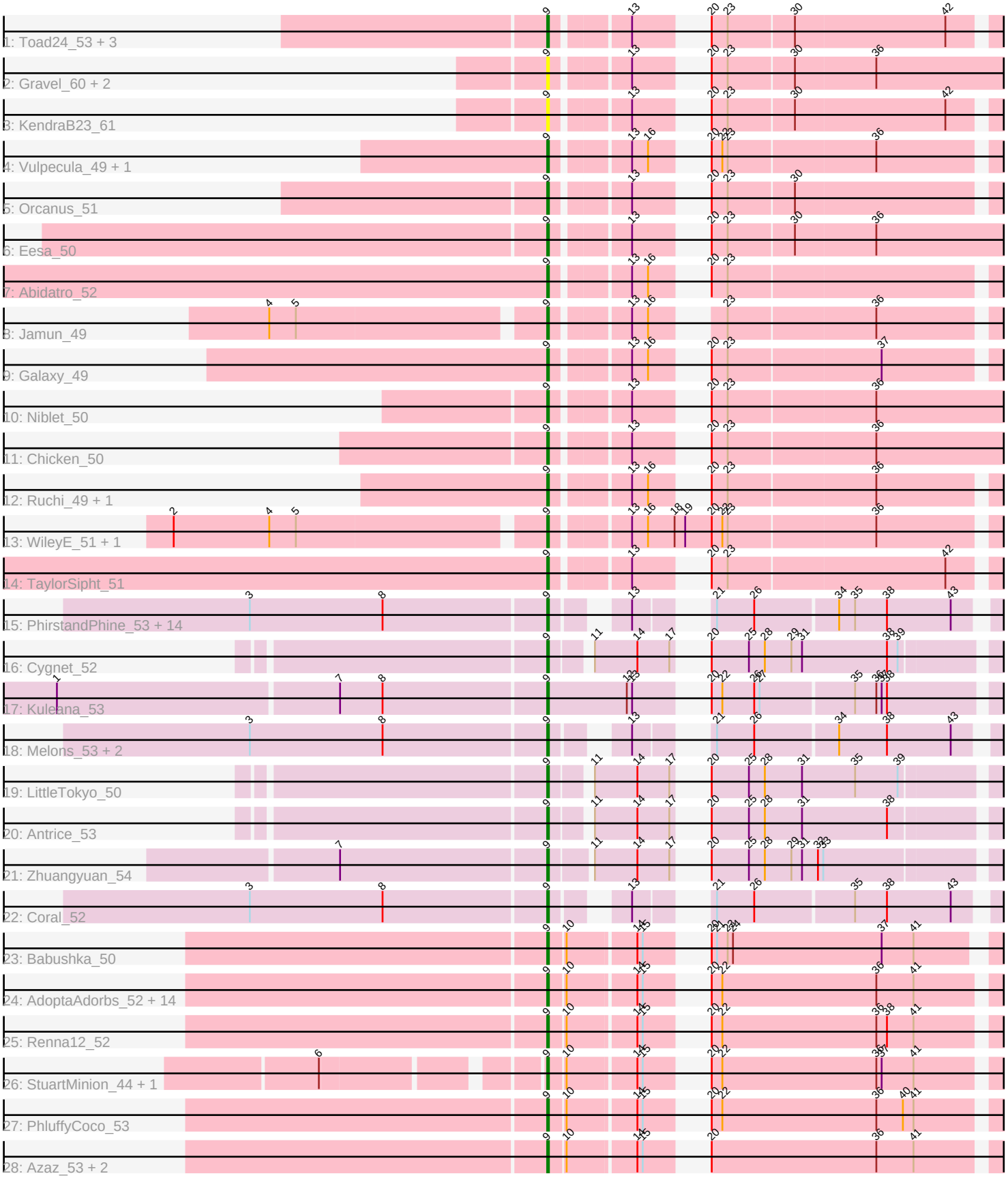
Pham 347580


1: Toad24_53 + 3
2: Gravel_60 + 2
3: KendraB23_61
4: Vulpecula_49 + 1
5: Orcanus_51
6: Eesa_50
7: Abidatro_52
8: Jamun_49
9: Galaxy_49
10: Niblet_50
11: Chicken_50
12: Ruchi_49 + 1
13: WileyE_51 + 1
14: TaylorSipht_51
15: PhirstandPhine_53 + 14
16: Cygnet_52
17: Kuleana_53
18: Melons_53 + 2
19: LittleTokyo_50
20: Antrice_53
21: Zhuangyuan_54
22: Coral_52
23: Babushka_50
24: AdoptaAdorbs_52 + 14
25: Renna12_52
26: StuartMinion_44 + 1
27: PhluffyCoco_53
28: Azaz_53 + 2

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 347580 Report

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

Pham number 347580 has 69 members, 13 are drafts.

Phages represented in each track:
• Track 1 : Toad24_53, Amanises_53, Zixiang_50, Shen_48
• Track 2 : Gravel_60, Pelletreau_60, Westrich_59
• Track 3 : KendraB23_61
• Track 4 : Vulpecula_49, Brynnie_49
• Track 5 : Orcanus_51
• Track 6 : Eesa_50
• Track 7 : Abidatro_52
• Track 8 : Jamun_49
• Track 9 : Galaxy_49
• Track 10 : Niblet_50
• Track 11 : Chicken_50
• Track 12 : Ruchi_49, Basilisk_50
• Track 13 : WileyE_51, Chickaboom_51
• Track 14 : TaylorSipht_51
• Track 15 : PhirstandPhine_53, BadWillHunting_58, Kepler_53, OtsoOtso_53, Amelia_52, HannahPhantana_53, Bibble12_56, Cote_54, GramZayde_54, Bedetta_57, Lunar_53, Damocles_56, Jerole_53, Colusalem_53, Polka_52
• Track 16 : Cygnet_52
• Track 17 : Kuleana_53
• Track 18 : Melons_53, Pineda_54, Daob_54
• Track 19 : LittleTokyo_50
• Track 20 : Antrice_53
• Track 21 : Zhuangyuan_54
• Track 22 : Coral_52
• Track 23 : Babushka_50
• Track 24 : AdoptaAdorbs_52, Amphitrite_53, Juno112_52, Fingolfin_53, KHumphrey_53, AmiCi24_52, RedFox_53, DanHam62_53, Atlantica_53, Laphuphu24k_51, HamCheese_53, Glotell_54, Camara_53, Rattail_53, Oppalora_52
• Track 25 : Renna12_52
• Track 26 : StuartMinion_44, AlexMinion_52
• Track 27 : PhluffyCoco_53
• Track 28 : Azaz_53, Leona_52, Andrew_54

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 56 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abidatro_52, AdoptaAdorbs_52, AlexMinion_52, Amanises_53, Amelia_52, AmiCi24_52, Amphitrite_53, Andrew_54, Antrice_53, Atlantica_53, Azaz_53, Babushka_50, BadWillHunting_58, Basilisk_50, Bedetta_57, Bibble12_56, Brynnie_49, Camara_53, Chickaboom_51, Chicken_50, Colusalem_53, Coral_52, Cote_54, Cygnet_52, Damocles_56, DanHam62_53, Daob_54, Eesa_50, Fingolfin_53, Galaxy_49, Glotell_54, GramZayde_54, Gravel_60, HamCheese_53, HannahPhantana_53, Jamun_49, Jerole_53, Juno112_52, KHumphrey_53, KendraB23_61, Kepler_53, Kuleana_53, Laphuphu24k_51, Leona_52, LittleTokyo_50, Lunar_53, Melons_53, Niblet_50, Oppalora_52, Orcanus_51, OtsoOtso_53, Pelletreau_60, PhirstandPhine_53, PhluffyCoco_53, Pineda_54, Polka_52, Rattail_53, RedFox_53, Renna12_52, Ruchi_49, Shen_48, StuartMinion_44, TaylorSipht_51, Toad24_53, Vulpecula_49, Westrich_59, WileyE_51, Zhuangyuan_54, Zixiang_50,

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

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

Summary by start number:

Start 9:
• Found in 69 of 69 (100.0%) of genes in pham
• Manual Annotations of this start: 56 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abidatro_52 (AS1), AdoptaAdorbs_52 (AS3), AlexMinion_52 (AS3), Amanises_53 (AS1), Amelia_52 (AS2), AmiCi24_52 (AS3), Amphitrite_53 (AS3), Andrew_54 (AS3), Antrice_53 (AS2), Atlantica_53 (AS3), Azaz_53 (AS3), Babushka_50 (AS3), BadWillHunting_58 (AS2), Basilisk_50 (AS1), Bedetta_57 (AS2), Bibble12_56 (AS2), Brynnie_49 (AS1), Camara_53 (AS3), Chickaboom_51 (AS1), Chicken_50 (AS1), Colusalem_53 (AS2), Coral_52 (AS2), Cote_54 (AS2), Cygnet_52 (AS2), Damocles_56 (AS2), DanHam62_53 (AS3), Daob_54 (AS2), Eesa_50 (AS1), Fingolfin_53 (AS3), Galaxy_49 (AS1), Glotell_54 (AS3), GramZayde_54 (AS2), Gravel_60 (AS1), HamCheese_53 (AS3), HannahPhantana_53 (AS2), Jamun_49 (AS1), Jerole_53 (AS2), Juno112_52 (AS3), KHumphrey_53 (AS3), KendraB23_61 (AS1), Kepler_53 (AS2), Kuleana_53 (AS2), Laphuphu24k_51 (AS3), Leona_52 (AS3), LittleTokyo_50 (AS2), Lunar_53 (AS2), Melons_53 (AS2), Niblet_50 (AS1), Oppalora_52 (AS3), Orcanus_51 (AS1), OtsoOtso_53 (AS2), Pelletreau_60 (AS1), PhirstandPhine_53 (AS2), PhluffyCoco_53 (AS3), Pineda_54 (AS2), Polka_52 (AS2), Rattail_53 (AS3), RedFox_53 (AS3), Renna12_52 (AS3), Ruchi_49 (AS1), Shen_48 (AS1), StuartMinion_44 (AS3), TaylorSipht_51 (AS1), Toad24_53 (AS1), Vulpecula_49 (AS1), Westrich_59 (AS1), WileyE_51 (AS1), Zhuangyuan_54 (AS2), Zixiang_50 (AS1),

Summary by clusters:

There are 3 clusters represented in this pham: AS3, AS2, AS1,

Info for manual annotations of cluster AS1:
•Start number 9 was manually annotated 18 times for cluster AS1.

Info for manual annotations of cluster AS2:
•Start number 9 was manually annotated 19 times for cluster AS2.

Info for manual annotations of cluster AS3:
•Start number 9 was manually annotated 19 times for cluster AS3.

Gene Information:

Gene: Abidatro_52 Start: 33557, Stop: 33799, Start Num: 9
Candidate Starts for Abidatro_52:
(Start: 9 @33557 has 56 MA's), (13, 33596), (16, 33605), (20, 33620), (23, 33629),

Gene: AdoptaAdorbs_52 Start: 32792, Stop: 33037, Start Num: 9
Candidate Starts for AdoptaAdorbs_52:
(Start: 9 @32792 has 56 MA's), (10, 32801), (14, 32837), (15, 32840), (20, 32858), (22, 32864), (36, 32951), (41, 32972),

Gene: AlexMinion_52 Start: 32816, Stop: 33064, Start Num: 9
Candidate Starts for AlexMinion_52:
(6, 32708), (Start: 9 @32816 has 56 MA's), (10, 32825), (14, 32861), (15, 32864), (20, 32882), (22, 32888), (36, 32975), (37, 32978), (41, 32996),

Gene: Amanises_53 Start: 34420, Stop: 34662, Start Num: 9
Candidate Starts for Amanises_53:
(Start: 9 @34420 has 56 MA's), (13, 34459), (20, 34483), (23, 34492), (30, 34528), (42, 34612),

Gene: Amelia_52 Start: 32428, Stop: 32658, Start Num: 9
Candidate Starts for Amelia_52:
(3, 32263), (8, 32338), (Start: 9 @32428 has 56 MA's), (13, 32461), (21, 32485), (26, 32506), (34, 32551), (35, 32560), (38, 32578), (43, 32614),

Gene: AmiCi24_52 Start: 32901, Stop: 33146, Start Num: 9
Candidate Starts for AmiCi24_52:
(Start: 9 @32901 has 56 MA's), (10, 32910), (14, 32946), (15, 32949), (20, 32967), (22, 32973), (36, 33060), (41, 33081),

Gene: Amphitrite_53 Start: 32791, Stop: 33036, Start Num: 9
Candidate Starts for Amphitrite_53:
(Start: 9 @32791 has 56 MA's), (10, 32800), (14, 32836), (15, 32839), (20, 32857), (22, 32863), (36, 32950), (41, 32971),

Gene: Andrew_54 Start: 32798, Stop: 33043, Start Num: 9
Candidate Starts for Andrew_54:
(Start: 9 @32798 has 56 MA's), (10, 32807), (14, 32843), (15, 32846), (20, 32864), (36, 32957), (41, 32978),

Gene: Antrice_53 Start: 32780, Stop: 33019, Start Num: 9

Candidate Starts for Antrice_53:
(Start: 9 @32780 has 56 MA's), (11, 32798), (14, 32822), (17, 32840), (20, 32843), (25, 32864), (28, 32873), (31, 32894), (38, 32942),

Gene: Atlantica_53 Start: 32903, Stop: 33148, Start Num: 9
Candidate Starts for Atlantica_53:
(Start: 9 @32903 has 56 MA's), (10, 32912), (14, 32948), (15, 32951), (20, 32969), (22, 32975), (36, 33062), (41, 33083),

Gene: Azaz_53 Start: 32983, Stop: 33228, Start Num: 9
Candidate Starts for Azaz_53:
(Start: 9 @32983 has 56 MA's), (10, 32992), (14, 33028), (15, 33031), (20, 33049), (36, 33142), (41, 33163),

Gene: Babushka_50 Start: 32713, Stop: 32955, Start Num: 9
Candidate Starts for Babushka_50:
(Start: 9 @32713 has 56 MA's), (10, 32722), (14, 32758), (15, 32761), (20, 32779), (21, 32782), (23, 32788), (24, 32791), (37, 32875), (41, 32893),

Gene: BadWillHunting_58 Start: 32298, Stop: 32525, Start Num: 9
Candidate Starts for BadWillHunting_58:
(3, 32133), (8, 32208), (Start: 9 @32298 has 56 MA's), (13, 32328), (21, 32352), (26, 32373), (34, 32418), (35, 32427), (38, 32445), (43, 32481),

Gene: Basilisk_50 Start: 32777, Stop: 33019, Start Num: 9
Candidate Starts for Basilisk_50:
(Start: 9 @32777 has 56 MA's), (13, 32816), (16, 32825), (20, 32840), (23, 32849), (36, 32930),

Gene: Bedetta_57 Start: 32590, Stop: 32817, Start Num: 9
Candidate Starts for Bedetta_57:
(3, 32425), (8, 32500), (Start: 9 @32590 has 56 MA's), (13, 32620), (21, 32644), (26, 32665), (34, 32710), (35, 32719), (38, 32737), (43, 32773),

Gene: Bibble12_56 Start: 32423, Stop: 32653, Start Num: 9
Candidate Starts for Bibble12_56:
(3, 32258), (8, 32333), (Start: 9 @32423 has 56 MA's), (13, 32456), (21, 32480), (26, 32501), (34, 32546), (35, 32555), (38, 32573), (43, 32609),

Gene: Brynnie_49 Start: 32634, Stop: 32876, Start Num: 9
Candidate Starts for Brynnie_49:
(Start: 9 @32634 has 56 MA's), (13, 32673), (16, 32682), (20, 32697), (22, 32703), (23, 32706), (36, 32787),

Gene: Camara_53 Start: 32794, Stop: 33039, Start Num: 9
Candidate Starts for Camara_53:
(Start: 9 @32794 has 56 MA's), (10, 32803), (14, 32839), (15, 32842), (20, 32860), (22, 32866), (36, 32953), (41, 32974),

Gene: Chickaboom_51 Start: 33089, Stop: 33352, Start Num: 9
Candidate Starts for Chickaboom_51:
(2, 32888), (4, 32942), (5, 32957), (Start: 9 @33089 has 56 MA's), (13, 33128), (16, 33137), (18, 33152), (19, 33158), (20, 33173), (22, 33179), (23, 33182), (36, 33263),

Gene: Chicken_50 Start: 33736, Stop: 33987, Start Num: 9
Candidate Starts for Chicken_50:
(Start: 9 @33736 has 56 MA's), (13, 33775), (20, 33799), (23, 33808), (36, 33889),

Gene: Colusalem_53 Start: 32405, Stop: 32635, Start Num: 9
Candidate Starts for Colusalem_53:
(3, 32240), (8, 32315), (Start: 9 @32405 has 56 MA's), (13, 32438), (21, 32462), (26, 32483), (34, 32528), (35, 32537), (38, 32555), (43, 32591),

Gene: Coral_52 Start: 32296, Stop: 32523, Start Num: 9
Candidate Starts for Coral_52:
(3, 32131), (8, 32206), (Start: 9 @32296 has 56 MA's), (13, 32326), (21, 32350), (26, 32371), (35, 32425), (38, 32443), (43, 32479),

Gene: Cote_54 Start: 32769, Stop: 32996, Start Num: 9
Candidate Starts for Cote_54:
(3, 32604), (8, 32679), (Start: 9 @32769 has 56 MA's), (13, 32799), (21, 32823), (26, 32844), (34, 32889), (35, 32898), (38, 32916), (43, 32952),

Gene: Cygnet_52 Start: 33384, Stop: 33623, Start Num: 9
Candidate Starts for Cygnet_52:
(Start: 9 @33384 has 56 MA's), (11, 33402), (14, 33426), (17, 33444), (20, 33447), (25, 33468), (28, 33477), (29, 33492), (31, 33498), (38, 33546), (39, 33552),

Gene: Damocles_56 Start: 32564, Stop: 32794, Start Num: 9
Candidate Starts for Damocles_56:
(3, 32399), (8, 32474), (Start: 9 @32564 has 56 MA's), (13, 32597), (21, 32621), (26, 32642), (34, 32687), (35, 32696), (38, 32714), (43, 32750),

Gene: DanHam62_53 Start: 32902, Stop: 33147, Start Num: 9
Candidate Starts for DanHam62_53:
(Start: 9 @32902 has 56 MA's), (10, 32911), (14, 32947), (15, 32950), (20, 32968), (22, 32974), (36, 33061), (41, 33082),

Gene: Daob_54 Start: 32780, Stop: 33007, Start Num: 9
Candidate Starts for Daob_54:
(3, 32615), (8, 32690), (Start: 9 @32780 has 56 MA's), (13, 32810), (21, 32834), (26, 32855), (34, 32900), (38, 32927), (43, 32963),

Gene: Eesa_50 Start: 34151, Stop: 34402, Start Num: 9
Candidate Starts for Eesa_50:
(Start: 9 @34151 has 56 MA's), (13, 34190), (20, 34214), (23, 34223), (30, 34259), (36, 34304),

Gene: Fingolfin_53 Start: 32905, Stop: 33150, Start Num: 9
Candidate Starts for Fingolfin_53:
(Start: 9 @32905 has 56 MA's), (10, 32914), (14, 32950), (15, 32953), (20, 32971), (22, 32977), (36, 33064), (41, 33085),

Gene: Galaxy_49 Start: 31972, Stop: 32214, Start Num: 9
Candidate Starts for Galaxy_49:
(Start: 9 @31972 has 56 MA's), (13, 32011), (16, 32020), (20, 32035), (23, 32044), (37, 32128),

Gene: Glotell_54 Start: 32949, Stop: 33194, Start Num: 9

Candidate Starts for Glotell_54:
(Start: 9 @32949 has 56 MA's), (10, 32958), (14, 32994), (15, 32997), (20, 33015), (22, 33021), (36, 33108), (41, 33129),

Gene: GramZayde_54 Start: 32605, Stop: 32832, Start Num: 9
Candidate Starts for GramZayde_54:
(3, 32440), (8, 32515), (Start: 9 @32605 has 56 MA's), (13, 32635), (21, 32659), (26, 32680), (34, 32725), (35, 32734), (38, 32752), (43, 32788),

Gene: Gravel_60 Start: 34235, Stop: 34486, Start Num: 9
Candidate Starts for Gravel_60:
(Start: 9 @34235 has 56 MA's), (13, 34274), (20, 34298), (23, 34307), (30, 34343), (36, 34388),

Gene: HamCheese_53 Start: 32889, Stop: 33134, Start Num: 9
Candidate Starts for HamCheese_53:
(Start: 9 @32889 has 56 MA's), (10, 32898), (14, 32934), (15, 32937), (20, 32955), (22, 32961), (36, 33048), (41, 33069),

Gene: HannahPhantana_53 Start: 32423, Stop: 32653, Start Num: 9
Candidate Starts for HannahPhantana_53:
(3, 32258), (8, 32333), (Start: 9 @32423 has 56 MA's), (13, 32456), (21, 32480), (26, 32501), (34, 32546), (35, 32555), (38, 32573), (43, 32609),

Gene: Jamun_49 Start: 33216, Stop: 33458, Start Num: 9
Candidate Starts for Jamun_49:
(4, 33069), (5, 33084), (Start: 9 @33216 has 56 MA's), (13, 33255), (16, 33264), (23, 33288), (36, 33369),

Gene: Jerole_53 Start: 32547, Stop: 32777, Start Num: 9
Candidate Starts for Jerole_53:
(3, 32382), (8, 32457), (Start: 9 @32547 has 56 MA's), (13, 32580), (21, 32604), (26, 32625), (34, 32670), (35, 32679), (38, 32697), (43, 32733),

Gene: Juno112_52 Start: 32905, Stop: 33150, Start Num: 9
Candidate Starts for Juno112_52:
(Start: 9 @32905 has 56 MA's), (10, 32914), (14, 32950), (15, 32953), (20, 32971), (22, 32977), (36, 33064), (41, 33085),

Gene: KHumphrey_53 Start: 32793, Stop: 33038, Start Num: 9
Candidate Starts for KHumphrey_53:
(Start: 9 @32793 has 56 MA's), (10, 32802), (14, 32838), (15, 32841), (20, 32859), (22, 32865), (36, 32952), (41, 32973),

Gene: KendraB23_61 Start: 34421, Stop: 34663, Start Num: 9
Candidate Starts for KendraB23_61:
(Start: 9 @34421 has 56 MA's), (13, 34460), (20, 34484), (23, 34493), (30, 34529), (42, 34613),

Gene: Kepler_53 Start: 32544, Stop: 32774, Start Num: 9
Candidate Starts for Kepler_53:
(3, 32379), (8, 32454), (Start: 9 @32544 has 56 MA's), (13, 32577), (21, 32601), (26, 32622), (34, 32667), (35, 32676), (38, 32694), (43, 32730),

Gene: Kuleana_53 Start: 32118, Stop: 32369, Start Num: 9

Candidate Starts for Kuleana_53:
(1, 31848), (7, 32004), (8, 32028), (Start: 9 @32118 has 56 MA's), (12, 32163), (13, 32166), (20, 32190), (22, 32196), (26, 32214), (27, 32217), (35, 32268), (36, 32280), (37, 32283), (38, 32286),

Gene: Laphuphu24k_51 Start: 32889, Stop: 33134, Start Num: 9
Candidate Starts for Laphuphu24k_51:
(Start: 9 @32889 has 56 MA's), (10, 32898), (14, 32934), (15, 32937), (20, 32955), (22, 32961), (36, 33048), (41, 33069),

Gene: Leona_52 Start: 32984, Stop: 33229, Start Num: 9
Candidate Starts for Leona_52:
(Start: 9 @32984 has 56 MA's), (10, 32993), (14, 33029), (15, 33032), (20, 33050), (36, 33143), (41, 33164),

Gene: LittleTokyo_50 Start: 31340, Stop: 31582, Start Num: 9
Candidate Starts for LittleTokyo_50:
(Start: 9 @31340 has 56 MA's), (11, 31358), (14, 31382), (17, 31400), (20, 31403), (25, 31424), (28, 31433), (31, 31454), (35, 31484), (39, 31508),

Gene: Lunar_53 Start: 32459, Stop: 32686, Start Num: 9
Candidate Starts for Lunar_53:
(3, 32294), (8, 32369), (Start: 9 @32459 has 56 MA's), (13, 32489), (21, 32513), (26, 32534), (34, 32579), (35, 32588), (38, 32606), (43, 32642),

Gene: Melons_53 Start: 32273, Stop: 32500, Start Num: 9
Candidate Starts for Melons_53:
(3, 32108), (8, 32183), (Start: 9 @32273 has 56 MA's), (13, 32303), (21, 32327), (26, 32348), (34, 32393), (38, 32420), (43, 32456),

Gene: Niblet_50 Start: 33823, Stop: 34074, Start Num: 9
Candidate Starts for Niblet_50:
(Start: 9 @33823 has 56 MA's), (13, 33862), (20, 33886), (23, 33895), (36, 33976),

Gene: Oppalora_52 Start: 32903, Stop: 33148, Start Num: 9
Candidate Starts for Oppalora_52:
(Start: 9 @32903 has 56 MA's), (10, 32912), (14, 32948), (15, 32951), (20, 32969), (22, 32975), (36, 33062), (41, 33083),

Gene: Orcanus_51 Start: 33804, Stop: 34046, Start Num: 9
Candidate Starts for Orcanus_51:
(Start: 9 @33804 has 56 MA's), (13, 33843), (20, 33867), (23, 33876), (30, 33912),

Gene: OtsoOtso_53 Start: 32277, Stop: 32507, Start Num: 9
Candidate Starts for OtsoOtso_53:
(3, 32112), (8, 32187), (Start: 9 @32277 has 56 MA's), (13, 32310), (21, 32334), (26, 32355), (34, 32400), (35, 32409), (38, 32427), (43, 32463),

Gene: Pelletreau_60 Start: 34235, Stop: 34486, Start Num: 9
Candidate Starts for Pelletreau_60:
(Start: 9 @34235 has 56 MA's), (13, 34274), (20, 34298), (23, 34307), (30, 34343), (36, 34388),

Gene: PhirstandPhine_53 Start: 32419, Stop: 32646, Start Num: 9
Candidate Starts for PhirstandPhine_53:

(3, 32254), (8, 32329), (Start: 9 @32419 has 56 MA's), (13, 32449), (21, 32473), (26, 32494), (34, 32539), (35, 32548), (38, 32566), (43, 32602),

Gene: PhluffyCoco_53 Start: 33003, Stop: 33248, Start Num: 9
Candidate Starts for PhluffyCoco_53:
(Start: 9 @33003 has 56 MA's), (10, 33012), (14, 33048), (15, 33051), (20, 33069), (22, 33075), (36, 33162), (40, 33177), (41, 33183),

Gene: Pineda_54 Start: 32588, Stop: 32815, Start Num: 9
Candidate Starts for Pineda_54:
(3, 32423), (8, 32498), (Start: 9 @32588 has 56 MA's), (13, 32618), (21, 32642), (26, 32663), (34, 32708), (38, 32735), (43, 32771),

Gene: Polka_52 Start: 32277, Stop: 32507, Start Num: 9
Candidate Starts for Polka_52:
(3, 32112), (8, 32187), (Start: 9 @32277 has 56 MA's), (13, 32310), (21, 32334), (26, 32355), (34, 32400), (35, 32409), (38, 32427), (43, 32463),

Gene: Rattail_53 Start: 33089, Stop: 33334, Start Num: 9
Candidate Starts for Rattail_53:
(Start: 9 @33089 has 56 MA's), (10, 33098), (14, 33134), (15, 33137), (20, 33155), (22, 33161), (36, 33248), (41, 33269),

Gene: RedFox_53 Start: 33002, Stop: 33247, Start Num: 9
Candidate Starts for RedFox_53:
(Start: 9 @33002 has 56 MA's), (10, 33011), (14, 33047), (15, 33050), (20, 33068), (22, 33074), (36, 33161), (41, 33182),

Gene: Renna12_52 Start: 32855, Stop: 33100, Start Num: 9
Candidate Starts for Renna12_52:
(Start: 9 @32855 has 56 MA's), (10, 32864), (14, 32900), (15, 32903), (20, 32921), (22, 32927), (36, 33014), (38, 33020), (41, 33035),

Gene: Ruchi_49 Start: 32699, Stop: 32941, Start Num: 9
Candidate Starts for Ruchi_49:
(Start: 9 @32699 has 56 MA's), (13, 32738), (16, 32747), (20, 32762), (23, 32771), (36, 32852),

Gene: Shen_48 Start: 32334, Stop: 32576, Start Num: 9
Candidate Starts for Shen_48:
(Start: 9 @32334 has 56 MA's), (13, 32373), (20, 32397), (23, 32406), (30, 32442), (42, 32526),

Gene: StuartMinion_44 Start: 29715, Stop: 29963, Start Num: 9
Candidate Starts for StuartMinion_44:
(6, 29607), (Start: 9 @29715 has 56 MA's), (10, 29724), (14, 29760), (15, 29763), (20, 29781), (22, 29787), (36, 29874), (37, 29877), (41, 29895),

Gene: TaylorSipht_51 Start: 33344, Stop: 33586, Start Num: 9
Candidate Starts for TaylorSipht_51:
(Start: 9 @33344 has 56 MA's), (13, 33383), (20, 33407), (23, 33416), (42, 33536),

Gene: Toad24_53 Start: 34474, Stop: 34716, Start Num: 9
Candidate Starts for Toad24_53:
(Start: 9 @34474 has 56 MA's), (13, 34513), (20, 34537), (23, 34546), (30, 34582), (42, 34666),

Gene: Vulpecula_49 Start: 32359, Stop: 32601, Start Num: 9
Candidate Starts for Vulpecula_49:
(Start: 9 @32359 has 56 MA's), (13, 32398), (16, 32407), (20, 32422), (22, 32428), (23, 32431), (36, 32512),

Gene: Westrich_59 Start: 34159, Stop: 34410, Start Num: 9
Candidate Starts for Westrich_59:
(Start: 9 @34159 has 56 MA's), (13, 34198), (20, 34222), (23, 34231), (30, 34267), (36, 34312),

Gene: WileyE_51 Start: 33089, Stop: 33352, Start Num: 9
Candidate Starts for WileyE_51:
(2, 32888), (4, 32942), (5, 32957), (Start: 9 @33089 has 56 MA's), (13, 33128), (16, 33137), (18, 33152), (19, 33158), (20, 33173), (22, 33179), (23, 33182), (36, 33263),

Gene: Zhuangyuan_54 Start: 33208, Stop: 33450, Start Num: 9
Candidate Starts for Zhuangyuan_54:
(7, 33094), (Start: 9 @33208 has 56 MA's), (11, 33229), (14, 33253), (17, 33271), (20, 33274), (25, 33295), (28, 33304), (29, 33319), (31, 33325), (32, 33334), (33, 33337),

Gene: Zixiang_50 Start: 33838, Stop: 34080, Start Num: 9
Candidate Starts for Zixiang_50:
(Start: 9 @33838 has 56 MA's), (13, 33877), (20, 33901), (23, 33910), (30, 33946), (42, 34030),