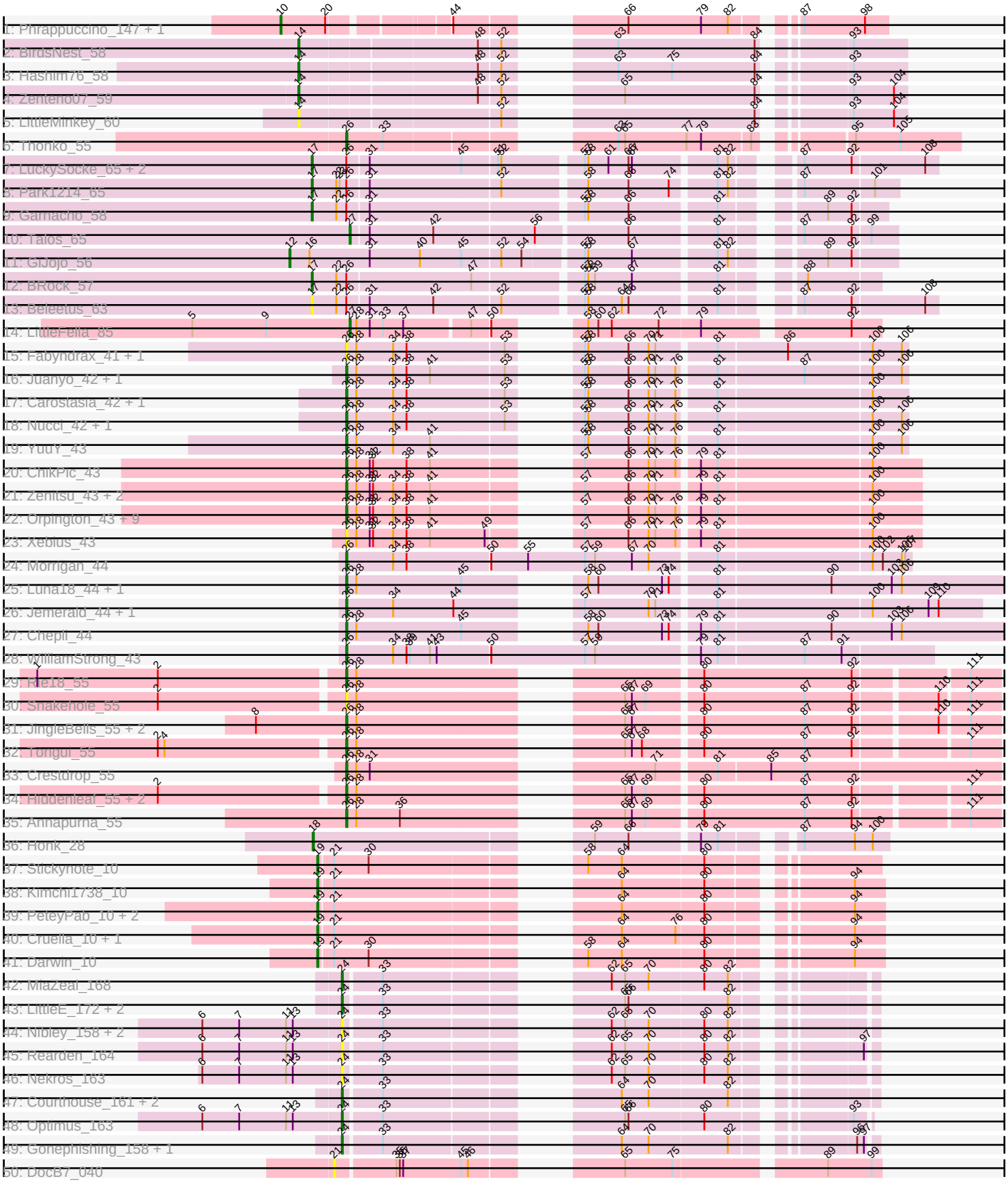
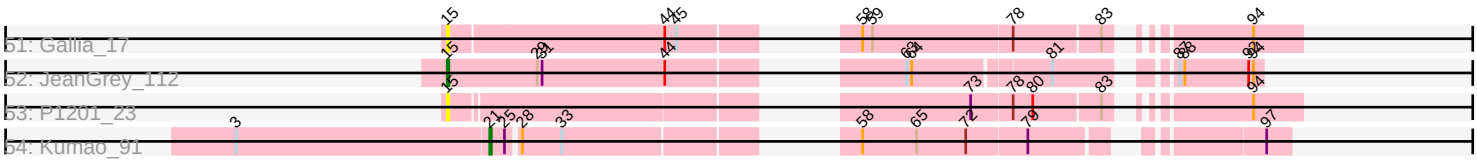
Pham 347495


1: Phrappuccino_147 + 1
2: BirdsNest_58
3: Hashim76_58
4: Zenteno07_59
5: LittleMinkey_60
6: Thonko_55
7: LuckySocke_65 + 2
8: Park1214_65
9: Gamacho_58
10: Talos_65
11: GIJojo_56
12: BRock_57
13: Beleetus_63
14: LittleFella_85
15: Fabyndrax_41 + 1
16: Juanyo_42 + 1
17: Carostasia_42 + 1
18: Nucci_42 + 1
19: YuuY_43
20: ChikPic_43
21: Zenitsu_43 + 2
22: Orpington_43 + 9
23: Xebius_43
24: Morrigan_44
25: Luna18_44 + 1
26: Jemerald_44 + 1
27: Chepii_44
28: WilliamStrong_43
29: Rie18_55
30: Snakehole_55
31: JingleBells_55 + 2
32: Tongui_55
33: Crestdrop_55
34: Hiddenleaf_55 + 2
35: Annapurna_55
36: Honk_28
37: Stickynote_10
38: Kimchi1738_10
39: PeteyPab_10 + 2
40: Cruella_10 + 1
41: Darwin_10
42: MiaZeal_168
43: LittleE_172 + 2
44: Nibley_158 + 2
45: Rearden_164
46: Nekros_163
47: Courthouse_161 + 2
48: Optimus_163
49: Gonephishing_158 + 1
50: DocB7_040

Pham 347495



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 347495 Report

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

Pham number 347495 has 88 members, 16 are drafts.

Phages represented in each track:
- Track 1 : Phrappuccino_147, Settecandela_147
- Track 2 : BirdsNest_58
- Track 3 : Hashim76_58
- Track 4 : Zenteno07_59
- Track 5 : LittleMinkey_60
- Track 6 : Thonko_55
- Track 7 : LuckySocke_65, Alone3_66, Fudan_63
- Track 8 : Park1214_65
- Track 9 : Garnacho_58
- Track 10 : Talos_65
- Track 11 : GiJojo_56
- Track 12 : BRock_57
- Track 13 : Beleetus_63
- Track 14 : LittleFella_85
- Track 15 : Fabyndrax_41, Cidela_41
- Track 16 : Juanyo_42, MiniVolent_41
- Track 17 : Carostasia_42, Quartz_43
- Track 18 : Nucci_42, Mandalorian_42
- Track 19 : YuuY_43
- Track 20 : ChikPic_43
- Track 21 : Zenitsu_43, MCubed_43, Sansa_42
- Track 22 : Orpington_43, Glamour_43, Shamu_44, Eleri_43, Phanita_44, ColaCorta_43, PSirce_43, Andromedas_43, Saratos_43, Finny_44
- Track 23 : Xebius_43
- Track 24 : Morrigan_44
- Track 25 : Luna18_44, KatChan_44
- Track 26 : Jemerald_44, Juicer_44
- Track 27 : Chepli_44
- Track 28 : WilliamStrong_43
- Track 29 : Rie18_55
- Track 30 : Snakehole_55
- Track 31 : JingleBells_55, FreddieHg_55, DannyDe_55
- Track 32 : Tongui_55
- Track 33 : Crestdrop_55
- Track 34 : Hiddenleaf_55, Chivey_55, SilentWarrior_55
- Track 35 : Annapurna_55
- Track 36 : Honk_28

• Track 37 : Stickynote_10
• Track 38 : Kimchi1738_10
• Track 39 : PeteyPab_10, Zion_10, PotatoChip_10
• Track 40 : Cruella_10, C3PO_10
• Track 41 : Darwin_10
• Track 42 : MiaZeal_168
• Track 43 : LittleE_172, Porcelain_165, Lucky2013_161
• Track 44 : Nibley_158, BronnyJames_160, Shaboozey_163
• Track 45 : Rearden_164
• Track 46 : Nekros_163
• Track 47 : Courthouse_161, Superphikiman_162, Ariel_164
• Track 48 : Optimus_163
• Track 49 : Gonephishing_158, Squint_159
• Track 50 : DocB7_040
• Track 51 : Gallia_17
• Track 52 : JeanGrey_112
• Track 53 : P1201_23
• Track 54 : Kumao_91

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

The start number called the most often in the published annotations is 26, it was called in 38 of the 72 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, Cidela_41, ColaCorta_43, Crestdrop_55, DannyDe_55, Eleri_43, Fabyndrax_41, 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, Orpington_43, PSirce_43, Phanita_44, Quartz_43, Rie18_55, Sansa_42, Saratos_43, Shamu_44, SilentWarrior_55, Snakehole_55, Thonko_55, Tongui_55, WilliamStrong_43, Xebius_43, YuuY_43, Zenitsu_43,

Genes that have the "Most Annotated" start but do not call it:
• Alone3_66, BRock_57, Beleetus_63, Fudan_63, Garnacho_58, LuckySocke_65, Park1214_65,

Genes that do not have the "Most Annotated" start:
• Ariel_164, BirdsNest_58, BronnyJames_160, C3PO_10, Courthouse_161, Cruella_10, Darwin_10, DocB7_040, Gallia_17, GiJojo_56, Gonephishing_158, Hashim76_58, Honk_28, JeanGrey_112, Kimchi1738_10, Kumao_91, LittleE_172, LittleFella_85, LittleMinkey_60, Lucky2013_161, MiaZeal_168, Nekros_163, Nibley_158, Optimus_163, P1201_23, PeteyPab_10, Phrappuccino_147, Porcelain_165, PotatoChip_10, Rearden_164, Settecandela_147, Shaboozey_163, Squint_159, Stickynote_10, Superphikiman_162, Talos_65, Zenteno07_59, Zion_10,

Summary by start number:

Start 10:

• Found in 2 of 88 (2.3%) of genes in pham
• Manual Annotations of this start: 2 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Phrappuccino_147 (AA), Settecandela_147 (AA),

Start 12:
• Found in 1 of 88 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GiJojo_56 (BS),

Start 14:
• Found in 4 of 88 (4.5%) of genes in pham
• Manual Annotations of this start: 3 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BirdsNest_58 (B13), Hashim76_58 (B13), LittleMinkey_60 (B13), Zenteno07_59 (B13),

Start 15:
• Found in 3 of 88 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gallia_17 (singleton), JeanGrey_112 (singleton), P1201_23 (singleton),

Start 17:
• Found in 7 of 88 (8.0%) of genes in pham
• Manual Annotations of this start: 6 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alone3_66 (BS), BRock_57 (BS), Beleetus_63 (BS), Fudan_63 (BS), Garnacho_58 (BS), LuckySocke_65 (BS), Park1214_65 (BS),

Start 18:
• Found in 1 of 88 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Honk_28 (EH),

Start 19:
• Found in 8 of 88 (9.1%) of genes in pham
• Manual Annotations of this start: 8 of 72
• 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 21:
• Found in 10 of 88 (11.4%) of genes in pham
• Manual Annotations of this start: 1 of 72
• Called 20.0% of time when present

• Phage (with cluster) where this start called: DocB7_040 (singleton), Kumao_91 (singleton),

Start 24:
• Found in 15 of 88 (17.0%) of genes in pham
• Manual Annotations of this start: 9 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ariel_164 (J), BronnyJames_160 (J), Courthouse_161 (J), Gonephishing_158 (J), LittleE_172 (J), Lucky2013_161 (J), MiaZeal_168 (J), Nekros_163 (J), Nibley_158 (J), Optimus_163 (J), Porcelain_165 (J), Rearden_164 (J), Shaboozey_163 (J), Squint_159 (J), Superphikiman_162 (J),

Start 26:
• Found in 50 of 88 (56.8%) of genes in pham
• Manual Annotations of this start: 38 of 72
• Called 86.0% 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), Cidela_41 (EA10), ColaCorta_43 (EA2), Crestdrop_55 (EF), DannyDe_55 (EF), Eleri_43 (EA2), Fabyndrax_41 (EA10), 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), Orpington_43 (EA2), 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), Thonko_55 (B8), Tongui_55 (EF), WilliamStrong_43 (EA6), Xebius_43 (EA2), YuuY_43 (EA10), Zenitsu_43 (EA2),

Start 27:
• Found in 2 of 88 (2.3%) of genes in pham
• Manual Annotations of this start: 2 of 72
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LittleFella_85 (DG2), Talos_65 (BS),

Summary by clusters:

There are 13 clusters represented in this pham: AA, singleton, EF, EA10, J, DG2, EH, EN, B13, BS, EA2, B8, EA6,

Info for manual annotations of cluster AA:
•Start number 10 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster B13:
•Start number 14 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B8:
•Start number 26 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster BS:
•Start number 12 was manually annotated 1 time for cluster BS.
•Start number 17 was manually annotated 6 times for cluster BS.
•Start number 27 was manually annotated 1 time for cluster BS.

Info for manual annotations of cluster DG2:
•Start number 27 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster EA10:
•Start number 26 was manually annotated 6 times for cluster EA10.

Info for manual annotations of cluster EA2:
•Start number 26 was manually annotated 14 times for cluster EA2.

Info for manual annotations of cluster EA6:
•Start number 26 was manually annotated 7 times for cluster EA6.

Info for manual annotations of cluster EF:
•Start number 26 was manually annotated 10 times for cluster EF.

Info for manual annotations of cluster EH:
•Start number 18 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster EN:
•Start number 19 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster J:
•Start number 24 was manually annotated 9 times for cluster J.

Gene Information:

Gene: Alone3_66 Start: 23782, Stop: 24288, Start Num: 17
Candidate Starts for Alone3_66:
(Start: 17 @23782 has 6 MA's), (Start: 26 @23812 has 38 MA's), (31, 23830), (45, 23911), (51, 23941), (52, 23944), (57, 24010), (58, 24013), (61, 24031), (66, 24049), (67, 24052), (81, 24121), (82, 24130), (87, 24172), (92, 24214), (108, 24277),

Gene: Andromedas_43 Start: 31962, Stop: 31519, Start Num: 26
Candidate Starts for Andromedas_43:
(Start: 26 @31962 has 38 MA's), (28, 31953), (31, 31941), (32, 31938), (34, 31920), (38, 31908), (41, 31887), (57, 31803), (66, 31764), (70, 31746), (71, 31740), (76, 31722), (79, 31707), (81, 31692), (100, 31560),

Gene: Annapurna_55 Start: 39067, Stop: 39576, Start Num: 26
Candidate Starts for Annapurna_55:
(Start: 26 @39067 has 38 MA's), (28, 39076), (36, 39115), (65, 39265), (67, 39271), (69, 39283), (80, 39328), (87, 39418), (92, 39460), (111, 39550),

Gene: Ariel_164 Start: 83788, Stop: 84171, Start Num: 24
Candidate Starts for Ariel_164:
(Start: 24 @83788 has 9 MA's), (33, 83818), (64, 83974), (70, 83998), (82, 84067),

Gene: BRock_57 Start: 20332, Stop: 20787, Start Num: 17
Candidate Starts for BRock_57:
(Start: 17 @20332 has 6 MA's), (22, 20353), (Start: 26 @20362 has 38 MA's), (47, 20470), (57, 20560), (58, 20563), (59, 20569), (67, 20602), (81, 20671), (88, 20725),

Gene: Beleetus_63 Start: 22462, Stop: 22968, Start Num: 17
Candidate Starts for Beleetus_63:
(Start: 17 @22462 has 6 MA's), (22, 22483), (Start: 26 @22492 has 38 MA's), (31, 22510), (42, 22567), (52, 22624), (57, 22690), (58, 22693), (64, 22723), (66, 22729), (81, 22801), (87, 22852), (92, 22894), (108, 22957),

Gene: BirdsNest_58 Start: 48152, Stop: 47700, Start Num: 14
Candidate Starts for BirdsNest_58:
(Start: 14 @48152 has 3 MA's), (48, 48002), (52, 47984), (63, 47930), (84, 47810), (93, 47747),

Gene: BronnyJames_160 Start: 84592, Stop: 84972, Start Num: 24
Candidate Starts for BronnyJames_160:
(6, 84469), (7, 84502), (11, 84544), (13, 84550), (Start: 24 @84592 has 9 MA's), (33, 84622), (62, 84769), (65, 84781), (70, 84802), (80, 84850), (82, 84871),

Gene: C3PO_10 Start: 5555, Stop: 5971, Start Num: 19
Candidate Starts for C3PO_10:
(Start: 19 @5555 has 8 MA's), (Start: 21 @5567 has 1 MA's), (64, 5765), (76, 5813), (80, 5837), (94, 5945),

Gene: Carostasia_42 Start: 31495, Stop: 31064, Start Num: 26
Candidate Starts for Carostasia_42:
(Start: 26 @31495 has 38 MA's), (28, 31486), (34, 31453), (38, 31441), (53, 31357), (57, 31336), (58, 31333), (66, 31297), (70, 31279), (71, 31273), (76, 31255), (81, 31225), (100, 31093),

Gene: Chepli_44 Start: 31401, Stop: 30856, Start Num: 26
Candidate Starts for Chepli_44:
(Start: 26 @31401 has 38 MA's), (28, 31392), (45, 31299), (58, 31236), (60, 31227), (73, 31170), (74, 31164), (79, 31143), (81, 31128), (90, 31029), (103, 30975), (106, 30966),

Gene: ChikPic_43 Start: 31816, Stop: 31373, Start Num: 26
Candidate Starts for ChikPic_43:
(Start: 26 @31816 has 38 MA's), (28, 31807), (31, 31795), (32, 31792), (38, 31762), (41, 31741), (57, 31657), (66, 31618), (70, 31600), (71, 31594), (76, 31576), (79, 31561), (81, 31546), (100, 31414),

Gene: Chivey_55 Start: 39021, Stop: 39530, Start Num: 26
Candidate Starts for Chivey_55:
(2, 38862), (Start: 26 @39021 has 38 MA's), (28, 39030), (65, 39219), (67, 39225), (69, 39237), (80, 39282), (87, 39372), (92, 39414), (111, 39504),

Gene: Cidela_41 Start: 32538, Stop: 32107, Start Num: 26
Candidate Starts for Cidela_41:
(Start: 26 @32538 has 38 MA's), (28, 32529), (34, 32496), (38, 32484), (53, 32400), (57, 32379), (58, 32376), (66, 32340), (70, 32322), (71, 32316), (81, 32268), (86, 32208), (100, 32136), (106, 32112),

Gene: ColaCorta_43 Start: 31962, Stop: 31519, Start Num: 26
Candidate Starts for ColaCorta_43:
(Start: 26 @31962 has 38 MA's), (28, 31953), (31, 31941), (32, 31938), (34, 31920), (38, 31908), (41, 31887), (57, 31803), (66, 31764), (70, 31746), (71, 31740), (76, 31722), (79, 31707), (81, 31692), (100, 31560),

Gene: Courthouse_161 Start: 84232, Stop: 84615, Start Num: 24

Candidate Starts for Courthouse_161:
(Start: 24 @84232 has 9 MA's), (33, 84262), (64, 84418), (70, 84442), (82, 84511),

Gene: Crestdrop_55 Start: 39188, Stop: 39706, Start Num: 26
Candidate Starts for Crestdrop_55:
(Start: 26 @39188 has 38 MA's), (28, 39197), (31, 39209), (71, 39413), (81, 39461), (85, 39506), (87, 39536),

Gene: Cruella_10 Start: 5555, Stop: 5971, Start Num: 19
Candidate Starts for Cruella_10:
(Start: 19 @5555 has 8 MA's), (Start: 21 @5567 has 1 MA's), (64, 5765), (76, 5813), (80, 5837), (94, 5945),

Gene: DannyDe_55 Start: 39022, Stop: 39531, Start Num: 26
Candidate Starts for DannyDe_55:
(8, 38941), (Start: 26 @39022 has 38 MA's), (28, 39031), (65, 39220), (67, 39226), (80, 39283), (87, 39373), (92, 39415), (110, 39481), (111, 39505),

Gene: Darwin_10 Start: 5554, Stop: 5970, Start Num: 19
Candidate Starts for Darwin_10:
(Start: 19 @5554 has 8 MA's), (Start: 21 @5566 has 1 MA's), (30, 5596), (58, 5734), (64, 5764), (80, 5836), (94, 5944),

Gene: DocB7_040 Start: 39094, Stop: 38681, Start Num: 21
Candidate Starts for DocB7_040:
(Start: 21 @39094 has 1 MA's), (35, 39043), (36, 39040), (37, 39037), (45, 38986), (46, 38980), (65, 38893), (75, 38851), (89, 38728), (99, 38689),

Gene: Eleri_43 Start: 31806, Stop: 31363, Start Num: 26
Candidate Starts for Eleri_43:
(Start: 26 @31806 has 38 MA's), (28, 31797), (31, 31785), (32, 31782), (34, 31764), (38, 31752), (41, 31731), (57, 31647), (66, 31608), (70, 31590), (71, 31584), (76, 31566), (79, 31551), (81, 31536), (100, 31404),

Gene: Fabyndrax_41 Start: 32550, Stop: 32119, Start Num: 26
Candidate Starts for Fabyndrax_41:
(Start: 26 @32550 has 38 MA's), (28, 32541), (34, 32508), (38, 32496), (53, 32412), (57, 32391), (58, 32388), (66, 32352), (70, 32334), (71, 32328), (81, 32280), (86, 32220), (100, 32148), (106, 32124),

Gene: Finny_44 Start: 31800, Stop: 31357, Start Num: 26
Candidate Starts for Finny_44:
(Start: 26 @31800 has 38 MA's), (28, 31791), (31, 31779), (32, 31776), (34, 31758), (38, 31746), (41, 31725), (57, 31641), (66, 31602), (70, 31584), (71, 31578), (76, 31560), (79, 31545), (81, 31530), (100, 31398),

Gene: FreddieHg_55 Start: 39038, Stop: 39547, Start Num: 26
Candidate Starts for FreddieHg_55:
(8, 38957), (Start: 26 @39038 has 38 MA's), (28, 39047), (65, 39236), (67, 39242), (80, 39299), (87, 39389), (92, 39431), (110, 39497), (111, 39521),

Gene: Fudan_63 Start: 23143, Stop: 23649, Start Num: 17
Candidate Starts for Fudan_63:

(Start: 17 @23143 has 6 MA's), (Start: 26 @23173 has 38 MA's), (31, 23191), (45, 23272), (51, 23302), (52, 23305), (57, 23371), (58, 23374), (61, 23392), (66, 23410), (67, 23413), (81, 23482), (82, 23491), (87, 23533), (92, 23575), (108, 23638),

Gene: Gallia_17 Start: 9538, Stop: 9963, Start Num: 15
Candidate Starts for Gallia_17:
(Start: 15 @9538 has 1 MA's), (44, 9664), (45, 9670), (58, 9730), (59, 9736), (78, 9820), (83, 9871), (94, 9934),

Gene: Garnacho_58 Start: 22022, Stop: 22483, Start Num: 17
Candidate Starts for Garnacho_58:
(Start: 17 @22022 has 6 MA's), (22, 22043), (Start: 26 @22052 has 38 MA's), (31, 22070), (57, 22250), (58, 22253), (66, 22289), (81, 22361), (89, 22433), (92, 22454),

Gene: GiJojo_56 Start: 22495, Stop: 22989, Start Num: 12
Candidate Starts for GiJojo_56:
(Start: 12 @22495 has 1 MA's), (16, 22513), (31, 22567), (40, 22612), (45, 22648), (52, 22681), (54, 22699), (57, 22747), (58, 22750), (67, 22789), (81, 22858), (82, 22867), (89, 22930), (92, 22951),

Gene: Glamour_43 Start: 31954, Stop: 31511, Start Num: 26
Candidate Starts for Glamour_43:
(Start: 26 @31954 has 38 MA's), (28, 31945), (31, 31933), (32, 31930), (34, 31912), (38, 31900), (41, 31879), (57, 31795), (66, 31756), (70, 31738), (71, 31732), (76, 31714), (79, 31699), (81, 31684), (100, 31552),

Gene: Gonephishing_158 Start: 85692, Stop: 86072, Start Num: 24
Candidate Starts for Gonephishing_158:
(Start: 24 @85692 has 9 MA's), (33, 85722), (64, 85878), (70, 85902), (82, 85971), (96, 86058), (97, 86064),

Gene: Hashim76_58 Start: 48722, Stop: 48270, Start Num: 14
Candidate Starts for Hashim76_58:
(Start: 14 @48722 has 3 MA's), (48, 48572), (52, 48554), (63, 48500), (75, 48452), (84, 48380), (93, 48317),

Gene: Hiddenleaf_55 Start: 39021, Stop: 39530, Start Num: 26
Candidate Starts for Hiddenleaf_55:
(2, 38862), (Start: 26 @39021 has 38 MA's), (28, 39030), (65, 39219), (67, 39225), (69, 39237), (80, 39282), (87, 39372), (92, 39414), (111, 39504),

Gene: Honk_28 Start: 20768, Stop: 21193, Start Num: 18
Candidate Starts for Honk_28:
(Start: 18 @20768 has 1 MA's), (59, 20966), (66, 20996), (79, 21053), (81, 21068), (87, 21119), (94, 21164), (100, 21179),

Gene: JeanGrey_112 Start: 87695, Stop: 88102, Start Num: 15
Candidate Starts for JeanGrey_112:
(Start: 15 @87695 has 1 MA's), (29, 87749), (31, 87752), (44, 87824), (63, 87917), (64, 87920), (81, 87998), (87, 88052), (88, 88055), (92, 88094), (94, 88097),

Gene: Jemerald_44 Start: 32468, Stop: 31968, Start Num: 26
Candidate Starts for Jemerald_44:

(Start: 26 @32468 has 38 MA's), (34, 32426), (44, 32372), (57, 32306), (70, 32249), (71, 32243), (81, 32195), (100, 32063), (109, 32015), (110, 32006),

Gene: JingleBells_55 Start: 39130, Stop: 39639, Start Num: 26
Candidate Starts for JingleBells_55:
(8, 39049), (Start: 26 @39130 has 38 MA's), (28, 39139), (65, 39328), (67, 39334), (80, 39391), (87, 39481), (92, 39523), (110, 39589), (111, 39613),

Gene: Juanyo_42 Start: 31426, Stop: 30995, Start Num: 26
Candidate Starts for Juanyo_42:
(Start: 26 @31426 has 38 MA's), (28, 31417), (34, 31384), (38, 31372), (41, 31351), (53, 31288), (57, 31267), (58, 31264), (66, 31228), (70, 31210), (71, 31204), (76, 31186), (81, 31156), (87, 31081), (100, 31024), (106, 31000),

Gene: Juicer_44 Start: 32468, Stop: 31968, Start Num: 26
Candidate Starts for Juicer_44:
(Start: 26 @32468 has 38 MA's), (34, 32426), (44, 32372), (57, 32306), (70, 32249), (71, 32243), (81, 32195), (100, 32063), (109, 32015), (110, 32006),

Gene: KatChan_44 Start: 31413, Stop: 30868, Start Num: 26
Candidate Starts for KatChan_44:
(Start: 26 @31413 has 38 MA's), (28, 31404), (45, 31311), (58, 31248), (60, 31239), (73, 31182), (74, 31176), (81, 31140), (90, 31041), (103, 30987), (106, 30978),

Gene: Kimchi1738_10 Start: 5556, Stop: 5972, Start Num: 19
Candidate Starts for Kimchi1738_10:
(Start: 19 @5556 has 8 MA's), (Start: 21 @5568 has 1 MA's), (64, 5766), (80, 5838), (94, 5946),

Gene: Kumao_91 Start: 57065, Stop: 57454, Start Num: 21
Candidate Starts for Kumao_91:
(3, 56912), (Start: 21 @57065 has 1 MA's), (25, 57074), (28, 57080), (33, 57104), (58, 57230), (65, 57263), (72, 57293), (79, 57329), (97, 57440),

Gene: LittleE_172 Start: 88564, Stop: 88944, Start Num: 24
Candidate Starts for LittleE_172:
(Start: 24 @88564 has 9 MA's), (33, 88594), (65, 88753), (66, 88756), (82, 88843),

Gene: LittleFella_85 Start: 60323, Stop: 60721, Start Num: 27
Candidate Starts for LittleFella_85:
(5, 60182), (9, 60248), (Start: 27 @60323 has 2 MA's), (28, 60329), (31, 60341), (33, 60353), (37, 60371), (47, 60425), (50, 60440), (58, 60476), (60, 60485), (62, 60497), (72, 60539), (79, 60575), (92, 60695),

Gene: LittleMinkey_60 Start: 48361, Stop: 47909, Start Num: 14
Candidate Starts for LittleMinkey_60:
(Start: 14 @48361 has 3 MA's), (52, 48193), (84, 48019), (93, 47956), (104, 47920),

Gene: Lucky2013_161 Start: 84061, Stop: 84441, Start Num: 24
Candidate Starts for Lucky2013_161:
(Start: 24 @84061 has 9 MA's), (33, 84091), (65, 84250), (66, 84253), (82, 84340),

Gene: LuckySocke_65 Start: 23092, Stop: 23598, Start Num: 17
Candidate Starts for LuckySocke_65:

(Start: 17 @23092 has 6 MA's), (Start: 26 @23122 has 38 MA's), (31, 23140), (45, 23221), (51, 23251), (52, 23254), (57, 23320), (58, 23323), (61, 23341), (66, 23359), (67, 23362), (81, 23431), (82, 23440), (87, 23482), (92, 23524), (108, 23587),

Gene: Luna18_44 Start: 31413, Stop: 30868, Start Num: 26
Candidate Starts for Luna18_44:
(Start: 26 @31413 has 38 MA's), (28, 31404), (45, 31311), (58, 31248), (60, 31239), (73, 31182), (74, 31176), (81, 31140), (90, 31041), (103, 30987), (106, 30978),

Gene: MCubed_43 Start: 31831, Stop: 31388, Start Num: 26
Candidate Starts for MCubed_43:
(Start: 26 @31831 has 38 MA's), (28, 31822), (31, 31810), (32, 31807), (34, 31789), (38, 31777), (41, 31756), (57, 31672), (66, 31633), (70, 31615), (71, 31609), (79, 31576), (81, 31561), (100, 31429),

Gene: Mandalorian_42 Start: 31505, Stop: 31074, Start Num: 26
Candidate Starts for Mandalorian_42:
(Start: 26 @31505 has 38 MA's), (28, 31496), (34, 31463), (38, 31451), (53, 31367), (57, 31346), (58, 31343), (66, 31307), (70, 31289), (71, 31283), (76, 31265), (81, 31235), (100, 31103), (106, 31079),

Gene: MiaZeal_168 Start: 85208, Stop: 85588, Start Num: 24
Candidate Starts for MiaZeal_168:
(Start: 24 @85208 has 9 MA's), (33, 85238), (62, 85385), (65, 85397), (70, 85418), (80, 85466), (82, 85487),

Gene: MiniVolent_41 Start: 31388, Stop: 30957, Start Num: 26
Candidate Starts for MiniVolent_41:
(Start: 26 @31388 has 38 MA's), (28, 31379), (34, 31346), (38, 31334), (41, 31313), (53, 31250), (57, 31229), (58, 31226), (66, 31190), (70, 31172), (71, 31166), (76, 31148), (81, 31118), (87, 31043), (100, 30986), (106, 30962),

Gene: Morrigan_44 Start: 31356, Stop: 30871, Start Num: 26
Candidate Starts for Morrigan_44:
(Start: 26 @31356 has 38 MA's), (34, 31314), (38, 31302), (50, 31230), (55, 31197), (57, 31146), (59, 31137), (67, 31104), (70, 31089), (81, 31035), (100, 30903), (102, 30894), (106, 30879), (107, 30876),

Gene: Nekros_163 Start: 87008, Stop: 87388, Start Num: 24
Candidate Starts for Nekros_163:
(6, 86885), (7, 86918), (11, 86960), (13, 86966), (Start: 24 @87008 has 9 MA's), (33, 87038), (62, 87185), (65, 87197), (70, 87218), (80, 87266), (82, 87287),

Gene: Nibley_158 Start: 84169, Stop: 84549, Start Num: 24
Candidate Starts for Nibley_158:
(6, 84046), (7, 84079), (11, 84121), (13, 84127), (Start: 24 @84169 has 9 MA's), (33, 84199), (62, 84346), (65, 84358), (70, 84379), (80, 84427), (82, 84448),

Gene: Nucci_42 Start: 31488, Stop: 31057, Start Num: 26
Candidate Starts for Nucci_42:
(Start: 26 @31488 has 38 MA's), (28, 31479), (34, 31446), (38, 31434), (53, 31350), (57, 31329), (58, 31326), (66, 31290), (70, 31272), (71, 31266), (76, 31248), (81, 31218), (100, 31086), (106, 31062),

Gene: Optimus_163 Start: 87886, Stop: 88260, Start Num: 24
Candidate Starts for Optimus_163:

(6, 87763), (7, 87796), (11, 87838), (13, 87844), (Start: 24 @87886 has 9 MA's), (33, 87916), (65, 88075), (66, 88078), (80, 88144), (93, 88249),

Gene: Orpington_43 Start: 31970, Stop: 31527, Start Num: 26
Candidate Starts for Orpington_43:
(Start: 26 @31970 has 38 MA's), (28, 31961), (31, 31949), (32, 31946), (34, 31928), (38, 31916), (41, 31895), (57, 31811), (66, 31772), (70, 31754), (71, 31748), (76, 31730), (79, 31715), (81, 31700), (100, 31568),

Gene: P1201_23 Start: 11182, Stop: 11604, Start Num: 15
Candidate Starts for P1201_23:
(Start: 15 @11182 has 1 MA's), (73, 11437), (78, 11461), (80, 11473), (83, 11512), (94, 11575),

Gene: PSirce_43 Start: 31961, Stop: 31518, Start Num: 26
Candidate Starts for PSirce_43:
(Start: 26 @31961 has 38 MA's), (28, 31952), (31, 31940), (32, 31937), (34, 31919), (38, 31907), (41, 31886), (57, 31802), (66, 31763), (70, 31745), (71, 31739), (76, 31721), (79, 31706), (81, 31691), (100, 31559),

Gene: Park1214_65 Start: 23564, Stop: 24034, Start Num: 17
Candidate Starts for Park1214_65:
(Start: 17 @23564 has 6 MA's), (22, 23585), (23, 23588), (Start: 26 @23594 has 38 MA's), (31, 23612), (52, 23726), (58, 23795), (66, 23831), (74, 23867), (81, 23903), (82, 23912), (87, 23954), (101, 24014),

Gene: PeteyPab_10 Start: 5532, Stop: 5948, Start Num: 19
Candidate Starts for PeteyPab_10:
(Start: 19 @5532 has 8 MA's), (Start: 21 @5544 has 1 MA's), (64, 5742), (80, 5814), (94, 5922),

Gene: Phanita_44 Start: 31743, Stop: 31300, Start Num: 26
Candidate Starts for Phanita_44:
(Start: 26 @31743 has 38 MA's), (28, 31734), (31, 31722), (32, 31719), (34, 31701), (38, 31689), (41, 31668), (57, 31584), (66, 31545), (70, 31527), (71, 31521), (76, 31503), (79, 31488), (81, 31473), (100, 31341),

Gene: Phrappuccino_147 Start: 102698, Stop: 103132, Start Num: 10
Candidate Starts for Phrappuccino_147:
(Start: 10 @102698 has 2 MA's), (20, 102737), (44, 102827), (66, 102929), (79, 102992), (82, 103016), (87, 103058), (98, 103112),

Gene: Porcelain_165 Start: 85007, Stop: 85387, Start Num: 24
Candidate Starts for Porcelain_165:
(Start: 24 @85007 has 9 MA's), (33, 85037), (65, 85196), (66, 85199), (82, 85286),

Gene: PotatoChip_10 Start: 5534, Stop: 5950, Start Num: 19
Candidate Starts for PotatoChip_10:
(Start: 19 @5534 has 8 MA's), (Start: 21 @5546 has 1 MA's), (64, 5744), (80, 5816), (94, 5924),

Gene: Quartz_43 Start: 31618, Stop: 31187, Start Num: 26
Candidate Starts for Quartz_43:
(Start: 26 @31618 has 38 MA's), (28, 31609), (34, 31576), (38, 31564), (53, 31480), (57, 31459), (58, 31456), (66, 31420), (70, 31402), (71, 31396), (76, 31378), (81, 31348), (100, 31216),

Gene: Rearden_164 Start: 85395, Stop: 85775, Start Num: 24

Candidate Starts for Rearden_164:
(6, 85272), (7, 85305), (11, 85347), (13, 85353), (Start: 24 @85395 has 9 MA's), (33, 85425), (62, 85572), (65, 85584), (70, 85605), (80, 85653), (82, 85674), (97, 85767),

Gene: Rie18_55 Start: 39472, Stop: 39981, Start Num: 26
Candidate Starts for Rie18_55:
(1, 39205), (2, 39313), (Start: 26 @39472 has 38 MA's), (28, 39481), (80, 39733), (92, 39865), (111, 39955),

Gene: Sansa_42 Start: 32036, Stop: 31593, Start Num: 26
Candidate Starts for Sansa_42:
(Start: 26 @32036 has 38 MA's), (28, 32027), (31, 32015), (32, 32012), (34, 31994), (38, 31982), (41, 31961), (57, 31877), (66, 31838), (70, 31820), (71, 31814), (79, 31781), (81, 31766), (100, 31634),

Gene: Saratos_43 Start: 31791, Stop: 31348, Start Num: 26
Candidate Starts for Saratos_43:
(Start: 26 @31791 has 38 MA's), (28, 31782), (31, 31770), (32, 31767), (34, 31749), (38, 31737), (41, 31716), (57, 31632), (66, 31593), (70, 31575), (71, 31569), (76, 31551), (79, 31536), (81, 31521), (100, 31389),

Gene: Settecandela_147 Start: 102698, Stop: 103132, Start Num: 10
Candidate Starts for Settecandela_147:
(Start: 10 @102698 has 2 MA's), (20, 102737), (44, 102827), (66, 102929), (79, 102992), (82, 103016), (87, 103058), (98, 103112),

Gene: Shaboozey_163 Start: 84613, Stop: 84993, Start Num: 24
Candidate Starts for Shaboozey_163:
(6, 84490), (7, 84523), (11, 84565), (13, 84571), (Start: 24 @84613 has 9 MA's), (33, 84643), (62, 84790), (65, 84802), (70, 84823), (80, 84871), (82, 84892),

Gene: Shamu_44 Start: 31970, Stop: 31527, Start Num: 26
Candidate Starts for Shamu_44:
(Start: 26 @31970 has 38 MA's), (28, 31961), (31, 31949), (32, 31946), (34, 31928), (38, 31916), (41, 31895), (57, 31811), (66, 31772), (70, 31754), (71, 31748), (76, 31730), (79, 31715), (81, 31700), (100, 31568),

Gene: SilentWarrior_55 Start: 38991, Stop: 39500, Start Num: 26
Candidate Starts for SilentWarrior_55:
(2, 38832), (Start: 26 @38991 has 38 MA's), (28, 39000), (65, 39189), (67, 39195), (69, 39207), (80, 39252), (87, 39342), (92, 39384), (111, 39474),

Gene: Snakehole_55 Start: 38999, Stop: 39508, Start Num: 26
Candidate Starts for Snakehole_55:
(2, 38840), (Start: 26 @38999 has 38 MA's), (28, 39008), (65, 39197), (67, 39203), (69, 39215), (80, 39260), (87, 39350), (92, 39392), (110, 39458), (111, 39482),

Gene: Squint_159 Start: 84873, Stop: 85253, Start Num: 24
Candidate Starts for Squint_159:
(Start: 24 @84873 has 9 MA's), (33, 84903), (64, 85059), (70, 85083), (82, 85152), (96, 85239), (97, 85245),

Gene: Stickynote_10 Start: 5587, Stop: 6000, Start Num: 19
Candidate Starts for Stickynote_10:

(Start: 19 @5587 has 8 MA's), (Start: 21 @5599 has 1 MA's), (30, 5629), (58, 5767), (64, 5797), (80, 5869),

Gene: Superphikiman_162 Start: 83928, Stop: 84311, Start Num: 24
Candidate Starts for Superphikiman_162:
(Start: 24 @83928 has 9 MA's), (33, 83958), (64, 84114), (70, 84138), (82, 84207),

Gene: Talos_65 Start: 22927, Stop: 23367, Start Num: 27
Candidate Starts for Talos_65:
(Start: 27 @22927 has 2 MA's), (31, 22942), (42, 22999), (56, 23086), (66, 23164), (81, 23236), (87, 23287), (92, 23329), (99, 23344),

Gene: Thonko_55 Start: 46989, Stop: 46534, Start Num: 26
Candidate Starts for Thonko_55:
(Start: 26 @46989 has 38 MA's), (33, 46956), (63, 46806), (65, 46800), (77, 46746), (79, 46734), (83, 46692), (95, 46626), (105, 46587),

Gene: Tongui_55 Start: 39387, Stop: 39896, Start Num: 26
Candidate Starts for Tongui_55:
(2, 39228), (4, 39234), (Start: 26 @39387 has 38 MA's), (28, 39396), (65, 39585), (67, 39591), (68, 39600), (80, 39648), (87, 39738), (92, 39780), (111, 39870),

Gene: WilliamStrong_43 Start: 31938, Stop: 31432, Start Num: 26
Candidate Starts for WilliamStrong_43:
(Start: 26 @31938 has 38 MA's), (34, 31896), (38, 31884), (39, 31881), (41, 31863), (43, 31857), (50, 31812), (57, 31728), (59, 31719), (79, 31632), (81, 31617), (87, 31542), (91, 31509),

Gene: Xebius_43 Start: 31794, Stop: 31351, Start Num: 26
Candidate Starts for Xebius_43:
(Start: 26 @31794 has 38 MA's), (28, 31785), (31, 31773), (32, 31770), (34, 31752), (38, 31740), (41, 31719), (49, 31671), (57, 31635), (66, 31596), (70, 31578), (71, 31572), (76, 31554), (79, 31539), (81, 31524), (100, 31392),

Gene: YuuY_43 Start: 32085, Stop: 31654, Start Num: 26
Candidate Starts for YuuY_43:
(Start: 26 @32085 has 38 MA's), (28, 32076), (34, 32043), (41, 32010), (57, 31926), (58, 31923), (66, 31887), (70, 31869), (71, 31863), (76, 31845), (81, 31815), (100, 31683), (106, 31659),

Gene: Zenitsu_43 Start: 31836, Stop: 31393, Start Num: 26
Candidate Starts for Zenitsu_43:
(Start: 26 @31836 has 38 MA's), (28, 31827), (31, 31815), (32, 31812), (34, 31794), (38, 31782), (41, 31761), (57, 31677), (66, 31638), (70, 31620), (71, 31614), (79, 31581), (81, 31566), (100, 31434),

Gene: Zenteno07_59 Start: 48384, Stop: 47932, Start Num: 14
Candidate Starts for Zenteno07_59:
(Start: 14 @48384 has 3 MA's), (48, 48234), (52, 48216), (65, 48156), (84, 48042), (93, 47979), (104, 47943),

Gene: Zion_10 Start: 5532, Stop: 5948, Start Num: 19
Candidate Starts for Zion_10:
(Start: 19 @5532 has 8 MA's), (Start: 21 @5544 has 1 MA's), (64, 5742), (80, 5814), (94, 5922),