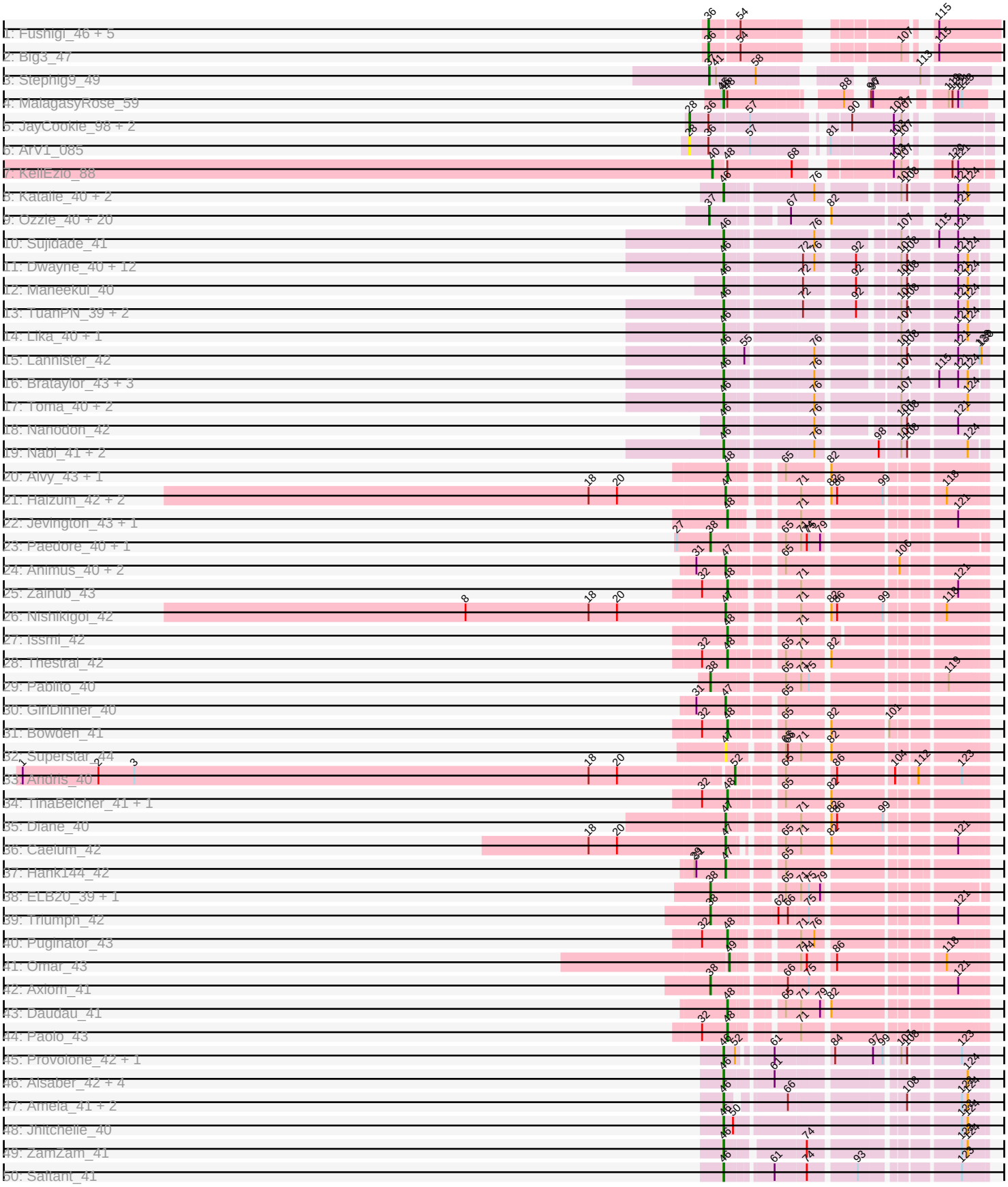
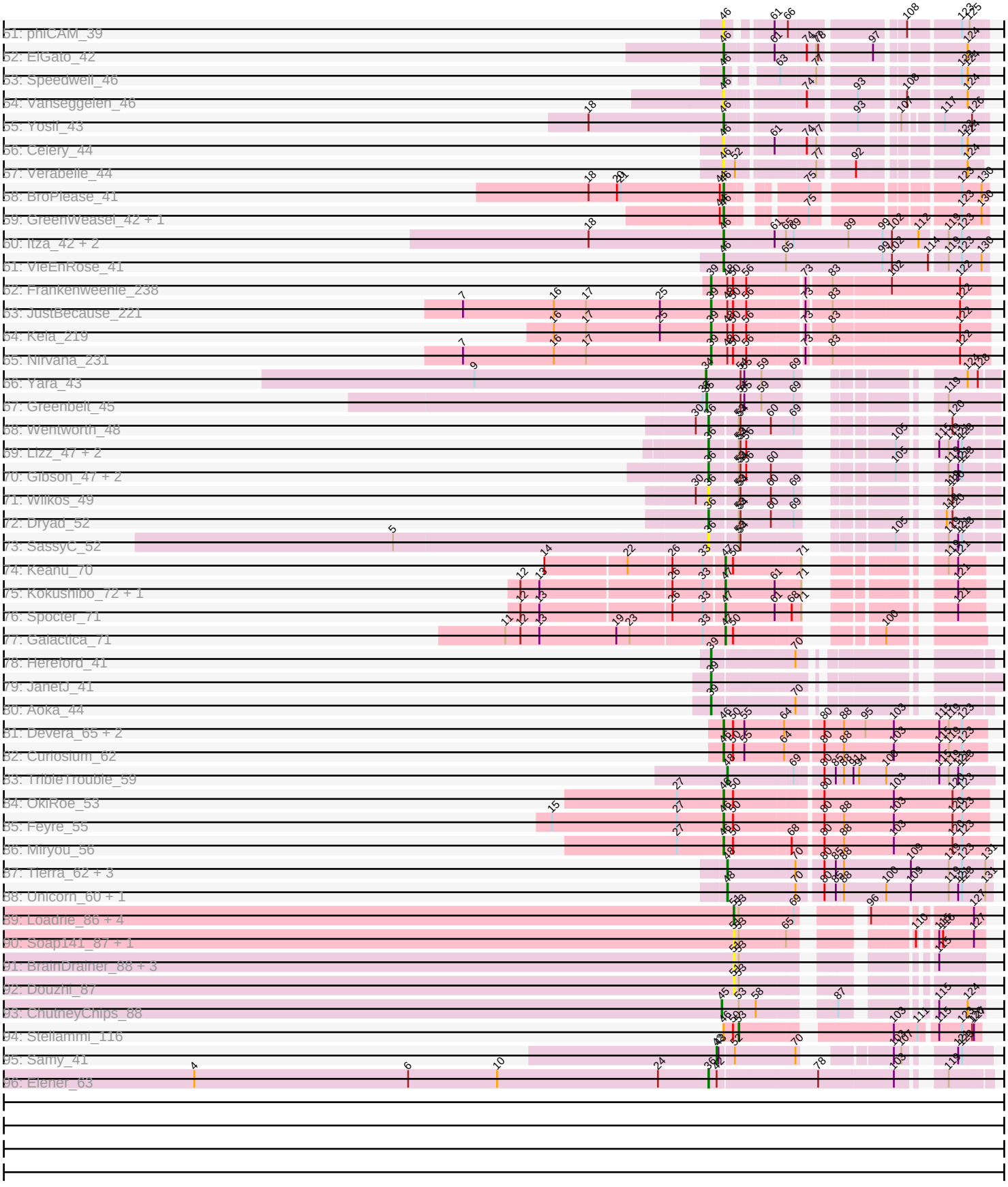
Pham 345413


1: Fushigi_46 + 5
2: Big3_47
3: Stephig9_49
4: MalagasyRose_59
5: JayCookie_98 + 2
6: ArV1_085
7: KellEzio_88
8: Katalie_40 + 2
9: Ozzie_40 + 20
10: Sujidade_41
11: Dwayne_40 + 12
12: Maneekui_40
13: TuanPN_39 + 2
14: Lika_40 + 1
15: Lannister_42
16: Brataylor_43 + 3
17: Toma_40 + 2
18: Nanodon_42
19: Nabi_41 + 2
20: Alvy_43 + 1
21: Haizum_42 + 2
22: Jevington_43 + 1
23: Paedore_40 + 1
24: Animus_40 + 2
25: Zainub_43
26: Nishikigoi_42
27: Issmi_42
28: Thestral_42
29: Pablito_40
30: GirlDinner_40
31: Bowden_41
32: Superstar_44
33: Amons_40
34: TinaBelcher_41 + 1
35: Diane_40
36: Caelum_42
37: Hank144_42
38: ELB20_39 + 1
39: Triumph_42
40: Puginator_43
41: Omar_43
42: Axiom_41
43: Daudau_41
44: Paolo_43
45: Provolone_42 + 1
46: Alsaber_42 + 4
47: Amela_41 + 2
48: Jhitchelle_40
49: ZamZam_41
50: Saltant_41

Pham 345413


51: phiCAM_39
52: ElGato_42
53: Speedwell_46
54: Vanseggelen_46
55: Yoshi_43
56: Celery_44
57: Verabelle_44
58: BroPlease_41
59: GreenWeasel_42 + 1
60: Itza_42 + 2
61: VieEnRose_41
62: Frankenweenie_238
63: JustBecause_221
64: Kela_219
65: Nirvana_231
66: Yara_43
67: Greenbelt_45
68: Wentworth_48
69: Lizz_47 + 2
70: Gibson_47 + 2
71: Wilkos_49
72: Dryad_52
73: SassyC_52
74: Keanu_70
75: Kokushibo_72 + 1
76: Specter_71
77: Galactica_71
78: Hereford_41
79: JanetJ_41
80: Aoka_44
81: Devera_65 + 2
82: Curiosium_62
83: TribleTrouble_59
84: OkiRoe_53
85: Feyre_55
86: Miryou_56
87: Tierra_62 + 3
88: Unicorn_60 + 1
89: Loadrie_86 + 4
90: Soap141_87 + 1
91: BrainDrainer_88 + 3
92: Douzhi_87
93: ChutneyChips_88
94: Stellammi_116
95: Samy_41
96: Elener_83

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 345413 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 345413 has 185 members, 18 are drafts.

Phages represented in each track:
- Track 1 : Fushigi_46, Traft412_50, Dexes_48, Pelly_47, Michley_47, MrGordo_47
- Track 2 : Big3_47
- Track 3 : Stephig9_49
- Track 4 : MalagasyRose_59
- Track 5 : JayCookie_98, MoyaNatalis_97, Conboy_96
- Track 6 : ArV1_085
- Track 7 : KellEzio_88
- Track 8 : Katalie_40, RedBear_41, South40_40
- Track 9 : Ozzie_40, Nerdos_39, Eddasa_41, Jash_41, Izzy_41, Legacy_40, BryanRecycles_41, BeardedLady_41, Esperer_40, EnochSoames_43, Aaronocolus_40, Phettuccine_40, Rusticus_41, SunsetPointe_40, Caliburn_40, Hydra_42, Oliynyk_41, Bovely_40, Indigo_39, Unstoppable_40, Leviticus_40
- Track 10 : Sujidade_41
- Track 11 : Dwayne_40, Asten_40, Whatever_40, OzzyJ_41, Emaanora_43, Hippo_40, Triste_40, Werner_40, BarryBee_43, Chucky_40, SarahRose_40, TagePhighter_42, Snorlax_40
- Track 12 : Maneekul_40
- Track 13 : TuanPN_39, Yasdnil_40, Ejemplo_39
- Track 14 : Lika_40, Godpower_41
- Track 15 : Lannister_42
- Track 16 : Brataylor_43, Celeste_41, Danzina_42, Zemlya_42
- Track 17 : Toma_40, Dattran_42, Goby_40
- Track 18 : Nanodon_42
- Track 19 : Nabi_41, Rana_41, Lorelei_41
- Track 20 : Alvy_43, BartholomewSD_43
- Track 21 : Haizum_42, Tefunt_42, Amethyst_40
- Track 22 : Jevington_43, Marav_44
- Track 23 : Paedore_40, Loofah_41
- Track 24 : Animus_40, SqueakyClean_40, Janus_41
- Track 25 : Zainub_43
- Track 26 : Nishikigoi_42
- Track 27 : Issmi_42
- Track 28 : Thestral_42

- Track 29 : Pablito_40
- Track 30 : GirlDinner_40
- Track 31 : Bowden_41
- Track 32 : Superstar_44
- Track 33 : Andris_40
- Track 34 : TinaBelcher_41, TrvxScott_40
- Track 35 : Diane_40
- Track 36 : Caelum_42
- Track 37 : Hank144_42
- Track 38 : ELB20_39, R4_41
- Track 39 : Triumph_42
- Track 40 : Puginator_43
- Track 41 : Omar_43
- Track 42 : Axiom_41
- Track 43 : Daudau_41
- Track 44 : Paolo_43
- Track 45 : Provolone_42, Pavo_42
- Track 46 : Alsaber_42, Sudan_41, Dexers_40, Kaine_41, Conan_42
- Track 47 : Amela_41, SunkenRoot_41, Verse_41
- Track 48 : Jhitchelle_40
- Track 49 : ZamZam_41
- Track 50 : Saftant_41
- Track 51 : phiCAM_39
- Track 52 : ElGato_42
- Track 53 : Speedwell_46
- Track 54 : Vanseggelen_46
- Track 55 : Yosif_43
- Track 56 : Celery_44
- Track 57 : Verabelle_44
- Track 58 : BroPlease_41
- Track 59 : GreenWeasel_42, phiHau3_42
- Track 60 : Itza_42, Celia_42, Urza_42
- Track 61 : VieEnRose_41
- Track 62 : Frankenweenie_238
- Track 63 : JustBecause_221
- Track 64 : Kela_219
- Track 65 : Nirvana_231
- Track 66 : Yara_43
- Track 67 : Greenbelt_45
- Track 68 : Wentworth_48
- Track 69 : Lizz_47, ShakeNBake_47, PHTowN_47
- Track 70 : Gibson_47, Virizion_52, Rooney_47
- Track 71 : Wilkos_49
- Track 72 : Dryad_52
- Track 73 : SassyC_52
- Track 74 : Keanu_70
- Track 75 : Kokushibo_72, Hiyaa_72
- Track 76 : Spocter_71
- Track 77 : Galactica_71
- Track 78 : Hereford_41
- Track 79 : JanetJ_41
- Track 80 : Aoka_44
- Track 81 : Devera_65, Dole_63, Illumine_63

• Track 82 : Curiosium_62
• Track 83 : TribleTrouble_59
• Track 84 : OkiRoe_53
• Track 85 : Feyre_55
• Track 86 : Miryou_56
• Track 87 : Tierra_62, Cain_62, Phrank_62, Bryler_62
• Track 88 : Unicorn_60, PhelpsODU_60
• Track 89 : Loadrie_86, OverPar_89, Zakai_88, Wigglewiggle_87, MkaliMitinis3_89
• Track 90 : Soap141_87, Sarshaun_88
• Track 91 : BrainDrainer_88, FarmResident_88, Sheng711_88, PYPDinur_87
• Track 92 : Douzhi_87
• Track 93 : ChutneyChips_88
• Track 94 : Stellammi_116
• Track 95 : Samy_41
• Track 96 : Elener_63

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

The start number called the most often in the published annotations is 46, it was called in 66 of the 167 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alsaber_42, Amela_41, Asten_40, BarryBee_43, Brataylor_43, BroPlease_41, Celery_44, Celeste_41, Celia_42, Chucky_40, Conan_42, Curiosium_62, Danzina_42, Dattran_42, Devera_65, Dexers_40, Dole_63, Dwayne_40, Ejemplo_39, ElGato_42, Emaanora_43, Feyre_55, Goby_40, Godpower_41, GreenWeasel_42, Hippo_40, Illumine_63, Itza_42, Jhitchelle_40, Kaine_41, Katalie_40, Lannister_42, Lika_40, Lorelei_41, MalagasyRose_59, Maneekul_40, Miryou_56, Nabi_41, Nanodon_42, OkiRoe_53, OzzyJ_41, Pavo_42, Provolone_42, Rana_41, RedBear_41, Saftant_41, SarahRose_40, Snorlax_40, South40_40, Speedwell_46, Sudan_41, Sujidade_41, SunkenRoot_41, TagePhighter_42, Toma_40, Triste_40, TuanPN_39, Urza_42, Vanseggelen_46, Verabelle_44, Verse_41, VieEnRose_41, Werner_40, Whatever_40, Yasdnil_40, Yosif_43, ZamZam_41, Zemlya_42, phiCAM_39, phiHau3_42,

Genes that have the "Most Annotated" start but do not call it:
• Stellammi_116,

Genes that do not have the "Most Annotated" start:
• Aaronocolus_40, Alvy_43, Amethyst_40, Andris_40, Animus_40, Aoka_44, ArV1_085, Axiom_41, BartholomewSD_43, BeardedLady_41, Big3_47, Bovely_40, Bowden_41, BrainDrainer_88, BryanRecycles_41, Bryler_62, Caelum_42, Cain_62, Caliburn_40, ChutneyChips_88, Conboy_96, Daudau_41, Dexes_48, Diane_40, Douzhi_87, Dryad_52, ELB20_39, Eddasa_41, Elener_63, EnochSoames_43, Esperer_40, FarmResident_88, Frankenweenie_238, Fushigi_46, Galactica_71, Gibson_47, GirlDinner_40, Greenbelt_45, Haizum_42, Hank144_42, Hereford_41, Hiyaa_72, Hydra_42, Indigo_39, Issmi_42, Izzy_41, JanetJ_41, Janus_41, Jash_41, JayCookie_98, Jevington_43, JustBecause_221, Keanu_70, Kela_219, KellEzio_88, Kokushibo_72, Legacy_40, Leviticus_40, Lizz_47, Loadrie_86, Loofah_41, Marav_44, Michley_47, MkaliMitinis3_89, MoyaNatalis_97, MrGordo_47, Nerdos_39,

Nirvana_231, Nishikigoi_42, Oliynyk_41, Omar_43, OverPar_89, Ozzie_40, PHTowN_47, PYPDinur_87, Pablito_40, Paedore_40, Paolo_43, Pelly_47, PhelpsODU_60, Phettuccine_40, Phrank_62, Puginator_43, R4_41, Rooney_47, Rusticus_41, Samy_41, Sarshaun_88, SassyC_52, ShakeNBake_47, Sheng711_88, Soap141_87, Spocter_71, SqueakyClean_40, Stephig9_49, SunsetPointe_40, Superstar_44, Tefunt_42, Thestral_42, Tierra_62, TinaBelcher_41, Traft412_50, TribleTrouble_59, Triumph_42, TrvxScott_40, Unicorn_60, Unstoppable_40, Virizion_52, Wentworth_48, Wigglewiggle_87, Wilkos_49, Yara_43, Zainub_43, Zakai_88,

Summary by start number:

Start 28:
• Found in 4 of 185 (2.2%) of genes in pham
• Manual Annotations of this start: 2 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ArV1_085 (AR), Conboy_96 (AR), JayCookie_98 (AR), MoyaNatalis_97 (AR),

Start 34:
• Found in 1 of 185 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Yara_43 (BN),

Start 35:
• Found in 1 of 185 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Greenbelt_45 (BN),

Start 36:
• Found in 22 of 185 (11.9%) of genes in pham
• Manual Annotations of this start: 15 of 167
• Called 81.8% of time when present
• Phage (with cluster) where this start called: Big3_47 (A1), Dexes_48 (A1), Dryad_52 (BN), Elener_63 (singleton), Fushigi_46 (A1), Gibson_47 (BN), Lizz_47 (BN), Michley_47 (A1), MrGordo_47 (A1), PHTowN_47 (BN), Pelly_47 (A1), Rooney_47 (BN), SassyC_52 (BN), ShakeNBake_47 (BN), Traft412_50 (A1), Virizion_52 (BN), Wentworth_48 (BN), Wilkos_49 (BN),

Start 37:
• Found in 22 of 185 (11.9%) of genes in pham
• Manual Annotations of this start: 21 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aaronocolus_40 (BD1), BeardedLady_41 (BD1), Bovely_40 (BD1), BryanRecycles_41 (BD1), Caliburn_40 (BD1), Eddasa_41 (BD1), EnochSoames_43 (BD1), Esperer_40 (BD1), Hydra_42 (BD1), Indigo_39 (BD1), Izzy_41 (BD1), Jash_41 (BD1), Legacy_40 (BD1), Leviticus_40 (BD1), Nerdos_39 (BD1), Oliynyk_41 (BD1), Ozzie_40 (BD1), Phettuccine_40 (BD1), Rusticus_41 (BD1), Stephig9_49 (A8), SunsetPointe_40 (BD1), Unstoppable_40 (BD1),

Start 38:
• Found in 7 of 185 (3.8%) of genes in pham
• Manual Annotations of this start: 7 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Axiom_41 (BD2), ELB20_39 (BD2), Loofah_41 (BD2), Pablito_40 (BD2), Paedore_40 (BD2), R4_41 (BD2), Triumph_42 (BD2),

Start 39:
• Found in 7 of 185 (3.8%) of genes in pham
• Manual Annotations of this start: 7 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aoka_44 (FO), Frankenweenie_238 (BM), Hereford_41 (FO), JanetJ_41 (FO), JustBecause_221 (BM), Kela_219 (BM), Nirvana_231 (BM),

Start 40:
• Found in 1 of 185 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: KellEzio_88 (AT),

Start 42:
• Found in 2 of 185 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Samy_41 (singleton),

Start 45:
• Found in 2 of 185 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 50.0% of time when present
• Phage (with cluster) where this start called: ChutneyChips_88 (L4),

Start 46:
• Found in 71 of 185 (38.4%) of genes in pham
• Manual Annotations of this start: 66 of 167
• Called 98.6% of time when present
• Phage (with cluster) where this start called: Alsaber_42 (BD3), Amela_41 (BD3), Asten_40 (BD1), BarryBee_43 (BD1), Brataylor_43 (BD1), BroPlease_41 (BD4), Celery_44 (BD3), Celeste_41 (BD1), Celia_42 (BD6), Chucky_40 (BD1), Conan_42 (BD3), Curiosium_62 (K1), Danzina_42 (BD1), Dattran_42 (BD1), Devera_65 (K1), Dexers_40 (BD3), Dole_63 (K1), Dwayne_40 (BD1), Ejemplo_39 (BD1), ElGato_42 (BD3), Emaanora_43 (BD1), Feyre_55 (K5), Goby_40 (BD1), Godpower_41 (BD1), GreenWeasel_42 (BD4), Hippo_40 (BD1), Illumine_63 (K1), Itza_42 (BD6), Jhitchelle_40 (BD3), Kaine_41 (BD3), Katalie_40 (BD1), Lannister_42 (BD1), Lika_40 (BD1), Lorelei_41 (BD1), MalagasyRose_59 (AG), Maneekul_40 (BD1), Miryou_56 (K5), Nabi_41 (BD1), Nanodon_42 (BD1), OkiRoe_53 (K5), OzzyJ_41 (BD1), Pavo_42 (BD3), Provolone_42 (BD3), Rana_41 (BD1), RedBear_41 (BD1), Saftant_41 (BD3), SarahRose_40 (BD1), Snorlax_40 (BD1), South40_40 (BD1), Speedwell_46 (BD3), Sudan_41 (BD3), Sujidade_41 (BD1), SunkenRoot_41 (BD3), TagePhighter_42 (BD1), Toma_40 (BD1), Triste_40 (BD1), TuanPN_39 (BD1), Urza_42 (BD6), Vanseggelen_46 (BD3), Verabelle_44 (BD3), Verse_41 (BD3),

VieEnRose_41 (BD6), Werner_40 (BD1), Whatever_40 (BD1), Yasdnil_40 (BD1), Yosif_43 (BD3), ZamZam_41 (BD3), Zemlya_42 (BD1), phiCAM_39 (BD3), phiHau3_42 (BD4),

Start 47:
• Found in 17 of 185 (9.2%) of genes in pham
• Manual Annotations of this start: 16 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amethyst_40 (BD2), Animus_40 (BD2), Caelum_42 (BD2), Diane_40 (BD2), Galactica_71 (BQ), GirlDinner_40 (BD2), Haizum_42 (BD2), Hank144_42 (BD2), Hiyaa_72 (BQ), Janus_41 (BD2), Keanu_70 (BQ), Kokushibo_72 (BQ), Nishikigoi_42 (BD2), Spocter_71 (BQ), SqueakyClean_40 (BD2), Superstar_44 (BD2), Tefunt_42 (BD2),

Start 48:
• Found in 26 of 185 (14.1%) of genes in pham
• Manual Annotations of this start: 20 of 167
• Called 76.9% of time when present
• Phage (with cluster) where this start called: Alvy_43 (BD2), BartholomewSD_43 (BD2), Bowden_41 (BD2), Bryler_62 (K6), Cain_62 (K6), Daudau_41 (BD2), Issmi_42 (BD2), Jevington_43 (BD2), Marav_44 (BD2), Paolo_43 (BD2), PhelpsODU_60 (K6), Phrank_62 (K6), Puginator_43 (BD2), Thestral_42 (BD2), Tierra_62 (K6), TinaBelcher_41 (BD2), TribleTrouble_59 (K3), TrvxScott_40 (BD2), Unicorn_60 (K6), Zainub_43 (BD2),

Start 49:
• Found in 1 of 185 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Omar_43 (BD2),

Start 51:
• Found in 12 of 185 (6.5%) of genes in pham
• Manual Annotations of this start: 5 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BrainDrainer_88 (L4), Douzhi_87 (L4), FarmResident_88 (L4), Loadrie_86 (L2), MkaliMitinis3_89 (L2), OverPar_89 (L2), PYPDinur_87 (L4), Sarshaun_88 (L2), Sheng711_88 (L4), Soap141_87 (L2), Wigglewiggle_87 (L2), Zakai_88 (L2),

Start 52:
• Found in 5 of 185 (2.7%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Andris_40 (BD2),

Start 53:
• Found in 24 of 185 (13.0%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 4.2% of time when present
• Phage (with cluster) where this start called: Stellammi_116 (UNK),

Summary by clusters:

There are 22 clusters represented in this pham: singleton, BM, BN, K3, K1, BQ, K5, FO, A1, BD4, BD6, BD1, BD3, BD2, A8, AG, L4, AR, L2, AT, UNK, K6,

Info for manual annotations of cluster A1:
•Start number 36 was manually annotated 7 times for cluster A1.

Info for manual annotations of cluster A8:
•Start number 37 was manually annotated 1 time for cluster A8.

Info for manual annotations of cluster AG:
•Start number 46 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster AR:
•Start number 28 was manually annotated 2 times for cluster AR.

Info for manual annotations of cluster AT:
•Start number 40 was manually annotated 1 time for cluster AT.

Info for manual annotations of cluster BD1:
•Start number 37 was manually annotated 20 times for cluster BD1.
•Start number 46 was manually annotated 35 times for cluster BD1.

Info for manual annotations of cluster BD2:
•Start number 38 was manually annotated 7 times for cluster BD2.
•Start number 47 was manually annotated 11 times for cluster BD2.
•Start number 48 was manually annotated 13 times for cluster BD2.
•Start number 49 was manually annotated 1 time for cluster BD2.
•Start number 52 was manually annotated 1 time for cluster BD2.

Info for manual annotations of cluster BD3:
•Start number 46 was manually annotated 16 times for cluster BD3.

Info for manual annotations of cluster BD4:
•Start number 46 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:
•Start number 46 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster BM:
•Start number 39 was manually annotated 4 times for cluster BM.

Info for manual annotations of cluster BN:
•Start number 34 was manually annotated 1 time for cluster BN.
•Start number 35 was manually annotated 1 time for cluster BN.
•Start number 36 was manually annotated 7 times for cluster BN.

Info for manual annotations of cluster BQ:
•Start number 47 was manually annotated 5 times for cluster BQ.

Info for manual annotations of cluster FO:
•Start number 39 was manually annotated 3 times for cluster FO.

Info for manual annotations of cluster K1:
•Start number 46 was manually annotated 4 times for cluster K1.

Info for manual annotations of cluster K3:
•Start number 48 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K5:
•Start number 46 was manually annotated 3 times for cluster K5.

Info for manual annotations of cluster K6:
•Start number 48 was manually annotated 6 times for cluster K6.

Info for manual annotations of cluster L2:
•Start number 51 was manually annotated 5 times for cluster L2.

Info for manual annotations of cluster L4:
•Start number 45 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster UNK:
•Start number 53 was manually annotated 1 time for cluster UNK.

Gene Information:

Gene: Aaronocolus_40 Start: 28479, Stop: 28826, Start Num: 37
Candidate Starts for Aaronocolus_40:
(Start: 37 @28479 has 21 MA's), (67, 28581), (82, 28632), (121, 28794),

Gene: Alsaber_42 Start: 30369, Stop: 30716, Start Num: 46
Candidate Starts for Alsaber_42:
(Start: 46 @30369 has 66 MA's), (61, 30432), (124, 30687),

Gene: Alvy_43 Start: 30032, Stop: 30367, Start Num: 48
Candidate Starts for Alvy_43:
(Start: 48 @30032 has 20 MA's), (65, 30095), (82, 30152),

Gene: Amela_41 Start: 31176, Stop: 31517, Start Num: 46
Candidate Starts for Amela_41:
(Start: 46 @31176 has 66 MA's), (66, 31251), (108, 31407), (123, 31479), (124, 31488),

Gene: Amethyst_40 Start: 29395, Stop: 29733, Start Num: 47
Candidate Starts for Amethyst_40:
(18, 29182), (20, 29227), (Start: 47 @29395 has 16 MA's), (71, 29482), (82, 29518), (86, 29527), (99, 29599), (118, 29674),

Gene: Andris_40 Start: 29457, Stop: 29789, Start Num: 52
Candidate Starts for Andris_40:
(1, 28344), (2, 28464), (3, 28521), (18, 29241), (20, 29286), (Start: 52 @29457 has 1 MA's), (65, 29514), (86, 29580), (104, 29664), (112, 29691), (123, 29751),

Gene: Animus_40 Start: 29869, Stop: 30219, Start Num: 47
Candidate Starts for Animus_40:

(31, 29824), (Start: 47 @29869 has 16 MA's), (65, 29944), (106, 30097),

Gene: Aoka_44 Start: 31288, Stop: 31638, Start Num: 39
Candidate Starts for Aoka_44:
(Start: 39 @31288 has 7 MA's), (70, 31408),

Gene: ArV1_085 Start: 61509, Stop: 61898, Start Num: 28
Candidate Starts for ArV1_085:
(Start: 28 @61509 has 2 MA's), (Start: 36 @61539 has 15 MA's), (57, 61599), (81, 61695), (103, 61785), (107, 61797),

Gene: Asten_40 Start: 28841, Stop: 29185, Start Num: 46
Candidate Starts for Asten_40:
(Start: 46 @28841 has 66 MA's), (72, 28949), (76, 28967), (92, 29021), (107, 29072), (108, 29081), (121, 29147), (124, 29162),

Gene: Axiom_41 Start: 29618, Stop: 29989, Start Num: 38
Candidate Starts for Axiom_41:
(Start: 38 @29618 has 7 MA's), (66, 29723), (75, 29750), (121, 29945),

Gene: BarryBee_43 Start: 28851, Stop: 29195, Start Num: 46
Candidate Starts for BarryBee_43:
(Start: 46 @28851 has 66 MA's), (72, 28959), (76, 28977), (92, 29031), (107, 29082), (108, 29091), (121, 29157), (124, 29172),

Gene: BartholomewSD_43 Start: 30031, Stop: 30366, Start Num: 48
Candidate Starts for BartholomewSD_43:
(Start: 48 @30031 has 20 MA's), (65, 30094), (82, 30151),

Gene: BeardedLady_41 Start: 28732, Stop: 29079, Start Num: 37
Candidate Starts for BeardedLady_41:
(Start: 37 @28732 has 21 MA's), (67, 28834), (82, 28885), (121, 29047),

Gene: Big3_47 Start: 35903, Stop: 35556, Start Num: 36
Candidate Starts for Big3_47:
(Start: 36 @35903 has 15 MA's), (54, 35861), (107, 35675), (115, 35651),

Gene: Bovely_40 Start: 28485, Stop: 28832, Start Num: 37
Candidate Starts for Bovely_40:
(Start: 37 @28485 has 21 MA's), (67, 28587), (82, 28638), (121, 28800),

Gene: Bowden_41 Start: 29946, Stop: 30287, Start Num: 48
Candidate Starts for Bowden_41:
(32, 29907), (Start: 48 @29946 has 20 MA's), (65, 30015), (82, 30072), (101, 30156),

Gene: BrainDrainer_88 Start: 55558, Stop: 55860, Start Num: 51
Candidate Starts for BrainDrainer_88:
(Start: 51 @55558 has 5 MA's), (Start: 53 @55564 has 1 MA's), (115, 55789),

Gene: Brataylor_43 Start: 29824, Stop: 30168, Start Num: 46
Candidate Starts for Brataylor_43:
(Start: 46 @29824 has 66 MA's), (76, 29950), (107, 30055), (115, 30100), (121, 30130), (124, 30145),

Gene: BroPlease_41 Start: 28966, Stop: 29289, Start Num: 46
Candidate Starts for BroPlease_41:
(18, 28753), (20, 28798), (21, 28804), (44, 28960), (Start: 46 @28966 has 66 MA's), (75, 29059), (123, 29254), (130, 29281),

Gene: BryanRecycles_41 Start: 28839, Stop: 29195, Start Num: 37
Candidate Starts for BryanRecycles_41:
(Start: 37 @28839 has 21 MA's), (67, 28941), (82, 28992), (121, 29154),

Gene: Bryler_62 Start: 40362, Stop: 40757, Start Num: 48
Candidate Starts for Bryler_62:
(Start: 48 @40362 has 20 MA's), (70, 40464), (80, 40497), (85, 40515), (88, 40527), (109, 40629), (119, 40689), (123, 40710), (131, 40746),

Gene: Caelum_42 Start: 29642, Stop: 29968, Start Num: 47
Candidate Starts for Caelum_42:
(18, 29429), (20, 29474), (Start: 47 @29642 has 16 MA's), (65, 29696), (71, 29717), (82, 29753), (121, 29927),

Gene: Cain_62 Start: 40350, Stop: 40745, Start Num: 48
Candidate Starts for Cain_62:
(Start: 48 @40350 has 20 MA's), (70, 40452), (80, 40485), (85, 40503), (88, 40515), (109, 40617), (119, 40677), (123, 40698), (131, 40734),

Gene: Caliburn_40 Start: 28462, Stop: 28809, Start Num: 37
Candidate Starts for Caliburn_40:
(Start: 37 @28462 has 21 MA's), (67, 28564), (82, 28615), (121, 28777),

Gene: Celery_44 Start: 30302, Stop: 30649, Start Num: 46
Candidate Starts for Celery_44:
(Start: 46 @30302 has 66 MA's), (61, 30365), (74, 30413), (77, 30425), (123, 30611), (124, 30620),

Gene: Celeste_41 Start: 29293, Stop: 29634, Start Num: 46
Candidate Starts for Celeste_41:
(Start: 46 @29293 has 66 MA's), (76, 29416), (107, 29521), (115, 29566), (121, 29596), (124, 29611),

Gene: Celia_42 Start: 29394, Stop: 29801, Start Num: 46
Candidate Starts for Celia_42:
(18, 29181), (Start: 46 @29394 has 66 MA's), (61, 29472), (65, 29490), (69, 29502), (89, 29589), (99, 29643), (102, 29658), (112, 29700), (119, 29739), (123, 29760),

Gene: Chucky_40 Start: 28855, Stop: 29199, Start Num: 46
Candidate Starts for Chucky_40:
(Start: 46 @28855 has 66 MA's), (72, 28963), (76, 28981), (92, 29035), (107, 29086), (108, 29095), (121, 29161), (124, 29176),

Gene: ChutneyChips_88 Start: 55420, Stop: 55743, Start Num: 45
Candidate Starts for ChutneyChips_88:
(Start: 45 @55420 has 1 MA's), (Start: 53 @55447 has 1 MA's), (58, 55474), (87, 55567), (115, 55672), (124, 55717),

Gene: Conan_42 Start: 30263, Stop: 30610, Start Num: 46
Candidate Starts for Conan_42:

(Start: 46 @30263 has 66 MA's), (61, 30326), (124, 30581),

Gene: Conboy_96 Start: 62664, Stop: 63050, Start Num: 28
Candidate Starts for Conboy_96:
(Start: 28 @62664 has 2 MA's), (Start: 36 @62694 has 15 MA's), (57, 62754), (90, 62877), (103, 62937), (107, 62949),

Gene: Curiosium_62 Start: 40040, Stop: 40438, Start Num: 46
Candidate Starts for Curiosium_62:
(Start: 46 @40040 has 66 MA's), (50, 40055), (55, 40073), (64, 40133), (80, 40187), (88, 40217), (103, 40292), (115, 40364), (119, 40379), (123, 40400),

Gene: Danzina_42 Start: 29594, Stop: 29935, Start Num: 46
Candidate Starts for Danzina_42:
(Start: 46 @29594 has 66 MA's), (76, 29717), (107, 29822), (115, 29867), (121, 29897), (124, 29912),

Gene: Dattran_42 Start: 29400, Stop: 29762, Start Num: 46
Candidate Starts for Dattran_42:
(Start: 46 @29400 has 66 MA's), (76, 29526), (107, 29643), (124, 29733),

Gene: Daudau_41 Start: 29789, Stop: 30124, Start Num: 48
Candidate Starts for Daudau_41:
(Start: 48 @29789 has 20 MA's), (65, 29852), (71, 29873), (79, 29903), (82, 29909),

Gene: Devera_65 Start: 41933, Stop: 42331, Start Num: 46
Candidate Starts for Devera_65:
(Start: 46 @41933 has 66 MA's), (50, 41948), (55, 41966), (64, 42026), (80, 42080), (88, 42110), (95, 42143), (103, 42185), (115, 42257), (119, 42272), (123, 42293),

Gene: Dexers_40 Start: 30287, Stop: 30634, Start Num: 46
Candidate Starts for Dexers_40:
(Start: 46 @30287 has 66 MA's), (61, 30350), (124, 30605),

Gene: Dexes_48 Start: 36500, Stop: 36153, Start Num: 36
Candidate Starts for Dexes_48:
(Start: 36 @36500 has 15 MA's), (54, 36458), (115, 36248),

Gene: Diane_40 Start: 29624, Stop: 29962, Start Num: 47
Candidate Starts for Diane_40:
(Start: 47 @29624 has 16 MA's), (71, 29711), (82, 29747), (86, 29756), (99, 29828),

Gene: Dole_63 Start: 41936, Stop: 42334, Start Num: 46
Candidate Starts for Dole_63:
(Start: 46 @41936 has 66 MA's), (50, 41951), (55, 41969), (64, 42029), (80, 42083), (88, 42113), (95, 42146), (103, 42188), (115, 42260), (119, 42275), (123, 42296),

Gene: Douzhi_87 Start: 55217, Stop: 55519, Start Num: 51
Candidate Starts for Douzhi_87:
(Start: 51 @55217 has 5 MA's), (Start: 53 @55223 has 1 MA's),

Gene: Dryad_52 Start: 35720, Stop: 35379, Start Num: 36
Candidate Starts for Dryad_52:

(Start: 36 @35720 has 15 MA's), (Start: 53 @35681 has 1 MA's), (54, 35678), (60, 35630), (69, 35597), (118, 35456), (120, 35447),

Gene: Dwayne_40 Start: 28842, Stop: 29186, Start Num: 46
Candidate Starts for Dwayne_40:
(Start: 46 @28842 has 66 MA's), (72, 28950), (76, 28968), (92, 29022), (107, 29073), (108, 29082), (121, 29148), (124, 29163),

Gene: ELB20_39 Start: 30032, Stop: 30394, Start Num: 38
Candidate Starts for ELB20_39:
(Start: 38 @30032 has 7 MA's), (65, 30128), (71, 30149), (75, 30161), (79, 30179),

Gene: Eddasa_41 Start: 28839, Stop: 29195, Start Num: 37
Candidate Starts for Eddasa_41:
(Start: 37 @28839 has 21 MA's), (67, 28941), (82, 28992), (121, 29154),

Gene: Ejemplo_39 Start: 28786, Stop: 29130, Start Num: 46
Candidate Starts for Ejemplo_39:
(Start: 46 @28786 has 66 MA's), (72, 28894), (92, 28966), (107, 29017), (108, 29026), (121, 29092), (124, 29107),

Gene: ElGato_42 Start: 29927, Stop: 30274, Start Num: 46
Candidate Starts for ElGato_42:
(Start: 46 @29927 has 66 MA's), (61, 29990), (74, 30038), (77, 30050), (78, 30053), (97, 30125), (124, 30245),

Gene: Elener_63 Start: 36486, Stop: 36878, Start Num: 36
Candidate Starts for Elener_63:
(4, 35673), (6, 36012), (10, 36153), (24, 36408), (Start: 36 @36486 has 15 MA's), (Start: 42 @36498 has 1 MA's), (78, 36648), (103, 36762), (119, 36813),

Gene: Emaanora_43 Start: 28800, Stop: 29144, Start Num: 46
Candidate Starts for Emaanora_43:
(Start: 46 @28800 has 66 MA's), (72, 28908), (76, 28926), (92, 28980), (107, 29031), (108, 29040), (121, 29106), (124, 29121),

Gene: EnochSoames_43 Start: 28834, Stop: 29190, Start Num: 37
Candidate Starts for EnochSoames_43:
(Start: 37 @28834 has 21 MA's), (67, 28936), (82, 28987), (121, 29149),

Gene: Esperer_40 Start: 28298, Stop: 28645, Start Num: 37
Candidate Starts for Esperer_40:
(Start: 37 @28298 has 21 MA's), (67, 28400), (82, 28451), (121, 28613),

Gene: FarmResident_88 Start: 54956, Stop: 55258, Start Num: 51
Candidate Starts for FarmResident_88:
(Start: 51 @54956 has 5 MA's), (Start: 53 @54962 has 1 MA's), (115, 55187),

Gene: Feyre_55 Start: 41389, Stop: 41784, Start Num: 46
Candidate Starts for Feyre_55:
(15, 41119), (27, 41317), (Start: 46 @41389 has 66 MA's), (50, 41404), (80, 41530), (88, 41560), (103, 41635), (120, 41728), (123, 41743),

Gene: Frankenweenie_238 Start: 141929, Stop: 142342, Start Num: 39
Candidate Starts for Frankenweenie_238:
(Start: 39 @141929 has 7 MA's), (Start: 48 @141953 has 20 MA's), (50, 141962), (56, 141983), (73, 142064), (83, 142100), (102, 142187), (122, 142295),

Gene: Fushigi_46 Start: 33901, Stop: 33554, Start Num: 36
Candidate Starts for Fushigi_46:
(Start: 36 @33901 has 15 MA's), (54, 33859), (115, 33649),

Gene: Galactica_71 Start: 52489, Stop: 52794, Start Num: 47
Candidate Starts for Galactica_71:
(11, 52147), (12, 52171), (13, 52201), (19, 52321), (23, 52342), (33, 52453), (Start: 47 @52489 has 16 MA's), (50, 52501), (100, 52672),

Gene: Gibson_47 Start: 34722, Stop: 34381, Start Num: 36
Candidate Starts for Gibson_47:
(Start: 36 @34722 has 15 MA's), (Start: 53 @34683 has 1 MA's), (54, 34680), (56, 34671), (60, 34632), (105, 34503), (119, 34455), (121, 34440), (123, 34434),

Gene: GirlDinner_40 Start: 29370, Stop: 29720, Start Num: 47
Candidate Starts for GirlDinner_40:
(31, 29325), (Start: 47 @29370 has 16 MA's), (65, 29445),

Gene: Goby_40 Start: 29299, Stop: 29661, Start Num: 46
Candidate Starts for Goby_40:
(Start: 46 @29299 has 66 MA's), (76, 29425), (107, 29542), (124, 29632),

Gene: Godpower_41 Start: 29294, Stop: 29644, Start Num: 46
Candidate Starts for Godpower_41:
(Start: 46 @29294 has 66 MA's), (107, 29525), (121, 29600), (124, 29615),

Gene: GreenWeasel_42 Start: 28973, Stop: 29296, Start Num: 46
Candidate Starts for GreenWeasel_42:
(44, 28967), (Start: 46 @28973 has 66 MA's), (75, 29066), (123, 29261), (130, 29288),

Gene: Greenbelt_45 Start: 31434, Stop: 31075, Start Num: 35
Candidate Starts for Greenbelt_45:
(33, 31440), (Start: 35 @31434 has 1 MA's), (54, 31380), (55, 31374), (59, 31347), (69, 31299), (119, 31155),

Gene: Haizum_42 Start: 29739, Stop: 30077, Start Num: 47
Candidate Starts for Haizum_42:
(18, 29526), (20, 29571), (Start: 47 @29739 has 16 MA's), (71, 29826), (82, 29862), (86, 29871), (99, 29943), (118, 30018),

Gene: Hank144_42 Start: 29734, Stop: 30075, Start Num: 47
Candidate Starts for Hank144_42:
(29, 29686), (31, 29689), (Start: 47 @29734 has 16 MA's), (65, 29806),

Gene: Hereford_41 Start: 30404, Stop: 30754, Start Num: 39
Candidate Starts for Hereford_41:
(Start: 39 @30404 has 7 MA's), (70, 30524),

Gene: Hippo_40 Start: 28854, Stop: 29198, Start Num: 46
Candidate Starts for Hippo_40:
(Start: 46 @28854 has 66 MA's), (72, 28962), (76, 28980), (92, 29034), (107, 29085), (108, 29094), (121, 29160), (124, 29175),

Gene: Hiyaa_72 Start: 53798, Stop: 54097, Start Num: 47
Candidate Starts for Hiyaa_72:
(12, 53492), (13, 53522), (26, 53720), (33, 53768), (Start: 47 @53798 has 16 MA's), (61, 53876), (71, 53912), (121, 54059),

Gene: Hydra_42 Start: 29010, Stop: 29357, Start Num: 37
Candidate Starts for Hydra_42:
(Start: 37 @29010 has 21 MA's), (67, 29112), (82, 29163), (121, 29325),

Gene: Illumine_63 Start: 41935, Stop: 42333, Start Num: 46
Candidate Starts for Illumine_63:
(Start: 46 @41935 has 66 MA's), (50, 41950), (55, 41968), (64, 42028), (80, 42082), (88, 42112), (95, 42145), (103, 42187), (115, 42259), (119, 42274), (123, 42295),

Gene: Indigo_39 Start: 28478, Stop: 28825, Start Num: 37
Candidate Starts for Indigo_39:
(Start: 37 @28478 has 21 MA's), (67, 28580), (82, 28631), (121, 28793),

Gene: Issmi_42 Start: 30341, Stop: 30664, Start Num: 48
Candidate Starts for Issmi_42:
(Start: 48 @30341 has 20 MA's), (71, 30425),

Gene: Itza_42 Start: 29308, Stop: 29715, Start Num: 46
Candidate Starts for Itza_42:
(18, 29095), (Start: 46 @29308 has 66 MA's), (61, 29386), (65, 29404), (69, 29416), (89, 29503), (99, 29557), (102, 29572), (112, 29614), (119, 29653), (123, 29674),

Gene: Izzy_41 Start: 28886, Stop: 29242, Start Num: 37
Candidate Starts for Izzy_41:
(Start: 37 @28886 has 21 MA's), (67, 28988), (82, 29039), (121, 29201),

Gene: JanetJ_41 Start: 31595, Stop: 31966, Start Num: 39
Candidate Starts for JanetJ_41:
(Start: 39 @31595 has 7 MA's),

Gene: Janus_41 Start: 29710, Stop: 30060, Start Num: 47
Candidate Starts for Janus_41:
(31, 29665), (Start: 47 @29710 has 16 MA's), (65, 29785), (106, 29938),

Gene: Jash_41 Start: 28839, Stop: 29195, Start Num: 37
Candidate Starts for Jash_41:
(Start: 37 @28839 has 21 MA's), (67, 28941), (82, 28992), (121, 29154),

Gene: JayCookie_98 Start: 63408, Stop: 63794, Start Num: 28
Candidate Starts for JayCookie_98:
(Start: 28 @63408 has 2 MA's), (Start: 36 @63438 has 15 MA's), (57, 63498), (90, 63621), (103, 63681), (107, 63693),

Gene: Jevington_43 Start: 30131, Stop: 30454, Start Num: 48
Candidate Starts for Jevington_43:
(Start: 48 @30131 has 20 MA's), (71, 30206), (121, 30413),

Gene: Jhitchelle_40 Start: 29800, Stop: 30153, Start Num: 46
Candidate Starts for Jhitchelle_40:
(Start: 46 @29800 has 66 MA's), (50, 29815), (123, 30115), (124, 30124),

Gene: JustBecause_221 Start: 129596, Stop: 130009, Start Num: 39
Candidate Starts for JustBecause_221:
(7, 129203), (16, 129347), (17, 129398), (25, 129515), (Start: 39 @129596 has 7 MA's), (Start: 48 @129620 has 20 MA's), (50, 129629), (56, 129650), (73, 129731), (83, 129767), (122, 129962),

Gene: Kaine_41 Start: 30078, Stop: 30425, Start Num: 46
Candidate Starts for Kaine_41:
(Start: 46 @30078 has 66 MA's), (61, 30141), (124, 30396),

Gene: Katalie_40 Start: 29025, Stop: 29372, Start Num: 46
Candidate Starts for Katalie_40:
(Start: 46 @29025 has 66 MA's), (76, 29148), (107, 29253), (108, 29262), (121, 29328), (124, 29343),

Gene: Keanu_70 Start: 53661, Stop: 53963, Start Num: 47
Candidate Starts for Keanu_70:
(14, 53391), (22, 53517), (26, 53583), (33, 53631), (Start: 47 @53661 has 16 MA's), (50, 53673), (71, 53775), (119, 53907), (121, 53922),

Gene: Kela_219 Start: 129441, Stop: 129854, Start Num: 39
Candidate Starts for Kela_219:
(16, 129192), (17, 129243), (25, 129360), (Start: 39 @129441 has 7 MA's), (Start: 48 @129465 has 20 MA's), (50, 129474), (56, 129495), (73, 129576), (83, 129612), (122, 129807),

Gene: KellEzio_88 Start: 52796, Stop: 53146, Start Num: 40
Candidate Starts for KellEzio_88:
(Start: 40 @52796 has 1 MA's), (Start: 48 @52814 has 20 MA's), (68, 52913), (103, 53030), (107, 53042), (120, 53087), (121, 53096),

Gene: Kokushibo_72 Start: 53830, Stop: 54129, Start Num: 47
Candidate Starts for Kokushibo_72:
(12, 53524), (13, 53554), (26, 53752), (33, 53800), (Start: 47 @53830 has 16 MA's), (61, 53908), (71, 53944), (121, 54091),

Gene: Lannister_42 Start: 29502, Stop: 29852, Start Num: 46
Candidate Starts for Lannister_42:
(Start: 46 @29502 has 66 MA's), (55, 29532), (76, 29628), (107, 29733), (108, 29742), (121, 29808), (129, 29841), (130, 29844),

Gene: Legacy_40 Start: 28453, Stop: 28800, Start Num: 37
Candidate Starts for Legacy_40:
(Start: 37 @28453 has 21 MA's), (67, 28555), (82, 28606), (121, 28768),

Gene: Leviticus_40 Start: 28482, Stop: 28829, Start Num: 37
Candidate Starts for Leviticus_40:
(Start: 37 @28482 has 21 MA's), (67, 28584), (82, 28635), (121, 28797),

Gene: Lika_40 Start: 29297, Stop: 29647, Start Num: 46
Candidate Starts for Lika_40:
(Start: 46 @29297 has 66 MA's), (107, 29528), (121, 29603), (124, 29618),

Gene: Lizz_47 Start: 34536, Stop: 34195, Start Num: 36
Candidate Starts for Lizz_47:
(Start: 36 @34536 has 15 MA's), (Start: 53 @34497 has 1 MA's), (54, 34494), (56, 34485), (105, 34317), (115, 34284), (119, 34269), (121, 34254), (123, 34248),

Gene: Loadrie_86 Start: 56068, Stop: 56370, Start Num: 51
Candidate Starts for Loadrie_86:
(Start: 51 @56068 has 5 MA's), (Start: 53 @56074 has 1 MA's), (69, 56155), (96, 56221), (127, 56353),

Gene: Loofah_41 Start: 29902, Stop: 30264, Start Num: 38
Candidate Starts for Loofah_41:
(27, 29851), (Start: 38 @29902 has 7 MA's), (65, 29998), (71, 30019), (74, 30028), (75, 30031), (79, 30049),

Gene: Lorelei_41 Start: 29357, Stop: 29713, Start Num: 46
Candidate Starts for Lorelei_41:
(Start: 46 @29357 has 66 MA's), (76, 29483), (98, 29573), (107, 29600), (108, 29609), (124, 29690),

Gene: MalagasyRose_59 Start: 39738, Stop: 40061, Start Num: 46
Candidate Starts for MalagasyRose_59:
(Start: 45 @39735 has 1 MA's), (Start: 46 @39738 has 66 MA's), (Start: 48 @39744 has 20 MA's), (88, 39891), (96, 39909), (97, 39912), (119, 40002), (120, 40008), (121, 40017), (123, 40023),

Gene: Maneekul_40 Start: 28876, Stop: 29220, Start Num: 46
Candidate Starts for Maneekul_40:
(Start: 46 @28876 has 66 MA's), (72, 28984), (92, 29056), (107, 29107), (108, 29116), (121, 29182), (124, 29197),

Gene: Marav_44 Start: 30456, Stop: 30779, Start Num: 48
Candidate Starts for Marav_44:
(Start: 48 @30456 has 20 MA's), (71, 30531), (121, 30738),

Gene: Michley_47 Start: 35355, Stop: 35008, Start Num: 36
Candidate Starts for Michley_47:
(Start: 36 @35355 has 15 MA's), (54, 35313), (115, 35103),

Gene: Miryou_56 Start: 42105, Stop: 42500, Start Num: 46
Candidate Starts for Miryou_56:
(27, 42033), (Start: 46 @42105 has 66 MA's), (50, 42120), (68, 42207), (80, 42246), (88, 42276), (103, 42351), (120, 42444), (123, 42459),

Gene: MkaliMitinis3_89 Start: 56052, Stop: 56354, Start Num: 51
Candidate Starts for MkaliMitinis3_89:
(Start: 51 @56052 has 5 MA's), (Start: 53 @56058 has 1 MA's), (69, 56139), (96, 56205), (127, 56337),

Gene: MoyaNatalis_97 Start: 62854, Stop: 63240, Start Num: 28
Candidate Starts for MoyaNatalis_97:

(Start: 28 @62854 has 2 MA's), (Start: 36 @62884 has 15 MA's), (57, 62944), (90, 63067), (103, 63127), (107, 63139),

Gene: MrGordo_47 Start: 35149, Stop: 34802, Start Num: 36
Candidate Starts for MrGordo_47:
(Start: 36 @35149 has 15 MA's), (54, 35107), (115, 34897),

Gene: Nabi_41 Start: 29357, Stop: 29713, Start Num: 46
Candidate Starts for Nabi_41:
(Start: 46 @29357 has 66 MA's), (76, 29483), (98, 29573), (107, 29600), (108, 29609), (124, 29690),

Gene: Nanodon_42 Start: 29128, Stop: 29478, Start Num: 46
Candidate Starts for Nanodon_42:
(Start: 46 @29128 has 66 MA's), (76, 29254), (107, 29359), (108, 29368), (121, 29434),

Gene: Nerdos_39 Start: 28477, Stop: 28824, Start Num: 37
Candidate Starts for Nerdos_39:
(Start: 37 @28477 has 21 MA's), (67, 28579), (82, 28630), (121, 28792),

Gene: Nirvana_231 Start: 140165, Stop: 140578, Start Num: 39
Candidate Starts for Nirvana_231:
(7, 139772), (16, 139916), (17, 139967), (Start: 39 @140165 has 7 MA's), (Start: 48 @140189 has 20 MA's), (50, 140198), (56, 140219), (73, 140300), (83, 140336), (122, 140531),

Gene: Nishikigoi_42 Start: 29739, Stop: 30077, Start Num: 47
Candidate Starts for Nishikigoi_42:
(8, 29331), (18, 29526), (20, 29571), (Start: 47 @29739 has 16 MA's), (71, 29826), (82, 29862), (86, 29871), (99, 29943), (118, 30018),

Gene: OkiRoe_53 Start: 39776, Stop: 40171, Start Num: 46
Candidate Starts for OkiRoe_53:
(27, 39704), (Start: 46 @39776 has 66 MA's), (50, 39791), (80, 39917), (103, 40022), (120, 40115), (123, 40130),

Gene: Oliynyk_41 Start: 28839, Stop: 29195, Start Num: 37
Candidate Starts for Oliynyk_41:
(Start: 37 @28839 has 21 MA's), (67, 28941), (82, 28992), (121, 29154),

Gene: Omar_43 Start: 29969, Stop: 30301, Start Num: 49
Candidate Starts for Omar_43:
(Start: 49 @29969 has 1 MA's), (71, 30050), (74, 30059), (86, 30095), (118, 30242),

Gene: OverPar_89 Start: 56068, Stop: 56370, Start Num: 51
Candidate Starts for OverPar_89:
(Start: 51 @56068 has 5 MA's), (Start: 53 @56074 has 1 MA's), (69, 56155), (96, 56221), (127, 56353),

Gene: Ozzie_40 Start: 28462, Stop: 28809, Start Num: 37
Candidate Starts for Ozzie_40:
(Start: 37 @28462 has 21 MA's), (67, 28564), (82, 28615), (121, 28777),

Gene: OzzyJ_41 Start: 28842, Stop: 29186, Start Num: 46
Candidate Starts for OzzyJ_41:

(Start: 46 @28842 has 66 MA's), (72, 28950), (76, 28968), (92, 29022), (107, 29073), (108, 29082), (121, 29148), (124, 29163),

Gene: PHTowN_47 Start: 34534, Stop: 34193, Start Num: 36
Candidate Starts for PHTowN_47:
(Start: 36 @34534 has 15 MA's), (Start: 53 @34495 has 1 MA's), (54, 34492), (56, 34483), (105, 34315), (115, 34282), (119, 34267), (121, 34252), (123, 34246),

Gene: PYPDinur_87 Start: 55810, Stop: 56112, Start Num: 51
Candidate Starts for PYPDinur_87:
(Start: 51 @55810 has 5 MA's), (Start: 53 @55816 has 1 MA's), (115, 56041),

Gene: Pablito_40 Start: 29276, Stop: 29650, Start Num: 38
Candidate Starts for Pablito_40:
(Start: 38 @29276 has 7 MA's), (65, 29381), (71, 29402), (75, 29414), (119, 29594),

Gene: Paedore_40 Start: 29887, Stop: 30249, Start Num: 38
Candidate Starts for Paedore_40:
(27, 29836), (Start: 38 @29887 has 7 MA's), (65, 29983), (71, 30004), (74, 30013), (75, 30016), (79, 30034),

Gene: Paolo_43 Start: 30313, Stop: 30642, Start Num: 48
Candidate Starts for Paolo_43:
(32, 30274), (Start: 48 @30313 has 20 MA's), (71, 30394),

Gene: Pavo_42 Start: 30536, Stop: 30874, Start Num: 46
Candidate Starts for Pavo_42:
(Start: 46 @30536 has 66 MA's), (Start: 52 @30551 has 1 MA's), (61, 30590), (84, 30668), (97, 30725), (99, 30740), (107, 30755), (108, 30764), (123, 30836),

Gene: Pelly_47 Start: 35989, Stop: 35642, Start Num: 36
Candidate Starts for Pelly_47:
(Start: 36 @35989 has 15 MA's), (54, 35947), (115, 35737),

Gene: PhelpsODU_60 Start: 40279, Stop: 40674, Start Num: 48
Candidate Starts for PhelpsODU_60:
(Start: 48 @40279 has 20 MA's), (70, 40381), (80, 40414), (85, 40432), (88, 40444), (100, 40507), (109, 40546), (119, 40606), (121, 40621), (123, 40627), (131, 40663),

Gene: Phettuccine_40 Start: 28478, Stop: 28825, Start Num: 37
Candidate Starts for Phettuccine_40:
(Start: 37 @28478 has 21 MA's), (67, 28580), (82, 28631), (121, 28793),

Gene: Phrank_62 Start: 40340, Stop: 40735, Start Num: 48
Candidate Starts for Phrank_62:
(Start: 48 @40340 has 20 MA's), (70, 40442), (80, 40475), (85, 40493), (88, 40505), (109, 40607), (119, 40667), (123, 40688), (131, 40724),

Gene: Provolone_42 Start: 29918, Stop: 30256, Start Num: 46
Candidate Starts for Provolone_42:
(Start: 46 @29918 has 66 MA's), (Start: 52 @29933 has 1 MA's), (61, 29972), (84, 30050), (97, 30107), (99, 30122), (107, 30137), (108, 30146), (123, 30218),

Gene: Puginator_43 Start: 30334, Stop: 30660, Start Num: 48
Candidate Starts for Puginator_43:
(32, 30295), (Start: 48 @30334 has 20 MA's), (71, 30415), (76, 30436),

Gene: R4_41 Start: 30042, Stop: 30404, Start Num: 38
Candidate Starts for R4_41:
(Start: 38 @30042 has 7 MA's), (65, 30138), (71, 30159), (75, 30171), (79, 30189),

Gene: Rana_41 Start: 29357, Stop: 29713, Start Num: 46
Candidate Starts for Rana_41:
(Start: 46 @29357 has 66 MA's), (76, 29483), (98, 29573), (107, 29600), (108, 29609), (124, 29690),

Gene: RedBear_41 Start: 29025, Stop: 29372, Start Num: 46
Candidate Starts for RedBear_41:
(Start: 46 @29025 has 66 MA's), (76, 29148), (107, 29253), (108, 29262), (121, 29328), (124, 29343),

Gene: Rooney_47 Start: 34719, Stop: 34378, Start Num: 36
Candidate Starts for Rooney_47:
(Start: 36 @34719 has 15 MA's), (Start: 53 @34680 has 1 MA's), (54, 34677), (56, 34668), (60, 34629), (105, 34500), (119, 34452), (121, 34437), (123, 34431),

Gene: Rusticus_41 Start: 28839, Stop: 29195, Start Num: 37
Candidate Starts for Rusticus_41:
(Start: 37 @28839 has 21 MA's), (67, 28941), (82, 28992), (121, 29154),

Gene: Saftant_41 Start: 30490, Stop: 30834, Start Num: 46
Candidate Starts for Saftant_41:
(Start: 46 @30490 has 66 MA's), (61, 30550), (74, 30598), (93, 30664), (123, 30796),

Gene: Samy_41 Start: 29540, Stop: 29869, Start Num: 42
Candidate Starts for Samy_41:
(Start: 42 @29540 has 1 MA's), (43, 29543), (Start: 52 @29564 has 1 MA's), (70, 29660), (103, 29750), (107, 29762), (121, 29816), (123, 29822),

Gene: SarahRose_40 Start: 28850, Stop: 29194, Start Num: 46
Candidate Starts for SarahRose_40:
(Start: 46 @28850 has 66 MA's), (72, 28958), (76, 28976), (92, 29030), (107, 29081), (108, 29090), (121, 29156), (124, 29171),

Gene: Sarshaun_88 Start: 56296, Stop: 56598, Start Num: 51
Candidate Starts for Sarshaun_88:
(Start: 51 @56296 has 5 MA's), (Start: 53 @56302 has 1 MA's), (65, 56374), (110, 56509), (115, 56527), (116, 56533), (127, 56581),

Gene: SassyC_52 Start: 35289, Stop: 34948, Start Num: 36
Candidate Starts for SassyC_52:
(5, 35778), (Start: 36 @35289 has 15 MA's), (Start: 53 @35250 has 1 MA's), (54, 35247), (105, 35070), (119, 35022), (121, 35007), (123, 35001),

Gene: ShakeNBake_47 Start: 34552, Stop: 34211, Start Num: 36
Candidate Starts for ShakeNBake_47:
(Start: 36 @34552 has 15 MA's), (Start: 53 @34513 has 1 MA's), (54, 34510), (56, 34501), (105, 34333), (115, 34300), (119, 34285), (121, 34270), (123, 34264),

Gene: Sheng711_88 Start: 55286, Stop: 55588, Start Num: 51
Candidate Starts for Sheng711_88:
(Start: 51 @55286 has 5 MA's), (Start: 53 @55292 has 1 MA's), (115, 55517),

Gene: Snorlax_40 Start: 28854, Stop: 29198, Start Num: 46
Candidate Starts for Snorlax_40:
(Start: 46 @28854 has 66 MA's), (72, 28962), (76, 28980), (92, 29034), (107, 29085), (108, 29094), (121, 29160), (124, 29175),

Gene: Soap141_87 Start: 56296, Stop: 56598, Start Num: 51
Candidate Starts for Soap141_87:
(Start: 51 @56296 has 5 MA's), (Start: 53 @56302 has 1 MA's), (65, 56374), (110, 56509), (115, 56527), (116, 56533), (127, 56581),

Gene: South40_40 Start: 29025, Stop: 29372, Start Num: 46
Candidate Starts for South40_40:
(Start: 46 @29025 has 66 MA's), (76, 29148), (107, 29253), (108, 29262), (121, 29328), (124, 29343),

Gene: Speedwell_46 Start: 31786, Stop: 32124, Start Num: 46
Candidate Starts for Speedwell_46:
(Start: 46 @31786 has 66 MA's), (63, 31849), (77, 31900), (123, 32086), (124, 32095),

Gene: Spocter_71 Start: 53893, Stop: 54192, Start Num: 47
Candidate Starts for Spocter_71:
(12, 53587), (13, 53617), (26, 53815), (33, 53863), (Start: 47 @53893 has 16 MA's), (61, 53971), (68, 53992), (71, 54007), (121, 54154),

Gene: SqueakyClean_40 Start: 29801, Stop: 30151, Start Num: 47
Candidate Starts for SqueakyClean_40:
(31, 29756), (Start: 47 @29801 has 16 MA's), (65, 29876), (106, 30029),

Gene: Stellammi_116 Start: 57480, Stop: 57809, Start Num: 53
Candidate Starts for Stellammi_116:
(Start: 46 @57456 has 66 MA's), (50, 57471), (Start: 53 @57480 has 1 MA's), (103, 57684), (111, 57720), (115, 57744), (123, 57780), (126, 57795), (127, 57798),

Gene: Stephig9_49 Start: 34347, Stop: 33979, Start Num: 37
Candidate Starts for Stephig9_49:
(Start: 37 @34347 has 21 MA's), (41, 34338), (58, 34275), (113, 34080),

Gene: Sudan_41 Start: 30365, Stop: 30712, Start Num: 46
Candidate Starts for Sudan_41:
(Start: 46 @30365 has 66 MA's), (61, 30428), (124, 30683),

Gene: Sujidade_41 Start: 29582, Stop: 29929, Start Num: 46
Candidate Starts for Sujidade_41:
(Start: 46 @29582 has 66 MA's), (76, 29705), (107, 29810), (115, 29855), (121, 29885),

Gene: SunkenRoot_41 Start: 30976, Stop: 31317, Start Num: 46
Candidate Starts for SunkenRoot_41:
(Start: 46 @30976 has 66 MA's), (66, 31051), (108, 31207), (123, 31279), (124, 31288),

Gene: SunsetPointe_40 Start: 28469, Stop: 28816, Start Num: 37
Candidate Starts for SunsetPointe_40:
(Start: 37 @28469 has 21 MA's), (67, 28571), (82, 28622), (121, 28784),

Gene: Superstar_44 Start: 30847, Stop: 31182, Start Num: 47
Candidate Starts for Superstar_44:
(Start: 47 @30847 has 16 MA's), (65, 30913), (66, 30916), (71, 30934), (82, 30970),

Gene: TagePhighter_42 Start: 28854, Stop: 29198, Start Num: 46
Candidate Starts for TagePhighter_42:
(Start: 46 @28854 has 66 MA's), (72, 28962), (76, 28980), (92, 29034), (107, 29085), (108, 29094), (121, 29160), (124, 29175),

Gene: Tefunt_42 Start: 29741, Stop: 30079, Start Num: 47
Candidate Starts for Tefunt_42:
(18, 29528), (20, 29573), (Start: 47 @29741 has 16 MA's), (71, 29828), (82, 29864), (86, 29873), (99, 29945), (118, 30020),

Gene: Thestral_42 Start: 29938, Stop: 30279, Start Num: 48
Candidate Starts for Thestral_42:
(32, 29899), (Start: 48 @29938 has 20 MA's), (65, 30007), (71, 30028), (82, 30064),

Gene: Tierra_62 Start: 41151, Stop: 41546, Start Num: 48
Candidate Starts for Tierra_62:
(Start: 48 @41151 has 20 MA's), (70, 41253), (80, 41286), (85, 41304), (88, 41316), (109, 41418), (119, 41478), (123, 41499), (131, 41535),

Gene: TinaBelcher_41 Start: 29885, Stop: 30226, Start Num: 48
Candidate Starts for TinaBelcher_41:
(32, 29846), (Start: 48 @29885 has 20 MA's), (65, 29954), (82, 30011),

Gene: Toma_40 Start: 29299, Stop: 29661, Start Num: 46
Candidate Starts for Toma_40:
(Start: 46 @29299 has 66 MA's), (76, 29425), (107, 29542), (124, 29632),

Gene: Traft412_50 Start: 36788, Stop: 36441, Start Num: 36
Candidate Starts for Traft412_50:
(Start: 36 @36788 has 15 MA's), (54, 36746), (115, 36536),

Gene: TribleTrouble_59 Start: 41359, Stop: 41751, Start Num: 48
Candidate Starts for TribleTrouble_59:
(Start: 48 @41359 has 20 MA's), (69, 41458), (80, 41494), (85, 41512), (88, 41524), (91, 41539), (94, 41548), (100, 41587), (115, 41665), (119, 41680), (121, 41695), (123, 41701),

Gene: Triste_40 Start: 28842, Stop: 29186, Start Num: 46
Candidate Starts for Triste_40:
(Start: 46 @28842 has 66 MA's), (72, 28950), (76, 28968), (92, 29022), (107, 29073), (108, 29082), (121, 29148), (124, 29163),

Gene: Triumph_42 Start: 29635, Stop: 30006, Start Num: 38
Candidate Starts for Triumph_42:
(Start: 38 @29635 has 7 MA's), (62, 29725), (66, 29740), (75, 29767), (121, 29962),

Gene: TrvxScott_40 Start: 29931, Stop: 30272, Start Num: 48
Candidate Starts for TrvxScott_40:
(32, 29892), (Start: 48 @29931 has 20 MA's), (65, 30000), (82, 30057),

Gene: TuanPN_39 Start: 28786, Stop: 29130, Start Num: 46
Candidate Starts for TuanPN_39:
(Start: 46 @28786 has 66 MA's), (72, 28894), (92, 28966), (107, 29017), (108, 29026), (121, 29092), (124, 29107),

Gene: Unicorn_60 Start: 40279, Stop: 40674, Start Num: 48
Candidate Starts for Unicorn_60:
(Start: 48 @40279 has 20 MA's), (70, 40381), (80, 40414), (85, 40432), (88, 40444), (100, 40507), (109, 40546), (119, 40606), (121, 40621), (123, 40627), (131, 40663),

Gene: Unstoppable_40 Start: 28473, Stop: 28820, Start Num: 37
Candidate Starts for Unstoppable_40:
(Start: 37 @28473 has 21 MA's), (67, 28575), (82, 28626), (121, 28788),

Gene: Urza_42 Start: 29329, Stop: 29736, Start Num: 46
Candidate Starts for Urza_42:
(18, 29116), (Start: 46 @29329 has 66 MA's), (61, 29407), (65, 29425), (69, 29437), (89, 29524), (99, 29578), (102, 29593), (112, 29635), (119, 29674), (123, 29695),

Gene: Vanseggelen_46 Start: 30019, Stop: 30357, Start Num: 46
Candidate Starts for Vanseggelen_46:
(Start: 46 @30019 has 66 MA's), (74, 30127), (93, 30193), (108, 30253), (124, 30334),

Gene: Verabelle_44 Start: 30428, Stop: 30769, Start Num: 46
Candidate Starts for Verabelle_44:
(Start: 46 @30428 has 66 MA's), (Start: 52 @30443 has 1 MA's), (77, 30551), (92, 30602), (124, 30746),

Gene: Verse_41 Start: 31170, Stop: 31511, Start Num: 46
Candidate Starts for Verse_41:
(Start: 46 @31170 has 66 MA's), (66, 31245), (108, 31401), (123, 31473), (124, 31482),

Gene: VieEnRose_41 Start: 29253, Stop: 29663, Start Num: 46
Candidate Starts for VieEnRose_41:
(Start: 46 @29253 has 66 MA's), (65, 29352), (99, 29505), (102, 29520), (114, 29577), (119, 29601), (123, 29622), (130, 29652),

Gene: Virizion_52 Start: 34918, Stop: 34577, Start Num: 36
Candidate Starts for Virizion_52:
(Start: 36 @34918 has 15 MA's), (Start: 53 @34879 has 1 MA's), (54, 34876), (56, 34867), (60, 34828), (105, 34699), (119, 34651), (121, 34636), (123, 34630),

Gene: Wentworth_48 Start: 35004, Stop: 34663, Start Num: 36
Candidate Starts for Wentworth_48:
(30, 35022), (Start: 36 @35004 has 15 MA's), (Start: 53 @34965 has 1 MA's), (54, 34962), (60, 34914), (69, 34881), (120, 34731),

Gene: Werner_40 Start: 28852, Stop: 29196, Start Num: 46
Candidate Starts for Werner_40:

(Start: 46 @28852 has 66 MA's), (72, 28960), (76, 28978), (92, 29032), (107, 29083), (108, 29092), (121, 29158), (124, 29173),

Gene: Whatever_40 Start: 28852, Stop: 29196, Start Num: 46
Candidate Starts for Whatever_40:
(Start: 46 @28852 has 66 MA's), (72, 28960), (76, 28978), (92, 29032), (107, 29083), (108, 29092), (121, 29158), (124, 29173),

Gene: Wigglewiggle_87 Start: 55845, Stop: 56147, Start Num: 51
Candidate Starts for Wigglewiggle_87:
(Start: 51 @55845 has 5 MA's), (Start: 53 @55851 has 1 MA's), (69, 55932), (96, 55998), (127, 56130),

Gene: Wilkos_49 Start: 34825, Stop: 34484, Start Num: 36
Candidate Starts for Wilkos_49:
(30, 34843), (Start: 36 @34825 has 15 MA's), (Start: 53 @34786 has 1 MA's), (54, 34783), (60, 34735), (69, 34702), (119, 34558), (120, 34552),

Gene: Yara_43 Start: 33601, Stop: 33248, Start Num: 34
Candidate Starts for Yara_43:
(9, 33967), (Start: 34 @33601 has 1 MA's), (54, 33547), (55, 33541), (59, 33514), (69, 33466), (124, 33292), (128, 33277),

Gene: Yasdnil_40 Start: 28904, Stop: 29248, Start Num: 46
Candidate Starts for Yasdnil_40:
(Start: 46 @28904 has 66 MA's), (72, 29012), (92, 29084), (107, 29135), (108, 29144), (121, 29210), (124, 29225),

Gene: Yosif_43 Start: 30966, Stop: 31310, Start Num: 46
Candidate Starts for Yosif_43:
(18, 30753), (Start: 46 @30966 has 66 MA's), (93, 31149), (107, 31200), (117, 31248), (126, 31290),

Gene: Zainub_43 Start: 30274, Stop: 30603, Start Num: 48
Candidate Starts for Zainub_43:
(32, 30235), (Start: 48 @30274 has 20 MA's), (71, 30355), (121, 30562),

Gene: Zakai_88 Start: 56309, Stop: 56611, Start Num: 51
Candidate Starts for Zakai_88:
(Start: 51 @56309 has 5 MA's), (Start: 53 @56315 has 1 MA's), (69, 56396), (96, 56462), (127, 56594),

Gene: ZamZam_41 Start: 30463, Stop: 30807, Start Num: 46
Candidate Starts for ZamZam_41:
(Start: 46 @30463 has 66 MA's), (74, 30571), (123, 30769), (124, 30778),

Gene: Zemlya_42 Start: 29400, Stop: 29735, Start Num: 46
Candidate Starts for Zemlya_42:
(Start: 46 @29400 has 66 MA's), (76, 29517), (107, 29622), (115, 29667), (121, 29697), (124, 29712),

Gene: phiCAM_39 Start: 32321, Stop: 32662, Start Num: 46
Candidate Starts for phiCAM_39:
(Start: 46 @32321 has 66 MA's), (61, 32375), (66, 32396), (108, 32552), (123, 32624), (125, 32636),

Gene: phiHau3_42 Start: 28938, Stop: 29264, Start Num: 46
Candidate Starts for phiHau3_42:

(44, 28932), (Start: 46 @28938 has 66 MA's), (75, 29034), (123, 29229), (130, 29256),