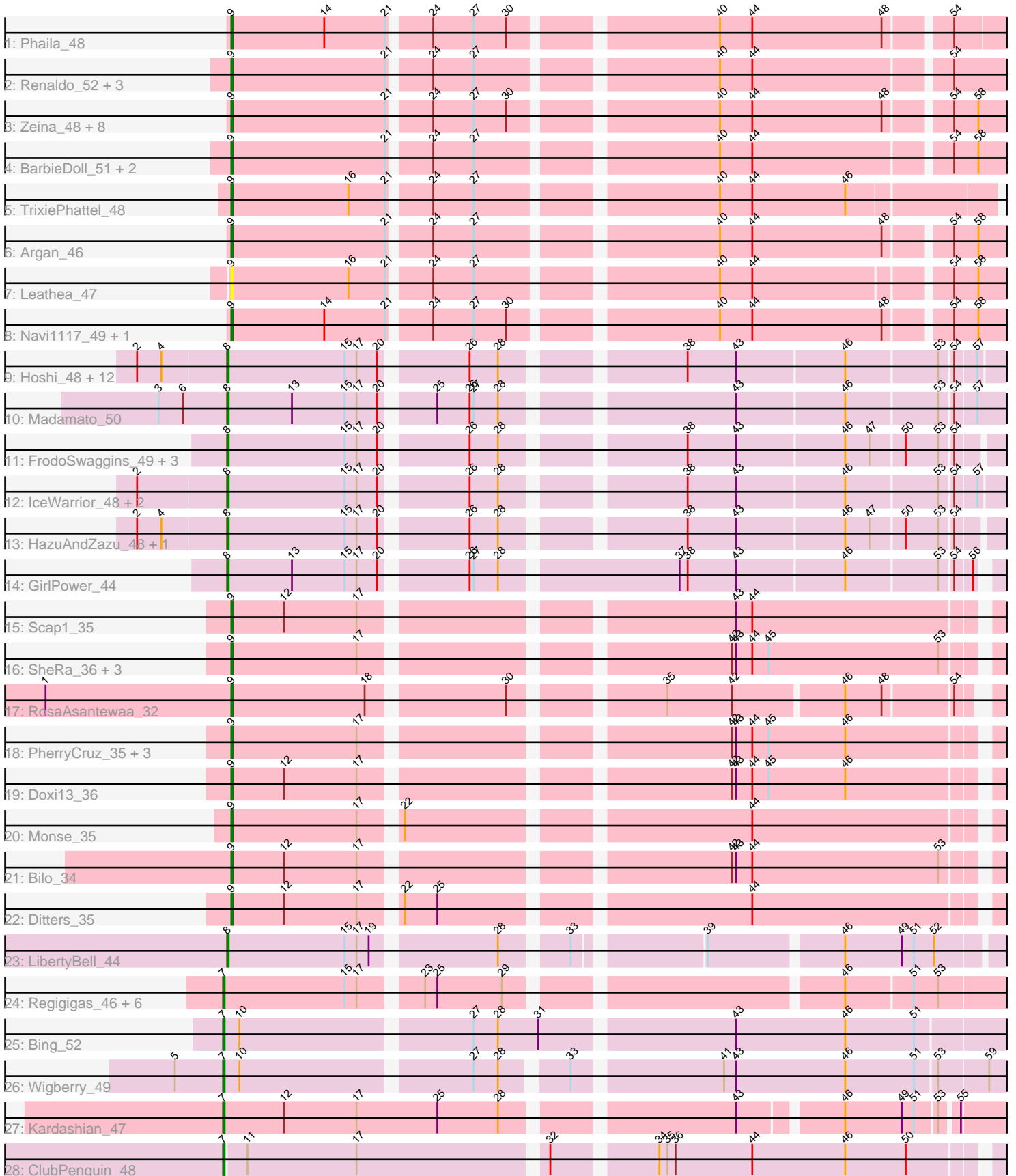


Pham 311545



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 311545 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311545 has 72 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Phaila_48
- Track 2 : Renaldo_52, Muglass_49, Biscute_47, Barbonzobean_52
- Track 3 : Zeina_48, Uzumaki_45, Stardrop_47, GantcherGoblin_46, BlackHoleSun_49, Altjira_49, Tenney120_48, Mardi_47, KevinMinion_47
- Track 4 : BarbieDoll_51, Kinny_50, Lewando_49
- Track 5 : TrixiePhattel_48
- Track 6 : Argan_46
- Track 7 : Leathea_47
- Track 8 : Navi1117_49, PoeMe_47
- Track 9 : Hoshi_48, Rima_50, Indigenous_49, FidgetOrca_49, OlympicHelado_49, Spectropatronm_49, TieDye_48, Jaylociraptor_49, Esketit_49, Meibysrarus_47, Namu_50, TonyStarch_48, Maya_49
- Track 10 : Madamato_50
- Track 11 : FrodoSwaggins_49, Popy_49, Espio_49, DrGrey_48
- Track 12 : IceWarrior_48, CherryBlossom_49, TaidaOne_49
- Track 13 : HazuAndZazu_48, Soshi_48
- Track 14 : GirlPower_44
- Track 15 : Scap1_35
- Track 16 : SheRa_36, Moozy_35, Annihilus_36, HotFries_35
- Track 17 : RosaAsantewaa_32
- Track 18 : PherryCruz_35, Sangak_34, GoblinVoyage_36, RavenPuff_35
- Track 19 : Doxi13_36
- Track 20 : Monse_35
- Track 21 : Bilo_34
- Track 22 : Ditters_35
- Track 23 : LibertyBell_44
- Track 24 : Regigigas_46, Rainydai_44, Miek_44, Thiqqums_45, CricKo_45, FromIndy_45, SendItCS_43
- Track 25 : Bing_52
- Track 26 : Wigberry_49
- Track 27 : Kardashian_47
- Track 28 : ClubPenguin_48

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

The start number called the most often in the published annotations is 9, it was called in 27 of the 61 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altjira_49, Annihilus_36, Argan_46, BarbieDoll_51, Barbonzobean_52, Bilo_34, Biscute_47, BlackHoleSun_49, Ditters_35, Doxi13_36, GantcherGoblin_46, GoblinVoyage_36, HotFries_35, KevinMinion_47, Kinny_50, Leathea_47, Lewando_49, Mardi_47, Monse_35, Moozy_35, Muglass_49, Navi1117_49, Phaila_48, PherryCruz_35, PoeMe_47, RavenPuff_35, Renaldo_52, RosaAsantewaa_32, Sangak_34, Scap1_35, SheRa_36, Stardrop_47, Tenney120_48, TrixiePhattel_48, Uzumaki_45, Zeina_48,

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

-

Genes that do not have the "Most Annotated" start:

- Bing_52, CherryBlossom_49, ClubPenguin_48, CricKo_45, DrGrey_48, Esketit_49, Espio_49, FidgetOrca_49, FrodoSwaggins_49, FromIndy_45, GirlPower_44, HazuAndZazu_48, Hoshi_48, IceWarrior_48, Indigenous_49, Jaylociraptor_49, Kardashian_47, LibertyBell_44, Madamato_50, Maya_49, Meibysrarus_47, Miek_44, Namu_50, OlympicHelado_49, Popy_49, Rainydai_44, Regigigas_46, Rima_50, SendItCS_43, Soshi_48, Spectropatronm_49, TaidaOne_49, Thiqqums_45, TieDye_48, TonyStarch_48, Wigberry_49,

Summary by start number:

Start 7:

- Found in 11 of 72 (15.3%) of genes in pham
- Manual Annotations of this start: 9 of 61
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bing_52 (BI5), ClubPenguin_48 (BI7), CricKo_45 (BI4), FromIndy_45 (BI4), Kardashian_47 (BI6), Miek_44 (BI4), Rainydai_44 (BI4), Regigigas_46 (BI4), SendItCS_43 (BI4), Thiqqums_45 (BI4), Wigberry_49 (BI5),

Start 8:

- Found in 25 of 72 (34.7%) of genes in pham
- Manual Annotations of this start: 25 of 61
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryBlossom_49 (BI1), DrGrey_48 (BI1), Esketit_49 (BI1), Espio_49 (BI1), FidgetOrca_49 (BI1), FrodoSwaggins_49 (BI1), GirlPower_44 (BI1), HazuAndZazu_48 (BI1), Hoshi_48 (BI1), IceWarrior_48 (BI1), Indigenous_49 (BI1), Jaylociraptor_49 (BI1), LibertyBell_44 (BI3), Madamato_50 (BI1), Maya_49 (BI1), Meibysrarus_47 (BI1), Namu_50 (BI1), OlympicHelado_49 (BI1), Popy_49 (BI1), Rima_50 (BI1), Soshi_48 (BI1), Spectropatronm_49 (BI1), TaidaOne_49 (BI1), TieDye_48 (BI1), TonyStarch_48 (BI1),

Start 9:

- Found in 36 of 72 (50.0%) of genes in pham
- Manual Annotations of this start: 27 of 61
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Altjira_49 (AU6), Annihilus_36 (BI2), Argan_46 (AU6), BarbieDoll_51 (AU6), Barbonzobean_52 (AU6), Bilo_34 (BI2), Biscute_47 (AU6), BlackHoleSun_49 (AU6), Ditters_35 (BI2), Doxi13_36 (BI2), GantcherGoblin_46 (AU6), GoblinVoyage_36 (BI2), HotFries_35 (BI2), KevinMinion_47 (AU6), Kinny_50 (AU6), Leathea_47 (AU6), Lewando_49 (AU6), Mardi_47 (AU6), Monse_35 (BI2), Moozy_35 (BI2), Muglass_49 (AU6), Navi1117_49 (AU6), Phaila_48 (AU6), PherryCruz_35 (BI2), PoeMe_47 (AU6), RavenPuff_35 (BI2), Renaldo_52 (AU6), RosaAsantewaa_32 (BI2), Sangak_34 (BI2), Scap1_35 (BI2), SheRa_36 (BI2), Stardrop_47 (AU6), Tenney120_48 (AU6), TrixiePhattel_48 (AU6), Uzumaki_45 (AU6), Zeina_48 (AU6),

Summary by clusters:

There are 8 clusters represented in this pham: AU6, BI6, BI7, BI4, BI5, BI2, BI3, BI1,

Info for manual annotations of cluster AU6:

- Start number 9 was manually annotated 14 times for cluster AU6.

Info for manual annotations of cluster BI1:

- Start number 8 was manually annotated 24 times for cluster BI1.

Info for manual annotations of cluster BI2:

- Start number 9 was manually annotated 13 times for cluster BI2.

Info for manual annotations of cluster BI3:

- Start number 8 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:

- Start number 7 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:

- Start number 7 was manually annotated 2 times for cluster BI5.

Info for manual annotations of cluster BI6:

- Start number 7 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:

- Start number 7 was manually annotated 1 time for cluster BI7.

Gene Information:

Gene: Altjira_49 Start: 33420, Stop: 33953, Start Num: 9

Candidate Starts for Altjira_49:

(Start: 9 @33420 has 27 MA's), (21, 33534), (24, 33561), (27, 33591), (30, 33615), (40, 33753), (44, 33777), (48, 33873), (54, 33915), (58, 33933),

Gene: Annihilus_36 Start: 26356, Stop: 26877, Start Num: 9

Candidate Starts for Annihilus_36:

(Start: 9 @26356 has 27 MA's), (17, 26449), (42, 26692), (43, 26695), (44, 26707), (45, 26719), (53, 26845),

Gene: Argan_46 Start: 32018, Stop: 32551, Start Num: 9

Candidate Starts for Argan_46:

(Start: 9 @32018 has 27 MA's), (21, 32132), (24, 32159), (27, 32189), (40, 32351), (44, 32375), (48, 32471), (54, 32513), (58, 32531),

Gene: BarbieDoll_51 Start: 33705, Stop: 34238, Start Num: 9

Candidate Starts for BarbieDoll_51:

(Start: 9 @33705 has 27 MA's), (21, 33819), (24, 33846), (27, 33876), (40, 34038), (44, 34062), (54, 34200), (58, 34218),

Gene: Barbonzobean_52 Start: 33749, Stop: 34282, Start Num: 9

Candidate Starts for Barbonzobean_52:

(Start: 9 @33749 has 27 MA's), (21, 33863), (24, 33890), (27, 33920), (40, 34082), (44, 34106), (54, 34244),

Gene: Bilo_34 Start: 26468, Stop: 26989, Start Num: 9

Candidate Starts for Bilo_34:

(Start: 9 @26468 has 27 MA's), (12, 26507), (17, 26561), (42, 26804), (43, 26807), (44, 26819), (53, 26957),

Gene: Bing_52 Start: 33497, Stop: 34048, Start Num: 7

Candidate Starts for Bing_52:

(Start: 7 @33497 has 9 MA's), (10, 33509), (27, 33671), (28, 33689), (31, 33719), (43, 33854), (46, 33935), (51, 33986),

Gene: Biscute_47 Start: 33357, Stop: 33890, Start Num: 9

Candidate Starts for Biscute_47:

(Start: 9 @33357 has 27 MA's), (21, 33471), (24, 33498), (27, 33528), (40, 33690), (44, 33714), (54, 33852),

Gene: BlackHoleSun_49 Start: 32149, Stop: 32682, Start Num: 9

Candidate Starts for BlackHoleSun_49:

(Start: 9 @32149 has 27 MA's), (21, 32263), (24, 32290), (27, 32320), (30, 32344), (40, 32482), (44, 32506), (48, 32602), (54, 32644), (58, 32662),

Gene: CherryBlossom_49 Start: 32728, Stop: 33255, Start Num: 8

Candidate Starts for CherryBlossom_49:

(2, 32665), (Start: 8 @32728 has 25 MA's), (15, 32815), (17, 32824), (20, 32839), (26, 32896), (28, 32917), (38, 33034), (43, 33070), (46, 33148), (53, 33214), (54, 33223), (57, 33238),

Gene: ClubPenguin_48 Start: 32048, Stop: 32584, Start Num: 7

Candidate Starts for ClubPenguin_48:

(Start: 7 @32048 has 9 MA's), (11, 32063), (17, 32144), (32, 32276), (34, 32345), (35, 32351), (36, 32357), (44, 32414), (46, 32483), (50, 32528),

Gene: CricKo_45 Start: 30767, Stop: 31297, Start Num: 7

Candidate Starts for CricKo_45:

(Start: 7 @30767 has 9 MA's), (15, 30857), (17, 30866), (23, 30905), (25, 30914), (29, 30962), (46, 31184), (51, 31232), (53, 31250),

Gene: Ditters_35 Start: 26795, Stop: 27316, Start Num: 9

Candidate Starts for Ditters_35:

(Start: 9 @26795 has 27 MA's), (12, 26834), (17, 26888), (22, 26912), (25, 26936), (44, 27146),

Gene: Doxi13_36 Start: 26330, Stop: 26851, Start Num: 9

Candidate Starts for Doxi13_36:

(Start: 9 @26330 has 27 MA's), (12, 26369), (17, 26423), (42, 26666), (43, 26669), (44, 26681), (45, 26693), (46, 26750),

Gene: DrGrey_48 Start: 33096, Stop: 33620, Start Num: 8

Candidate Starts for DrGrey_48:

(Start: 8 @33096 has 25 MA's), (15, 33183), (17, 33192), (20, 33207), (26, 33264), (28, 33285), (38, 33402), (43, 33438), (46, 33516), (47, 33534), (50, 33558), (53, 33582), (54, 33591),

Gene: Esketit_49 Start: 32839, Stop: 33366, Start Num: 8

Candidate Starts for Esketit_49:

(2, 32776), (4, 32794), (Start: 8 @32839 has 25 MA's), (15, 32926), (17, 32935), (20, 32950), (26, 33007), (28, 33028), (38, 33145), (43, 33181), (46, 33259), (53, 33325), (54, 33334), (57, 33349),

Gene: Espio_49 Start: 33491, Stop: 34015, Start Num: 8

Candidate Starts for Espio_49:

(Start: 8 @33491 has 25 MA's), (15, 33578), (17, 33587), (20, 33602), (26, 33659), (28, 33680), (38, 33797), (43, 33833), (46, 33911), (47, 33929), (50, 33953), (53, 33977), (54, 33986),

Gene: FidgetOrca_49 Start: 32832, Stop: 33359, Start Num: 8

Candidate Starts for FidgetOrca_49:

(2, 32769), (4, 32787), (Start: 8 @32832 has 25 MA's), (15, 32919), (17, 32928), (20, 32943), (26, 33000), (28, 33021), (38, 33138), (43, 33174), (46, 33252), (53, 33318), (54, 33327), (57, 33342),

Gene: FrodoSwaggins_49 Start: 33490, Stop: 34014, Start Num: 8

Candidate Starts for FrodoSwaggins_49:

(Start: 8 @33490 has 25 MA's), (15, 33577), (17, 33586), (20, 33601), (26, 33658), (28, 33679), (38, 33796), (43, 33832), (46, 33910), (47, 33928), (50, 33952), (53, 33976), (54, 33985),

Gene: FromIndy_45 Start: 30371, Stop: 30901, Start Num: 7

Candidate Starts for FromIndy_45:

(Start: 7 @30371 has 9 MA's), (15, 30461), (17, 30470), (23, 30509), (25, 30518), (29, 30566), (46, 30788), (51, 30836), (53, 30854),

Gene: GantcherGoblin_46 Start: 32217, Stop: 32750, Start Num: 9

Candidate Starts for GantcherGoblin_46:

(Start: 9 @32217 has 27 MA's), (21, 32331), (24, 32358), (27, 32388), (30, 32412), (40, 32550), (44, 32574), (48, 32670), (54, 32712), (58, 32730),

Gene: GirlPower_44 Start: 33290, Stop: 33820, Start Num: 8

Candidate Starts for GirlPower_44:

(Start: 8 @33290 has 25 MA's), (13, 33338), (15, 33377), (17, 33386), (20, 33401), (26, 33458), (27, 33461), (28, 33479), (37, 33602), (38, 33608), (43, 33644), (46, 33722), (53, 33788), (54, 33797), (56, 33809),

Gene: GoblinVoyage_36 Start: 26330, Stop: 26851, Start Num: 9

Candidate Starts for GoblinVoyage_36:

(Start: 9 @26330 has 27 MA's), (17, 26423), (42, 26666), (43, 26669), (44, 26681), (45, 26693), (46, 26750),

Gene: HazuAndZazu_48 Start: 33090, Stop: 33614, Start Num: 8

Candidate Starts for HazuAndZazu_48:

(2, 33027), (4, 33045), (Start: 8 @33090 has 25 MA's), (15, 33177), (17, 33186), (20, 33201), (26, 33258), (28, 33279), (38, 33396), (43, 33432), (46, 33510), (47, 33528), (50, 33552), (53, 33576), (54, 33585),

Gene: Hoshi_48 Start: 32436, Stop: 32963, Start Num: 8

Candidate Starts for Hoshi_48:

(2, 32373), (4, 32391), (Start: 8 @32436 has 25 MA's), (15, 32523), (17, 32532), (20, 32547), (26, 32604), (28, 32625), (38, 32742), (43, 32778), (46, 32856), (53, 32922), (54, 32931), (57, 32946),

Gene: HotFries_35 Start: 26374, Stop: 26895, Start Num: 9

Candidate Starts for HotFries_35:

(Start: 9 @26374 has 27 MA's), (17, 26467), (42, 26710), (43, 26713), (44, 26725), (45, 26737), (53, 26863),

Gene: IceWarrior_48 Start: 32518, Stop: 33045, Start Num: 8

Candidate Starts for IceWarrior_48:

(2, 32455), (Start: 8 @32518 has 25 MA's), (15, 32605), (17, 32614), (20, 32629), (26, 32686), (28, 32707), (38, 32824), (43, 32860), (46, 32938), (53, 33004), (54, 33013), (57, 33028),

Gene: Indigenous_49 Start: 32833, Stop: 33360, Start Num: 8

Candidate Starts for Indigenous_49:

(2, 32770), (4, 32788), (Start: 8 @32833 has 25 MA's), (15, 32920), (17, 32929), (20, 32944), (26, 33001), (28, 33022), (38, 33139), (43, 33175), (46, 33253), (53, 33319), (54, 33328), (57, 33343),

Gene: Jaylociraptor_49 Start: 32832, Stop: 33359, Start Num: 8

Candidate Starts for Jaylociraptor_49:

(2, 32769), (4, 32787), (Start: 8 @32832 has 25 MA's), (15, 32919), (17, 32928), (20, 32943), (26, 33000), (28, 33021), (38, 33138), (43, 33174), (46, 33252), (53, 33318), (54, 33327), (57, 33342),

Gene: Kardashian_47 Start: 32934, Stop: 33467, Start Num: 7

Candidate Starts for Kardashian_47:

(Start: 7 @32934 has 9 MA's), (12, 32979), (17, 33033), (25, 33093), (28, 33138), (43, 33291), (46, 33360), (49, 33402), (51, 33411), (53, 33426), (55, 33438),

Gene: KevinMinion_47 Start: 32975, Stop: 33508, Start Num: 9

Candidate Starts for KevinMinion_47:

(Start: 9 @32975 has 27 MA's), (21, 33089), (24, 33116), (27, 33146), (30, 33170), (40, 33308), (44, 33332), (48, 33428), (54, 33470), (58, 33488),

Gene: Kinny_50 Start: 34199, Stop: 34732, Start Num: 9

Candidate Starts for Kinny_50:

(Start: 9 @34199 has 27 MA's), (21, 34313), (24, 34340), (27, 34370), (40, 34532), (44, 34556), (54, 34694), (58, 34712),

Gene: Leathea_47 Start: 31879, Stop: 32409, Start Num: 9

Candidate Starts for Leathea_47:

(Start: 9 @31879 has 27 MA's), (16, 31966), (21, 31993), (24, 32020), (27, 32050), (40, 32212), (44, 32236), (54, 32371), (58, 32389),

Gene: Lewando_49 Start: 33491, Stop: 34024, Start Num: 9

Candidate Starts for Lewando_49:

(Start: 9 @33491 has 27 MA's), (21, 33605), (24, 33632), (27, 33662), (40, 33824), (44, 33848), (54, 33986), (58, 34004),

Gene: LibertyBell_44 Start: 30077, Stop: 30595, Start Num: 8

Candidate Starts for LibertyBell_44:

(Start: 8 @30077 has 25 MA's), (15, 30164), (17, 30173), (19, 30182), (28, 30266), (33, 30308), (39, 30392), (46, 30485), (49, 30527), (51, 30536), (52, 30551),

Gene: Madamato_50 Start: 32898, Stop: 33428, Start Num: 8

Candidate Starts for Madamato_50:

(3, 32847), (6, 32865), (Start: 8 @32898 has 25 MA's), (13, 32946), (15, 32985), (17, 32994), (20, 33009), (25, 33042), (26, 33066), (27, 33069), (28, 33087), (43, 33240), (46, 33318), (53, 33384), (54, 33393), (57, 33408),

Gene: Mardi_47 Start: 32309, Stop: 32842, Start Num: 9

Candidate Starts for Mardi_47:

(Start: 9 @32309 has 27 MA's), (21, 32423), (24, 32450), (27, 32480), (30, 32504), (40, 32642), (44, 32666), (48, 32762), (54, 32804), (58, 32822),

Gene: Maya_49 Start: 32846, Stop: 33373, Start Num: 8

Candidate Starts for Maya_49:

(2, 32783), (4, 32801), (Start: 8 @32846 has 25 MA's), (15, 32933), (17, 32942), (20, 32957), (26, 33014), (28, 33035), (38, 33152), (43, 33188), (46, 33266), (53, 33332), (54, 33341), (57, 33356),

Gene: Meibysrarus_47 Start: 32209, Stop: 32736, Start Num: 8

Candidate Starts for Meibysrarus_47:

(2, 32146), (4, 32164), (Start: 8 @32209 has 25 MA's), (15, 32296), (17, 32305), (20, 32320), (26, 32377), (28, 32398), (38, 32515), (43, 32551), (46, 32629), (53, 32695), (54, 32704), (57, 32719),

Gene: Miek_44 Start: 30383, Stop: 30913, Start Num: 7

Candidate Starts for Miek_44:

(Start: 7 @30383 has 9 MA's), (15, 30473), (17, 30482), (23, 30521), (25, 30530), (29, 30578), (46, 30800), (51, 30848), (53, 30866),

Gene: Monse_35 Start: 26238, Stop: 26759, Start Num: 9

Candidate Starts for Monse_35:

(Start: 9 @26238 has 27 MA's), (17, 26331), (22, 26355), (44, 26589),

Gene: Moozy_35 Start: 26330, Stop: 26851, Start Num: 9

Candidate Starts for Moozy_35:

(Start: 9 @26330 has 27 MA's), (17, 26423), (42, 26666), (43, 26669), (44, 26681), (45, 26693), (53, 26819),

Gene: Muglass_49 Start: 33261, Stop: 33794, Start Num: 9

Candidate Starts for Muglass_49:

(Start: 9 @33261 has 27 MA's), (21, 33375), (24, 33402), (27, 33432), (40, 33594), (44, 33618), (54, 33756),

Gene: Namo_50 Start: 33177, Stop: 33704, Start Num: 8

Candidate Starts for Namo_50:

(2, 33114), (4, 33132), (Start: 8 @33177 has 25 MA's), (15, 33264), (17, 33273), (20, 33288), (26, 33345), (28, 33366), (38, 33483), (43, 33519), (46, 33597), (53, 33663), (54, 33672), (57, 33687),

Gene: Navi1117_49 Start: 32920, Stop: 33453, Start Num: 9

Candidate Starts for Navi1117_49:

(Start: 9 @32920 has 27 MA's), (14, 32989), (21, 33034), (24, 33061), (27, 33091), (30, 33115), (40, 33253), (44, 33277), (48, 33373), (54, 33415), (58, 33433),

Gene: OlympicHelado_49 Start: 32860, Stop: 33387, Start Num: 8

Candidate Starts for OlympicHelado_49:

(2, 32797), (4, 32815), (Start: 8 @32860 has 25 MA's), (15, 32947), (17, 32956), (20, 32971), (26, 33028), (28, 33049), (38, 33166), (43, 33202), (46, 33280), (53, 33346), (54, 33355), (57, 33370),

Gene: Phaila_48 Start: 32107, Stop: 32637, Start Num: 9

Candidate Starts for Phaila_48:

(Start: 9 @32107 has 27 MA's), (14, 32176), (21, 32221), (24, 32248), (27, 32278), (30, 32302), (40, 32440), (44, 32464), (48, 32560), (54, 32602),

Gene: PherryCruz_35 Start: 26326, Stop: 26847, Start Num: 9

Candidate Starts for PherryCruz_35:

(Start: 9 @26326 has 27 MA's), (17, 26419), (42, 26662), (43, 26665), (44, 26677), (45, 26689), (46, 26746),

Gene: PoeMe_47 Start: 32476, Stop: 33009, Start Num: 9

Candidate Starts for PoeMe_47:

(Start: 9 @32476 has 27 MA's), (14, 32545), (21, 32590), (24, 32617), (27, 32647), (30, 32671), (40, 32809), (44, 32833), (48, 32929), (54, 32971), (58, 32989),

Gene: Popy_49 Start: 33490, Stop: 34014, Start Num: 8

Candidate Starts for Popy_49:

(Start: 8 @33490 has 25 MA's), (15, 33577), (17, 33586), (20, 33601), (26, 33658), (28, 33679), (38, 33796), (43, 33832), (46, 33910), (47, 33928), (50, 33952), (53, 33976), (54, 33985),

Gene: Rainydai_44 Start: 30767, Stop: 31297, Start Num: 7

Candidate Starts for Rainydai_44:

(Start: 7 @30767 has 9 MA's), (15, 30857), (17, 30866), (23, 30905), (25, 30914), (29, 30962), (46, 31184), (51, 31232), (53, 31250),

Gene: RavenPuff_35 Start: 26326, Stop: 26847, Start Num: 9

Candidate Starts for RavenPuff_35:

(Start: 9 @26326 has 27 MA's), (17, 26419), (42, 26662), (43, 26665), (44, 26677), (45, 26689), (46, 26746),

Gene: Regigigas_46 Start: 30768, Stop: 31298, Start Num: 7

Candidate Starts for Regigigas_46:

(Start: 7 @30768 has 9 MA's), (15, 30858), (17, 30867), (23, 30906), (25, 30915), (29, 30963), (46, 31185), (51, 31233), (53, 31251),

Gene: Renaldo_52 Start: 33800, Stop: 34333, Start Num: 9

Candidate Starts for Renaldo_52:

(Start: 9 @33800 has 27 MA's), (21, 33914), (24, 33941), (27, 33971), (40, 34133), (44, 34157), (54, 34295),

Gene: Rima_50 Start: 33177, Stop: 33704, Start Num: 8

Candidate Starts for Rima_50:

(2, 33114), (4, 33132), (Start: 8 @33177 has 25 MA's), (15, 33264), (17, 33273), (20, 33288), (26, 33345), (28, 33366), (38, 33483), (43, 33519), (46, 33597), (53, 33663), (54, 33672), (57, 33687),

Gene: RosaAsantewaa_32 Start: 25470, Stop: 25979, Start Num: 9

Candidate Starts for RosaAsantewaa_32:

(1, 25332), (Start: 9 @25470 has 27 MA's), (18, 25569), (30, 25662), (35, 25758), (42, 25806), (46, 25884), (48, 25911), (54, 25959),

Gene: Sangak_34 Start: 25884, Stop: 26405, Start Num: 9

Candidate Starts for Sangak_34:

(Start: 9 @25884 has 27 MA's), (17, 25977), (42, 26220), (43, 26223), (44, 26235), (45, 26247), (46, 26304),

Gene: Scap1_35 Start: 26203, Stop: 26724, Start Num: 9

Candidate Starts for Scap1_35:

(Start: 9 @26203 has 27 MA's), (12, 26242), (17, 26296), (43, 26542), (44, 26554),

Gene: SendItCS_43 Start: 30371, Stop: 30901, Start Num: 7

Candidate Starts for SendItCS_43:

(Start: 7 @30371 has 9 MA's), (15, 30461), (17, 30470), (23, 30509), (25, 30518), (29, 30566), (46, 30788), (51, 30836), (53, 30854),

Gene: SheRa_36 Start: 26372, Stop: 26893, Start Num: 9

Candidate Starts for SheRa_36:

(Start: 9 @26372 has 27 MA's), (17, 26465), (42, 26708), (43, 26711), (44, 26723), (45, 26735), (53, 26861),

Gene: Soshi_48 Start: 33109, Stop: 33633, Start Num: 8

Candidate Starts for Soshi_48:

(2, 33046), (4, 33064), (Start: 8 @33109 has 25 MA's), (15, 33196), (17, 33205), (20, 33220), (26, 33277), (28, 33298), (38, 33415), (43, 33451), (46, 33529), (47, 33547), (50, 33571), (53, 33595), (54, 33604),

Gene: Spectropatronm_49 Start: 32839, Stop: 33366, Start Num: 8

Candidate Starts for Spectropatronm_49:

(2, 32776), (4, 32794), (Start: 8 @32839 has 25 MA's), (15, 32926), (17, 32935), (20, 32950), (26, 33007), (28, 33028), (38, 33145), (43, 33181), (46, 33259), (53, 33325), (54, 33334), (57, 33349),

Gene: Stardrop_47 Start: 32669, Stop: 33202, Start Num: 9

Candidate Starts for Stardrop_47:

(Start: 9 @32669 has 27 MA's), (21, 32783), (24, 32810), (27, 32840), (30, 32864), (40, 33002), (44, 33026), (48, 33122), (54, 33164), (58, 33182),

Gene: TaidaOne_49 Start: 33344, Stop: 33871, Start Num: 8

Candidate Starts for TaidaOne_49:

(2, 33281), (Start: 8 @33344 has 25 MA's), (15, 33431), (17, 33440), (20, 33455), (26, 33512), (28, 33533), (38, 33650), (43, 33686), (46, 33764), (53, 33830), (54, 33839), (57, 33854),

Gene: Tenney120_48 Start: 32517, Stop: 33050, Start Num: 9

Candidate Starts for Tenney120_48:

(Start: 9 @32517 has 27 MA's), (21, 32631), (24, 32658), (27, 32688), (30, 32712), (40, 32850), (44, 32874), (48, 32970), (54, 33012), (58, 33030),

Gene: Thiqqums_45 Start: 30767, Stop: 31297, Start Num: 7

Candidate Starts for Thiqqums_45:

(Start: 7 @30767 has 9 MA's), (15, 30857), (17, 30866), (23, 30905), (25, 30914), (29, 30962), (46, 31184), (51, 31232), (53, 31250),

Gene: TieDye_48 Start: 32432, Stop: 32959, Start Num: 8

Candidate Starts for TieDye_48:

(2, 32369), (4, 32387), (Start: 8 @32432 has 25 MA's), (15, 32519), (17, 32528), (20, 32543), (26, 32600), (28, 32621), (38, 32738), (43, 32774), (46, 32852), (53, 32918), (54, 32927), (57, 32942),

Gene: TonyStarch_48 Start: 32553, Stop: 33080, Start Num: 8

Candidate Starts for TonyStarch_48:

(2, 32490), (4, 32508), (Start: 8 @32553 has 25 MA's), (15, 32640), (17, 32649), (20, 32664), (26, 32721), (28, 32742), (38, 32859), (43, 32895), (46, 32973), (53, 33039), (54, 33048), (57, 33063),

Gene: TrixiePhattel_48 Start: 32174, Stop: 32704, Start Num: 9

Candidate Starts for TrixiePhattel_48:

(Start: 9 @32174 has 27 MA's), (16, 32261), (21, 32288), (24, 32315), (27, 32345), (40, 32507), (44, 32531), (46, 32600),

Gene: Uzumaki_45 Start: 32211, Stop: 32744, Start Num: 9

Candidate Starts for Uzumaki_45:

(Start: 9 @32211 has 27 MA's), (21, 32325), (24, 32352), (27, 32382), (30, 32406), (40, 32544), (44, 32568), (48, 32664), (54, 32706), (58, 32724),

Gene: Wigberry_49 Start: 32190, Stop: 32729, Start Num: 7

Candidate Starts for Wigberry_49:

(5, 32154), (Start: 7 @32190 has 9 MA's), (10, 32202), (27, 32364), (28, 32382), (33, 32424), (41, 32526), (43, 32535), (46, 32616), (51, 32667), (53, 32682), (59, 32718),

Gene: Zeina_48 Start: 32530, Stop: 33063, Start Num: 9

Candidate Starts for Zeina_48:

(Start: 9 @32530 has 27 MA's), (21, 32644), (24, 32671), (27, 32701), (30, 32725), (40, 32863), (44, 32887), (48, 32983), (54, 33025), (58, 33043),