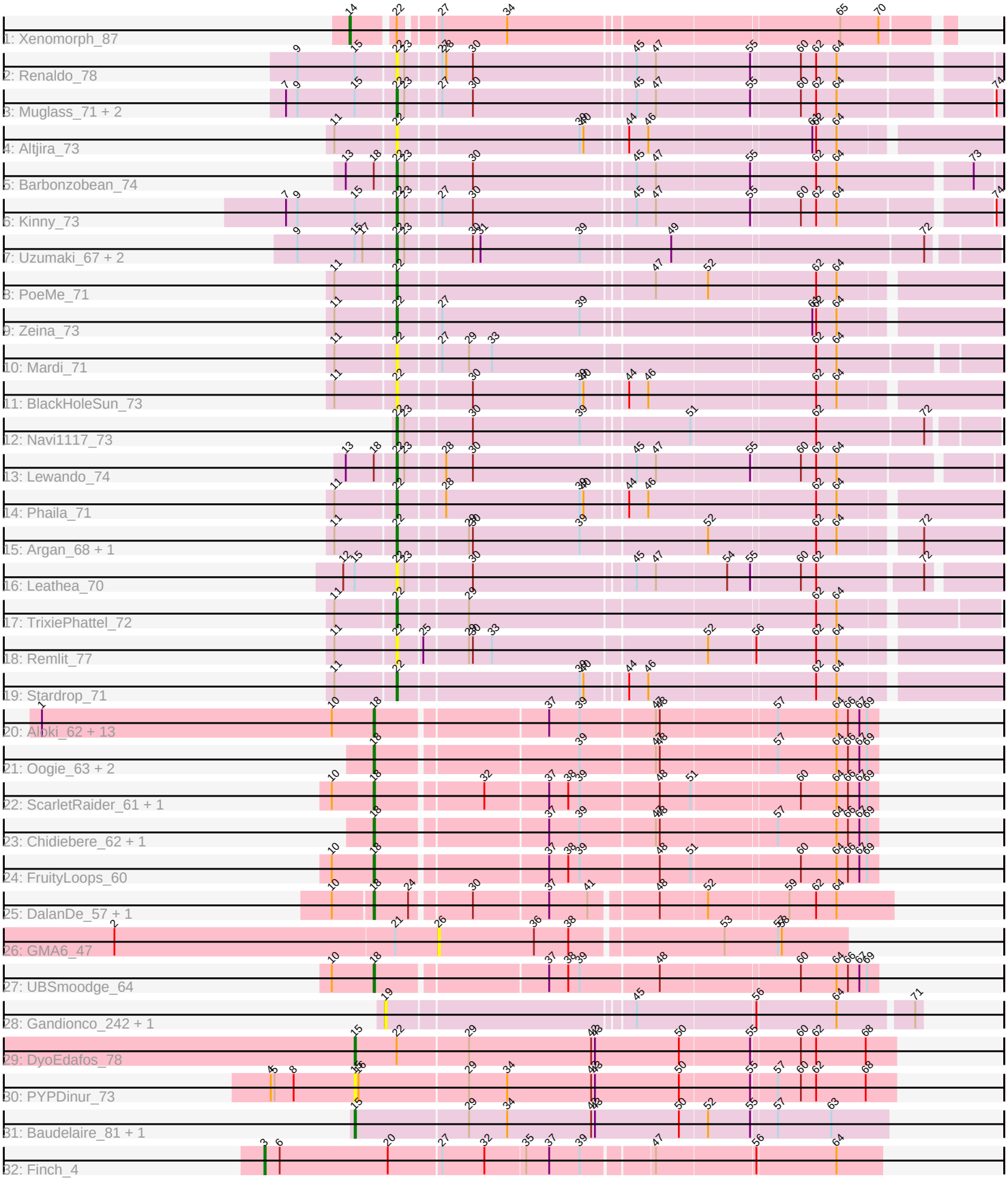
Pham 344047


1: Xenomorph_87
2: Renaldo_78
3: Muglass_71 + 2
4: Altjira_73
5: Barbonzobean_74
6: Kinny_73
7: Uzumaki_67 + 2
8: PoeMe_71
9: Zeina_73
10: Mardi_71
11: BlackHoleSun_73
12: Navi1117_73
13: Lewando_74
14: Phaila_71
15: Argan_68 + 1
16: Leathea_70
17: TrixiePhattel_72
18: Remlit_77
19: Stardrop_71
20: Alpki_62 + 13
21: Oogie_63 + 2
22: ScarletRaider_61 + 1
23: Chidiebere_62 + 1
24: FruityLoops_60
25: DalanDe_57 + 1
26: GMA6_47
27: UBSmoodge_64
28: Gandionco_242 + 1
29: DyoEdafos_78
30: PYPDinur_73
31: Baudelaire_81 + 1
32: Finch_4

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 344047 Report

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

Pham number 344047 has 57 members, 21 are drafts.

Phages represented in each track:
- Track 1 : Xenomorph_87
- Track 2 : Renaldo_78
- Track 3 : Muglass_71, BarbieDoll_74, Biscute_70
- Track 4 : Altjira_73
- Track 5 : Barbonzobean_74
- Track 6 : Kinny_73
- Track 7 : Uzumaki_67, Tenney120_71, GantcherGoblin_68
- Track 8 : PoeMe_71
- Track 9 : Zeina_73
- Track 10 : Mardi_71
- Track 11 : BlackHoleSun_73
- Track 12 : Navi1117_73
- Track 13 : Lewando_74
- Track 14 : Phaila_71
- Track 15 : Argan_68, KevinMinion_69
- Track 16 : Leathea_70
- Track 17 : TrixiePhattel_72
- Track 18 : Remlit_77
- Track 19 : Stardrop_71
- Track 20 : Aloki_62, Gray_62, Argena_60, Toneprano_60, EmoNemo_60, Schomber_61, Amoonguss_60, Hanem_62, Pakusa_60, Mikronejon_62, Kabocha_63, ChisanaKitsune_58, Twin_60, Farrylious_61
- Track 21 : Oogie_63, Beted_62, Lenoshki_62
- Track 22 : ScarletRaider_61, FlyingTortilla_62
- Track 23 : Chidiebere_62, MintFritos_60
- Track 24 : FruityLoops_60
- Track 25 : DalanDe_57, Thales_56
- Track 26 : GMA6_47
- Track 27 : UBSmoodge_64
- Track 28 : Gandionco_242, Marianna39_242
- Track 29 : DyoEdafos_78
- Track 30 : PYPDinur_73
- Track 31 : Baudelaire_81, Aegeus_81
- Track 32 : Finch_4

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

The start number called the most often in the published annotations is 22, it was called in 16 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Altjira_73, Argan_68, BarbieDoll_74, Barbonzobean_74, Biscute_70, BlackHoleSun_73, GantcherGoblin_68, KevinMinion_69, Kinny_73, Leathea_70, Lewando_74, Mardi_71, Muglass_71, Navi1117_73, Phaila_71, PoeMe_71, Remlit_77, Renaldo_78, Stardrop_71, Tenney120_71, TrixiePhattel_72, Uzumaki_67, Zeina_73,

Genes that have the "Most Annotated" start but do not call it:
• DyoEdafos_78, Xenomorph_87,

Genes that do not have the "Most Annotated" start:
• Aegeus_81, Aloki_62, Amoonguss_60, Argena_60, Baudelaire_81, Beted_62, Chidiebere_62, ChisanaKitsune_58, DalanDe_57, EmoNemo_60, Farrylious_61, Finch_4, FlyingTortilla_62, FruityLoops_60, GMA6_47, Gandionco_242, Gray_62, Hanem_62, Kabocha_63, Lenoshki_62, Marianna39_242, Mikronejon_62, MintFritos_60, Oogie_63, PYPDinur_73, Pakusa_60, ScarletRaider_61, Schomber_61, Thales_56, Toneprano_60, Twin_60, UBSmoodge_64,

Summary by start number:

Start 3:
• Found in 1 of 57 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 36
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Finch_4 (singleton),

Start 14:
• Found in 1 of 57 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 36
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Xenomorph_87 (AM),

Start 15:
• Found in 13 of 57 (22.8%) of genes in pham
• Manual Annotations of this start: 3 of 36
• Called 30.8% of time when present
• Phage (with cluster) where this start called: Aegeus_81 (L5), Baudelaire_81 (L5), DyoEdafos_78 (L4), PYPDinur_73 (L4),

Start 18:
• Found in 27 of 57 (47.4%) of genes in pham
• Manual Annotations of this start: 15 of 36
• Called 92.6% of time when present
• Phage (with cluster) where this start called: Aloki_62 (DQ), Amoonguss_60 (DQ), Argena_60 (DQ), Beted_62 (DQ), Chidiebere_62 (DQ), ChisanaKitsune_58 (DQ), DalanDe_57 (DQ), EmoNemo_60 (DQ), Farrylious_61 (DQ), FlyingTortilla_62 (DQ), FruityLoops_60 (DQ), Gray_62 (DQ), Hanem_62 (DQ), Kabocha_63 (DQ),

Lenoshki_62 (DQ), Mikronejon_62 (DQ), MintFritos_60 (DQ), Oogie_63 (DQ), Pakusa_60 (DQ), ScarletRaider_61 (DQ), Schomber_61 (DQ), Thales_56 (DQ), Toneprano_60 (DQ), Twin_60 (DQ), UBSmoodge_64 (DQ),

Start 19:
• Found in 2 of 57 (3.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gandionco_242 (FK), Marianna39_242 (FK),

Start 22:
• Found in 25 of 57 (43.9%) of genes in pham
• Manual Annotations of this start: 16 of 36
• Called 92.0% of time when present
• Phage (with cluster) where this start called: Altjira_73 (AU6), Argan_68 (AU6), BarbieDoll_74 (AU6), Barbonzobean_74 (AU6), Biscute_70 (AU6), BlackHoleSun_73 (AU6), GantcherGoblin_68 (AU6), KevinMinion_69 (AU6), Kinny_73 (AU6), Leathea_70 (AU6), Lewando_74 (AU6), Mardi_71 (AU6), Muglass_71 (AU6), Navi1117_73 (AU6), Phaila_71 (AU6), PoeMe_71 (AU6), Remlit_77 (AU6), Renaldo_78 (AU6), Stardrop_71 (AU6), Tenney120_71 (AU6), TrixiePhattel_72 (AU6), Uzumaki_67 (AU6), Zeina_73 (AU6),

Start 26:
• Found in 1 of 57 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GMA6_47 (DQ),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, AM, L4, L5, AU6, FK, DQ,

Info for manual annotations of cluster AM:
•Start number 14 was manually annotated 1 time for cluster AM.

Info for manual annotations of cluster AU6:
•Start number 22 was manually annotated 16 times for cluster AU6.

Info for manual annotations of cluster DQ:
•Start number 18 was manually annotated 15 times for cluster DQ.

Info for manual annotations of cluster L4:
•Start number 15 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster L5:
•Start number 15 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: Aegeus_81 Start: 50995, Stop: 51405, Start Num: 15
Candidate Starts for Aegeus_81:
(Start: 15 @50995 has 3 MA's), (29, 51082), (34, 51112), (42, 51178), (43, 51181), (50, 51247), (52, 51268), (55, 51301), (57, 51319), (63, 51361),

Gene: Aloki_62 Start: 50472, Stop: 50846, Start Num: 18
Candidate Starts for Aloki_62:
(1, 50211), (10, 50439), (Start: 18 @50472 has 15 MA's), (37, 50598), (39, 50622), (47, 50679), (48, 50682), (57, 50769), (64, 50814), (66, 50823), (67, 50832), (69, 50838),

Gene: Altjira_73 Start: 44965, Stop: 45408, Start Num: 22
Candidate Starts for Altjira_73:
(11, 44920), (Start: 22 @44965 has 16 MA's), (39, 45103), (40, 45106), (44, 45133), (46, 45148), (61, 45271), (62, 45274), (64, 45289),

Gene: Amoonguss_60 Start: 50475, Stop: 50849, Start Num: 18
Candidate Starts for Amoonguss_60:
(1, 50214), (10, 50442), (Start: 18 @50475 has 15 MA's), (37, 50601), (39, 50625), (47, 50682), (48, 50685), (57, 50772), (64, 50817), (66, 50826), (67, 50835), (69, 50841),

Gene: Argan_68 Start: 43685, Stop: 44131, Start Num: 22
Candidate Starts for Argan_68:
(11, 43640), (Start: 22 @43685 has 16 MA's), (29, 43736), (30, 43739), (39, 43823), (52, 43916), (62, 43997), (64, 44012), (72, 44069),

Gene: Argena_60 Start: 50487, Stop: 50861, Start Num: 18
Candidate Starts for Argena_60:
(1, 50226), (10, 50454), (Start: 18 @50487 has 15 MA's), (37, 50613), (39, 50637), (47, 50694), (48, 50697), (57, 50784), (64, 50829), (66, 50838), (67, 50847), (69, 50853),

Gene: BarbieDoll_74 Start: 45295, Stop: 45735, Start Num: 22
Candidate Starts for BarbieDoll_74:
(7, 45211), (9, 45220), (Start: 15 @45265 has 3 MA's), (Start: 22 @45295 has 16 MA's), (23, 45301), (27, 45325), (30, 45349), (45, 45469), (47, 45484), (55, 45556), (60, 45592), (62, 45604), (64, 45619), (74, 45730),

Gene: Barbonzobean_74 Start: 45688, Stop: 46131, Start Num: 22
Candidate Starts for Barbonzobean_74:
(13, 45652), (Start: 18 @45673 has 15 MA's), (Start: 22 @45688 has 16 MA's), (23, 45694), (30, 45742), (45, 45862), (47, 45877), (55, 45949), (62, 45997), (64, 46012), (73, 46111),

Gene: Baudelaire_81 Start: 50995, Stop: 51405, Start Num: 15
Candidate Starts for Baudelaire_81:
(Start: 15 @50995 has 3 MA's), (29, 51082), (34, 51112), (42, 51178), (43, 51181), (50, 51247), (52, 51268), (55, 51301), (57, 51319), (63, 51361),

Gene: Beted_62 Start: 52167, Stop: 52541, Start Num: 18
Candidate Starts for Beted_62:
(Start: 18 @52167 has 15 MA's), (39, 52317), (47, 52374), (48, 52377), (57, 52464), (64, 52509), (66, 52518), (67, 52527), (69, 52533),

Gene: Biscute_70 Start: 44947, Stop: 45387, Start Num: 22
Candidate Starts for Biscute_70:

(7, 44863), (9, 44872), (Start: 15 @44917 has 3 MA's), (Start: 22 @44947 has 16 MA's), (23, 44953), (27, 44977), (30, 45001), (45, 45121), (47, 45136), (55, 45208), (60, 45244), (62, 45256), (64, 45271), (74, 45382),

Gene: BlackHoleSun_73 Start: 43806, Stop: 44249, Start Num: 22
Candidate Starts for BlackHoleSun_73:
(11, 43761), (Start: 22 @43806 has 16 MA's), (30, 43860), (39, 43944), (40, 43947), (44, 43974), (46, 43989), (62, 44115), (64, 44130),

Gene: Chidiebere_62 Start: 50472, Stop: 50846, Start Num: 18
Candidate Starts for Chidiebere_62:
(Start: 18 @50472 has 15 MA's), (37, 50598), (39, 50622), (47, 50679), (48, 50682), (57, 50769), (64, 50814), (66, 50823), (67, 50832), (69, 50838),

Gene: ChisanaKitsune_58 Start: 49266, Stop: 49640, Start Num: 18
Candidate Starts for ChisanaKitsune_58:
(1, 49005), (10, 49233), (Start: 18 @49266 has 15 MA's), (37, 49392), (39, 49416), (47, 49473), (48, 49476), (57, 49563), (64, 49608), (66, 49617), (67, 49626), (69, 49632),

Gene: DalanDe_57 Start: 53394, Stop: 53774, Start Num: 18
Candidate Starts for DalanDe_57:
(10, 53364), (Start: 18 @53394 has 15 MA's), (24, 53421), (30, 53463), (37, 53520), (41, 53550), (48, 53598), (52, 53634), (59, 53694), (62, 53715), (64, 53730),

Gene: DyoEdafos_78 Start: 49663, Stop: 50079, Start Num: 15
Candidate Starts for DyoEdafos_78:
(Start: 15 @49663 has 3 MA's), (Start: 22 @49696 has 16 MA's), (29, 49750), (42, 49846), (43, 49849), (50, 49915), (55, 49969), (60, 50005), (62, 50017), (68, 50056),

Gene: EmoNemo_60 Start: 50472, Stop: 50846, Start Num: 18
Candidate Starts for EmoNemo_60:
(1, 50211), (10, 50439), (Start: 18 @50472 has 15 MA's), (37, 50598), (39, 50622), (47, 50679), (48, 50682), (57, 50769), (64, 50814), (66, 50823), (67, 50832), (69, 50838),

Gene: Farrylious_61 Start: 50251, Stop: 50625, Start Num: 18
Candidate Starts for Farrylious_61:
(1, 49990), (10, 50218), (Start: 18 @50251 has 15 MA's), (37, 50377), (39, 50401), (47, 50458), (48, 50461), (57, 50548), (64, 50593), (66, 50602), (67, 50611), (69, 50617),

Gene: Finch_4 Start: 2539, Stop: 3000, Start Num: 3
Candidate Starts for Finch_4:
(Start: 3 @2539 has 1 MA's), (6, 2551), (20, 2635), (27, 2674), (32, 2707), (35, 2737), (37, 2755), (39, 2779), (47, 2830), (56, 2905), (64, 2965),

Gene: FlyingTortilla_62 Start: 54094, Stop: 54468, Start Num: 18
Candidate Starts for FlyingTortilla_62:
(10, 54061), (Start: 18 @54094 has 15 MA's), (32, 54172), (37, 54220), (38, 54235), (39, 54244), (48, 54304), (51, 54328), (60, 54409), (64, 54436), (66, 54445), (67, 54454), (69, 54460),

Gene: FruityLoops_60 Start: 53399, Stop: 53773, Start Num: 18
Candidate Starts for FruityLoops_60:
(10, 53366), (Start: 18 @53399 has 15 MA's), (37, 53525), (38, 53540), (39, 53549), (48, 53609), (51, 53633), (60, 53714), (64, 53741), (66, 53750), (67, 53759), (69, 53765),

Gene: GMA6_47 Start: 41896, Stop: 42207, Start Num: 26
Candidate Starts for GMA6_47:
(2, 41644), (21, 41863), (26, 41896), (36, 41971), (38, 41998), (53, 42112), (57, 42154), (58, 42157),

Gene: Gandionco_242 Start: 107900, Stop: 108292, Start Num: 19
Candidate Starts for Gandionco_242:
(19, 107900), (45, 108083), (56, 108173), (64, 108233), (71, 108287),

Gene: GantcherGoblin_68 Start: 43638, Stop: 44078, Start Num: 22
Candidate Starts for GantcherGoblin_68:
(9, 43563), (Start: 15 @43608 has 3 MA's), (17, 43614), (Start: 22 @43638 has 16 MA's), (23, 43644), (30, 43692), (31, 43698), (39, 43776), (49, 43839), (72, 44028),

Gene: Gray_62 Start: 50473, Stop: 50847, Start Num: 18
Candidate Starts for Gray_62:
(1, 50212), (10, 50440), (Start: 18 @50473 has 15 MA's), (37, 50599), (39, 50623), (47, 50680), (48, 50683), (57, 50770), (64, 50815), (66, 50824), (67, 50833), (69, 50839),

Gene: Hanem_62 Start: 50472, Stop: 50846, Start Num: 18
Candidate Starts for Hanem_62:
(1, 50211), (10, 50439), (Start: 18 @50472 has 15 MA's), (37, 50598), (39, 50622), (47, 50679), (48, 50682), (57, 50769), (64, 50814), (66, 50823), (67, 50832), (69, 50838),

Gene: Kabocha_63 Start: 51285, Stop: 51659, Start Num: 18
Candidate Starts for Kabocha_63:
(1, 51024), (10, 51252), (Start: 18 @51285 has 15 MA's), (37, 51411), (39, 51435), (47, 51492), (48, 51495), (57, 51582), (64, 51627), (66, 51636), (67, 51645), (69, 51651),

Gene: KevinMinion_69 Start: 44636, Stop: 45082, Start Num: 22
Candidate Starts for KevinMinion_69:
(11, 44591), (Start: 22 @44636 has 16 MA's), (29, 44687), (30, 44690), (39, 44774), (52, 44867), (62, 44948), (64, 44963), (72, 45020),

Gene: Kinny_73 Start: 45775, Stop: 46215, Start Num: 22
Candidate Starts for Kinny_73:
(7, 45691), (9, 45700), (Start: 15 @45745 has 3 MA's), (Start: 22 @45775 has 16 MA's), (23, 45781), (27, 45805), (30, 45829), (45, 45949), (47, 45964), (55, 46036), (60, 46072), (62, 46084), (64, 46099), (74, 46210),

Gene: Leathea_70 Start: 43549, Stop: 43989, Start Num: 22
Candidate Starts for Leathea_70:
(12, 43507), (Start: 15 @43516 has 3 MA's), (Start: 22 @43549 has 16 MA's), (23, 43555), (30, 43603), (45, 43723), (47, 43738), (54, 43792), (55, 43810), (60, 43846), (62, 43858), (72, 43936),

Gene: Lenoshki_62 Start: 52167, Stop: 52541, Start Num: 18
Candidate Starts for Lenoshki_62:
(Start: 18 @52167 has 15 MA's), (39, 52317), (47, 52374), (48, 52377), (57, 52464), (64, 52509), (66, 52518), (67, 52527), (69, 52533),

Gene: Lewando_74 Start: 45512, Stop: 45952, Start Num: 22
Candidate Starts for Lewando_74:

(13, 45476), (Start: 18 @45497 has 15 MA's), (Start: 22 @45512 has 16 MA's), (23, 45518), (28, 45545), (30, 45566), (45, 45686), (47, 45701), (55, 45773), (60, 45809), (62, 45821), (64, 45836),

Gene: Mardi_71 Start: 44206, Stop: 44652, Start Num: 22
Candidate Starts for Mardi_71:
(11, 44161), (Start: 22 @44206 has 16 MA's), (27, 44236), (29, 44257), (33, 44275), (62, 44518), (64, 44533),

Gene: Marianna39_242 Start: 108503, Stop: 108895, Start Num: 19
Candidate Starts for Marianna39_242:
(19, 108503), (45, 108686), (56, 108776), (64, 108836), (71, 108890),

Gene: Mikronejon_62 Start: 50472, Stop: 50846, Start Num: 18
Candidate Starts for Mikronejon_62:
(1, 50211), (10, 50439), (Start: 18 @50472 has 15 MA's), (37, 50598), (39, 50622), (47, 50679), (48, 50682), (57, 50769), (64, 50814), (66, 50823), (67, 50832), (69, 50838),

Gene: MintFritos_60 Start: 50473, Stop: 50847, Start Num: 18
Candidate Starts for MintFritos_60:
(Start: 18 @50473 has 15 MA's), (37, 50599), (39, 50623), (47, 50680), (48, 50683), (57, 50770), (64, 50815), (66, 50824), (67, 50833), (69, 50839),

Gene: Muglass_71 Start: 44851, Stop: 45291, Start Num: 22
Candidate Starts for Muglass_71:
(7, 44767), (9, 44776), (Start: 15 @44821 has 3 MA's), (Start: 22 @44851 has 16 MA's), (23, 44857), (27, 44881), (30, 44905), (45, 45025), (47, 45040), (55, 45112), (60, 45148), (62, 45160), (64, 45175), (74, 45286),

Gene: Navi1117_73 Start: 44718, Stop: 45158, Start Num: 22
Candidate Starts for Navi1117_73:
(Start: 22 @44718 has 16 MA's), (23, 44724), (30, 44772), (39, 44856), (51, 44934), (62, 45027), (72, 45108),

Gene: Oogie_63 Start: 52193, Stop: 52567, Start Num: 18
Candidate Starts for Oogie_63:
(Start: 18 @52193 has 15 MA's), (39, 52343), (47, 52400), (48, 52403), (57, 52490), (64, 52535), (66, 52544), (67, 52553), (69, 52559),

Gene: PYPDinur_73 Start: 49425, Stop: 49841, Start Num: 15
Candidate Starts for PYPDinur_73:
(4, 49359), (5, 49362), (8, 49377), (Start: 15 @49425 has 3 MA's), (16, 49428), (29, 49512), (34, 49542), (42, 49608), (43, 49611), (50, 49677), (55, 49731), (57, 49749), (60, 49767), (62, 49779), (68, 49818),

Gene: Pakusa_60 Start: 50214, Stop: 50588, Start Num: 18
Candidate Starts for Pakusa_60:
(1, 49953), (10, 50181), (Start: 18 @50214 has 15 MA's), (37, 50340), (39, 50364), (47, 50421), (48, 50424), (57, 50511), (64, 50556), (66, 50565), (67, 50574), (69, 50580),

Gene: Phaila_71 Start: 43871, Stop: 44314, Start Num: 22
Candidate Starts for Phaila_71:
(11, 43826), (Start: 22 @43871 has 16 MA's), (28, 43904), (39, 44009), (40, 44012), (44, 44039), (46, 44054), (62, 44180), (64, 44195),

Gene: PoeMe_71 Start: 44359, Stop: 44802, Start Num: 22
Candidate Starts for PoeMe_71:
(11, 44314), (Start: 22 @44359 has 16 MA's), (47, 44548), (52, 44587), (62, 44668), (64, 44683),

Gene: Remlit_77 Start: 44608, Stop: 45054, Start Num: 22
Candidate Starts for Remlit_77:
(11, 44563), (Start: 22 @44608 has 16 MA's), (25, 44626), (29, 44659), (30, 44662), (33, 44677), (52, 44839), (56, 44875), (62, 44920), (64, 44935),

Gene: Renaldo_78 Start: 45733, Stop: 46173, Start Num: 22
Candidate Starts for Renaldo_78:
(9, 45658), (Start: 15 @45703 has 3 MA's), (Start: 22 @45733 has 16 MA's), (23, 45739), (27, 45763), (28, 45766), (30, 45787), (45, 45907), (47, 45922), (55, 45994), (60, 46030), (62, 46042), (64, 46057),

Gene: ScarletRaider_61 Start: 53381, Stop: 53755, Start Num: 18
Candidate Starts for ScarletRaider_61:
(10, 53348), (Start: 18 @53381 has 15 MA's), (32, 53459), (37, 53507), (38, 53522), (39, 53531), (48, 53591), (51, 53615), (60, 53696), (64, 53723), (66, 53732), (67, 53741), (69, 53747),

Gene: Schomber_61 Start: 50222, Stop: 50596, Start Num: 18
Candidate Starts for Schomber_61:
(1, 49961), (10, 50189), (Start: 18 @50222 has 15 MA's), (37, 50348), (39, 50372), (47, 50429), (48, 50432), (57, 50519), (64, 50564), (66, 50573), (67, 50582), (69, 50588),

Gene: Stardrop_71 Start: 44461, Stop: 44904, Start Num: 22
Candidate Starts for Stardrop_71:
(11, 44416), (Start: 22 @44461 has 16 MA's), (39, 44599), (40, 44602), (44, 44629), (46, 44644), (62, 44770), (64, 44785),

Gene: Tenney120_71 Start: 44298, Stop: 44738, Start Num: 22
Candidate Starts for Tenney120_71:
(9, 44223), (Start: 15 @44268 has 3 MA's), (17, 44274), (Start: 22 @44298 has 16 MA's), (23, 44304), (30, 44352), (31, 44358), (39, 44436), (49, 44499), (72, 44688),

Gene: Thales_56 Start: 52309, Stop: 52689, Start Num: 18
Candidate Starts for Thales_56:
(10, 52279), (Start: 18 @52309 has 15 MA's), (24, 52336), (30, 52378), (37, 52435), (41, 52465), (48, 52513), (52, 52549), (59, 52609), (62, 52630), (64, 52645),

Gene: Toneprano_60 Start: 50487, Stop: 50861, Start Num: 18
Candidate Starts for Toneprano_60:
(1, 50226), (10, 50454), (Start: 18 @50487 has 15 MA's), (37, 50613), (39, 50637), (47, 50694), (48, 50697), (57, 50784), (64, 50829), (66, 50838), (67, 50847), (69, 50853),

Gene: TrixiePhattel_72 Start: 44033, Stop: 44473, Start Num: 22
Candidate Starts for TrixiePhattel_72:
(11, 43988), (Start: 22 @44033 has 16 MA's), (29, 44084), (62, 44345), (64, 44360),

Gene: Twin_60 Start: 50472, Stop: 50846, Start Num: 18
Candidate Starts for Twin_60:
(1, 50211), (10, 50439), (Start: 18 @50472 has 15 MA's), (37, 50598), (39, 50622), (47, 50679), (48, 50682), (57, 50769), (64, 50814), (66, 50823), (67, 50832), (69, 50838),

Gene: UBSmoodge_64 Start: 53863, Stop: 54237, Start Num: 18
Candidate Starts for UBSmoodge_64:
(10, 53830), (Start: 18 @53863 has 15 MA's), (37, 53989), (38, 54004), (39, 54013), (48, 54073), (60, 54178), (64, 54205), (66, 54214), (67, 54223), (69, 54229),

Gene: Uzumaki_67 Start: 43739, Stop: 44179, Start Num: 22
Candidate Starts for Uzumaki_67:
(9, 43664), (Start: 15 @43709 has 3 MA's), (17, 43715), (Start: 22 @43739 has 16 MA's), (23, 43745), (30, 43793), (31, 43799), (39, 43877), (49, 43940), (72, 44129),

Gene: Xenomorph_87 Start: 52772, Stop: 53200, Start Num: 14
Candidate Starts for Xenomorph_87:
(Start: 14 @52772 has 1 MA's), (Start: 22 @52802 has 16 MA's), (27, 52826), (34, 52877), (65, 53123), (70, 53153),

Gene: Zeina_73 Start: 44539, Stop: 44982, Start Num: 22
Candidate Starts for Zeina_73:
(11, 44494), (Start: 22 @44539 has 16 MA's), (27, 44569), (39, 44677), (61, 44845), (62, 44848), (64, 44863),