

Gene: LuckySocke_65 Start: 23092, Stop: 23598, Start Num: 19
Candidate Starts for LuckySocke_65:
(Start: 19 @23092 has 4 MA's), (25, 23122), (29, 23140), (44, 23221), (50, 23251), (51, 23254), (58, 23320), (59, 23323), (63, 23341), (68, 23359), (69, 23362), (82, 23431), (83, 23440), (86, 23482), (94, 23524), (103, 23587),

Gene: Luna18_44 Start: 31413, Stop: 30868, Start Num: 27
Candidate Starts for Luna18_44:
(Start: 27 @31413 has 36 MA's), (28, 31404), (44, 31311), (59, 31248), (61, 31239), (75, 31182), (76, 31176), (82, 31140), (91, 31041), (100, 30987), (101, 30978),

Gene: MCubed_43 Start: 31831, Stop: 31388, Start Num: 27
Candidate Starts for MCubed_43:
(Start: 27 @31831 has 36 MA's), (28, 31822), (30, 31810), (31, 31807), (35, 31789), (37, 31777), (40, 31756), (58, 31672), (68, 31633), (72, 31615), (74, 31609), (80, 31576), (82, 31561), (98, 31429),

Gene: Mandalorian_42 Start: 31505, Stop: 31074, Start Num: 27
Candidate Starts for Mandalorian_42:
(Start: 27 @31505 has 36 MA's), (28, 31496), (35, 31463), (37, 31451), (52, 31367), (58, 31346), (59, 31343), (68, 31307), (72, 31289), (74, 31283), (78, 31265), (82, 31235), (98, 31103), (101, 31079),

Gene: Mimi_106 Start: 85373, Stop: 86026, Start Num: 4
Candidate Starts for Mimi_106:
(Start: 4 @85373 has 2 MA's), (Start: 7 @85436 has 6 MA's), (60, 85790), (62, 85799), (64, 85808), (82, 85892),

Gene: MiniVolent_41 Start: 31388, Stop: 30957, Start Num: 27

Candidate Starts for MiniVolent_41:
(Start: 27 @31388 has 36 MA's), (28, 31379), (35, 31346), (37, 31334), (40, 31313), (52, 31250), (58, 31229), (59, 31226), (68, 31190), (72, 31172), (74, 31166), (78, 31148), (82, 31118), (88, 31043), (98, 30986), (101, 30962),

Gene: ModicumRichard_91 Start: 53919, Stop: 54545, Start Num: 8
Candidate Starts for ModicumRichard_91:
(Start: 8 @53919 has 4 MA's), (12, 53946), (32, 54120), (47, 54204), (65, 54324), (76, 54369), (82, 54405), (89, 54477),

Gene: Morgana_98 Start: 56101, Stop: 56727, Start Num: 8
Candidate Starts for Morgana_98:
(1, 55819), (2, 55831), (Start: 8 @56101 has 4 MA's), (11, 56113), (12, 56128), (32, 56302), (47, 56386), (65, 56506), (69, 56518), (76, 56551), (82, 56587), (88, 56656),

Gene: Morrigan_44 Start: 31356, Stop: 30871, Start Num: 27
Candidate Starts for Morrigan_44:
(Start: 27 @31356 has 36 MA's), (35, 31314), (37, 31302), (49, 31230), (55, 31197), (58, 31146), (60, 31137), (69, 31104), (72, 31089), (82, 31035), (98, 30903), (99, 30894), (101, 30879), (102, 30876),

Gene: Nucci_42 Start: 31488, Stop: 31057, Start Num: 27
Candidate Starts for Nucci_42:
(Start: 27 @31488 has 36 MA's), (28, 31479), (35, 31446), (37, 31434), (52, 31350), (58, 31329), (59, 31326), (68, 31290), (72, 31272), (74, 31266), (78, 31248), (82, 31218), (98, 31086), (101, 31062),

Gene: ObLaDi_91 Start: 53945, Stop: 54571, Start Num: 8
Candidate Starts for ObLaDi_91:
(Start: 8 @53945 has 4 MA's), (12, 53972), (32, 54146), (47, 54230), (65, 54350), (76, 54395), (82, 54431), (89, 54503),

Gene: P1201_23 Start: 11182, Stop: 11604, Start Num: 19
Candidate Starts for P1201_23:
(Start: 19 @11182 has 4 MA's), (75, 11437), (79, 11461), (81, 11473), (84, 11512), (95, 11575),

Gene: PSirce_43 Start: 31961, Stop: 31518, Start Num: 27
Candidate Starts for PSirce_43:
(Start: 27 @31961 has 36 MA's), (28, 31952), (30, 31940), (31, 31937), (35, 31919), (37, 31907), (40, 31886), (58, 31802), (68, 31763), (72, 31745), (74, 31739), (78, 31721), (80, 31706), (82, 31691), (98, 31559),

Gene: Panchaali_102 Start: 82860, Stop: 83471, Start Num: 7
Candidate Starts for Panchaali_102:
(Start: 7 @82860 has 6 MA's), (69, 83268), (82, 83337),

Gene: Park1214_69 Start: 23564, Stop: 24034, Start Num: 19
Candidate Starts for Park1214_69:
(Start: 19 @23564 has 4 MA's), (23, 23585), (24, 23588), (25, 23594), (29, 23612), (51, 23726), (59, 23795), (68, 23831), (76, 23867), (82, 23903), (83, 23912), (86, 23954), (97, 24014),

Gene: Patbob_107 Start: 86171, Stop: 86761, Start Num: 7
Candidate Starts for Patbob_107:
(Start: 4 @86108 has 2 MA's), (Start: 7 @86171 has 6 MA's), (62, 86534), (64, 86543), (76, 86591), (82, 86627),

Gene: PeteyPab_10 Start: 5532, Stop: 5948, Start Num: 22
Candidate Starts for PeteyPab_10:
(Start: 22 @5532 has 8 MA's), (Start: 26 @5544 has 1 MA's), (66, 5742), (81, 5814), (95, 5922),

Gene: Phanita_44 Start: 31743, Stop: 31300, Start Num: 27
Candidate Starts for Phanita_44:
(Start: 27 @31743 has 36 MA's), (28, 31734), (30, 31722), (31, 31719), (35, 31701), (37, 31689), (40, 31668), (58, 31584), (68, 31545), (72, 31527), (74, 31521), (78, 31503), (80, 31488), (82, 31473), (98, 31341),

Gene: Phrampa_101 Start: 87574, Stop: 88167, Start Num: 7
Candidate Starts for Phrampa_101:
(Start: 7 @87574 has 6 MA's), (13, 87619), (21, 87703), (53, 87865), (56, 87883), (57, 87898), (82, 88030), (93, 88126),

Gene: PotatoChip_10 Start: 5534, Stop: 5950, Start Num: 22
Candidate Starts for PotatoChip_10:
(Start: 22 @5534 has 8 MA's), (Start: 26 @5546 has 1 MA's), (66, 5744), (81, 5816), (95, 5924),

Gene: Quartz_43 Start: 31618, Stop: 31187, Start Num: 27
Candidate Starts for Quartz_43:
(Start: 27 @31618 has 36 MA's), (28, 31609), (35, 31576), (37, 31564), (52, 31480), (58, 31459), (59, 31456), (68, 31420), (72, 31402), (74, 31396), (78, 31378), (82, 31348), (98, 31216),

Gene: Racecar_107 Start: 86026, Stop: 86679, Start Num: 4
Candidate Starts for Racecar_107:
(Start: 4 @86026 has 2 MA's), (Start: 7 @86089 has 6 MA's), (60, 86443), (62, 86452), (64, 86461), (76, 86509), (82, 86545),

Gene: ReginaGlobina_105 Start: 85786, Stop: 86394, Start Num: 7
Candidate Starts for ReginaGlobina_105:
(6, 85741), (Start: 7 @85786 has 6 MA's), (65, 86182), (82, 86263),

Gene: Rie18_55 Start: 39472, Stop: 39981, Start Num: 27
Candidate Starts for Rie18_55:
(3, 39205), (9, 39313), (Start: 27 @39472 has 36 MA's), (28, 39481), (81, 39733), (94, 39865), (106, 39955),

Gene: Rockabye_111 Start: 79290, Stop: 79880, Start Num: 7
Candidate Starts for Rockabye_111:
(6, 79245), (Start: 7 @79290 has 6 MA's), (79, 79719), (82, 79743), (84, 79770),

Gene: SJReid_110 Start: 78336, Stop: 78929, Start Num: 7
Candidate Starts for SJReid_110:
(Start: 7 @78336 has 6 MA's), (13, 78381), (21, 78465), (33, 78522), (39, 78549), (58, 78681), (79, 78768), (82, 78792), (90, 78867),

Gene: Sansa_42 Start: 32036, Stop: 31593, Start Num: 27
Candidate Starts for Sansa_42:
(Start: 27 @32036 has 36 MA's), (28, 32027), (30, 32015), (31, 32012), (35, 31994), (37, 31982), (40, 31961), (58, 31877), (68, 31838), (72, 31820), (74, 31814), (80, 31781), (82, 31766), (98, 31634),

Gene: Saratos_43 Start: 31791, Stop: 31348, Start Num: 27
Candidate Starts for Saratos_43:
(Start: 27 @31791 has 36 MA's), (28, 31782), (30, 31770), (31, 31767), (35, 31749), (37, 31737), (40, 31716), (58, 31632), (68, 31593), (72, 31575), (74, 31569), (78, 31551), (80, 31536), (82, 31521), (98, 31389),

Gene: Shamu_44 Start: 31970, Stop: 31527, Start Num: 27
Candidate Starts for Shamu_44:
(Start: 27 @31970 has 36 MA's), (28, 31961), (30, 31949), (31, 31946), (35, 31928), (37, 31916), (40, 31895), (58, 31811), (68, 31772), (72, 31754), (74, 31748), (78, 31730), (80, 31715), (82, 31700), (98, 31568),

Gene: SilentWarrior_55 Start: 38991, Stop: 39500, Start Num: 27
Candidate Starts for SilentWarrior_55:
(9, 38832), (Start: 27 @38991 has 36 MA's), (28, 39000), (67, 39189), (69, 39195), (71, 39207), (81, 39252), (88, 39342), (94, 39384), (106, 39474),

Gene: Snakehole_55 Start: 38999, Stop: 39508, Start Num: 27
Candidate Starts for Snakehole_55:
(9, 38840), (Start: 27 @38999 has 36 MA's), (28, 39008), (67, 39197), (69, 39203), (71, 39215), (81, 39260), (88, 39350), (94, 39392), (105, 39458), (106, 39482),

Gene: Stewart25555_97 Start: 82605, Stop: 83216, Start Num: 7
Candidate Starts for Stewart25555_97:
(6, 82557), (Start: 7 @82605 has 6 MA's), (14, 82659), (17, 82728), (65, 83001), (82, 83082),

Gene: Stickynote_10 Start: 5587, Stop: 6000, Start Num: 22
Candidate Starts for Stickynote_10:
(Start: 22 @5587 has 8 MA's), (Start: 26 @5599 has 1 MA's), (31, 5629), (59, 5767), (66, 5797), (81, 5869),

Gene: Talia1610_106 Start: 85455, Stop: 86045, Start Num: 7
Candidate Starts for Talia1610_106:
(Start: 7 @85455 has 6 MA's), (60, 85809), (62, 85818), (64, 85827), (76, 85875), (82, 85911),

Gene: Talos_65 Start: 22927, Stop: 23367, Start Num: 26
Candidate Starts for Talos_65:
(Start: 26 @22927 has 1 MA's), (29, 22942), (41, 22999), (56, 23086), (68, 23164), (82, 23236), (86, 23287), (94, 23329), (96, 23344),

Gene: Tongui_55 Start: 39387, Stop: 39896, Start Num: 27
Candidate Starts for Tongui_55:
(9, 39228), (10, 39234), (Start: 27 @39387 has 36 MA's), (28, 39396), (67, 39585), (69, 39591), (70, 39600), (81, 39648), (88, 39738), (94, 39780), (106, 39870),

Gene: WaddleDee_93 Start: 81057, Stop: 81668, Start Num: 7
Candidate Starts for WaddleDee_93:
(6, 81009), (Start: 7 @81057 has 6 MA's), (60, 81432),

Gene: WilliamStrong_43 Start: 31938, Stop: 31432, Start Num: 27
Candidate Starts for WilliamStrong_43:
(Start: 27 @31938 has 36 MA's), (35, 31896), (37, 31884), (38, 31881), (40, 31863), (42, 31857), (49, 31812), (58, 31728), (60, 31719), (80, 31632), (82, 31617), (88, 31542), (92, 31509),

Gene: Xebius_43 Start: 31794, Stop: 31351, Start Num: 27
Candidate Starts for Xebius_43:
(Start: 27 @31794 has 36 MA's), (28, 31785), (30, 31773), (31, 31770), (35, 31752), (37, 31740), (40, 31719), (48, 31671), (58, 31635), (68, 31596), (72, 31578), (74, 31572), (78, 31554), (80, 31539), (82, 31524), (98, 31392),

Gene: YuuY_43 Start: 32085, Stop: 31654, Start Num: 27
Candidate Starts for YuuY_43:
(Start: 27 @32085 has 36 MA's), (28, 32076), (35, 32043), (40, 32010), (58, 31926), (59, 31923), (68, 31887), (72, 31869), (74, 31863), (78, 31845), (82, 31815), (98, 31683), (101, 31659),

Gene: Zenitsu_43 Start: 31836, Stop: 31393, Start Num: 27
Candidate Starts for Zenitsu_43:
(Start: 27 @31836 has 36 MA's), (28, 31827), (30, 31815), (31, 31812), (35, 31794), (37, 31782), (40, 31761), (58, 31677), (68, 31638), (72, 31620), (74, 31614), (80, 31581), (82, 31566), (98, 31434),

Gene: Zion_10 Start: 5532, Stop: 5948, Start Num: 22
Candidate Starts for Zion_10:
(Start: 22 @5532 has 8 MA's), (Start: 26 @5544 has 1 MA's), (66, 5742), (81, 5814), (95, 5922),