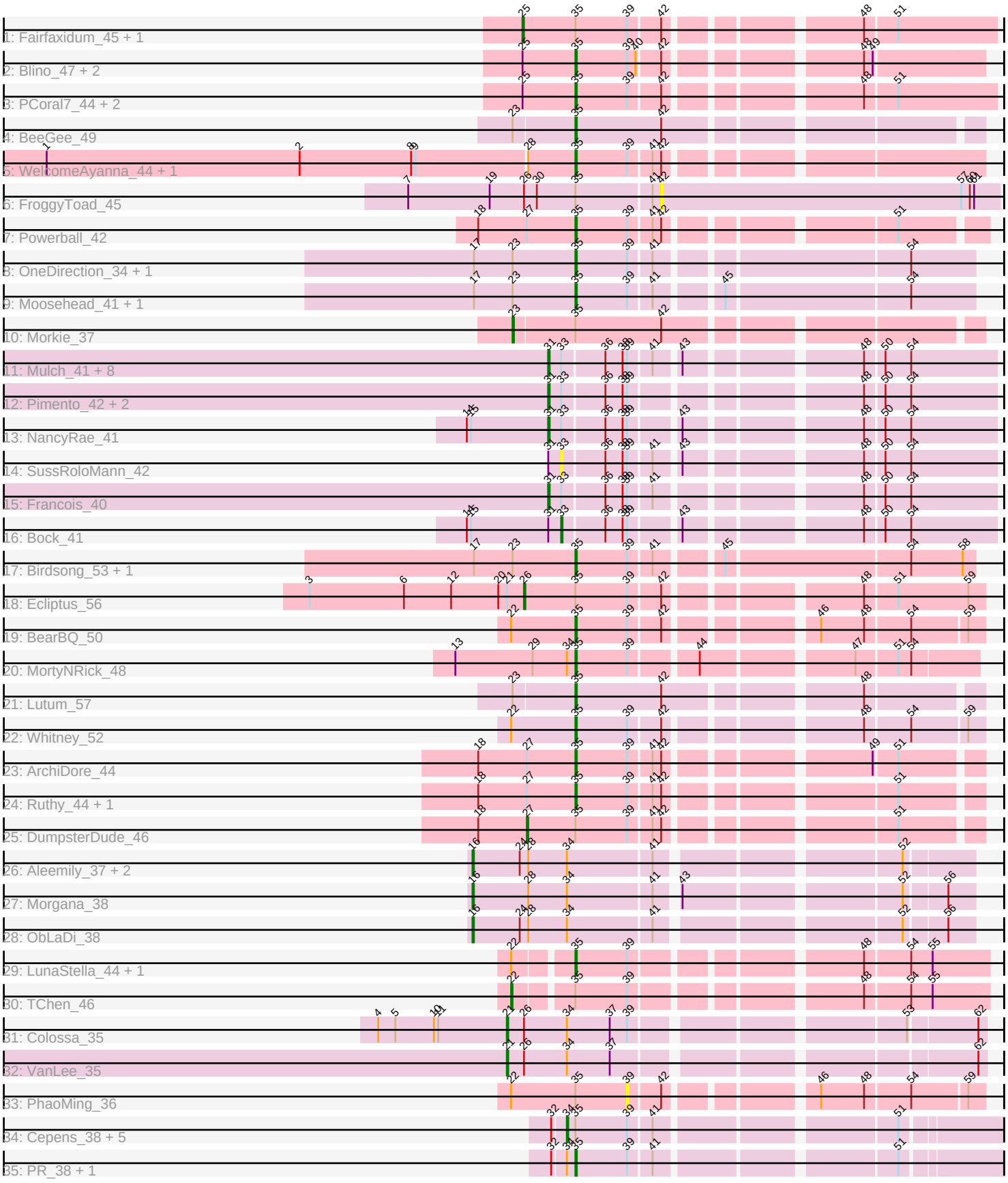
Pham 347612


1: Fairfaxidum_45 + 1
2: Blino_47 + 2
3: PCoral7_44 + 2
4: BeeGee_49
5: WelcomeAyanna_44 + 1
6: FroggyToad_45
7: Powerball_42
8: OneDirection_34 + 1
9: Moosehead_41 + 1
10: Morkie_37
11: Mulch_41 + 8
12: Pimento_42 + 2
13: NancyRae_41
14: SussRoloMann_42
15: Francois_40
16: Bock_41
17: Birdsong_53 + 1
18: Ecliptus_56
19: BearBQ_50
20: MortyNRick_48
21: Lutum_57
22: Whitney_52
23: ArchiDore_44
24: Ruthy_44 + 1
25: DumpsterDude_46
26: Aleemily_37 + 2
27: Morgana_38
28: ObLaDi_38
29: LunaStella_44 + 1
30: TChen_46
31: Colossa_35
32: VanLee_35
33: PhaoMing_36
34: Cepens_38 + 5
35: PR_38 + 1

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 347612 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 347612 has 64 members, 4 are drafts.

Phages represented in each track:
- Track 1 : Fairfaxidum_45, Toast_44
- Track 2 : Blino_47, CarolAnn_46, Soilmate_49
- Track 3 : PCoral7_44, PrincePatrick_43, William_45
- Track 4 : BeeGee_49
- Track 5 : WelcomeAyanna_44, ThankyouJordi_44
- Track 6 : FroggyToad_45
- Track 7 : Powerball_42
- Track 8 : OneDirection_34, BotCity_55
- Track 9 : Moosehead_41, Phabuloso_54
- Track 10 : Morkie_37
- Track 11 : Mulch_41, Ayotoya_41, Chop_41, GrandSlam_41, Nadeem_41, WheatThin_41, Parada_41, Brylie_41, Hamood_41
- Track 12 : Pimento_42, BetterKatz_41, DelRio_42
- Track 13 : NancyRae_41
- Track 14 : SussRoloMann_42
- Track 15 : Francois_40
- Track 16 : Bock_41
- Track 17 : Birdsong_53, Asapag_53
- Track 18 : Ecliptus_56
- Track 19 : BearBQ_50
- Track 20 : MortyNRick_48
- Track 21 : Lutum_57
- Track 22 : Whitney_52
- Track 23 : ArchiDore_44
- Track 24 : Ruthy_44, Malibo_45
- Track 25 : DumpsterDude_46
- Track 26 : Aleemily_37, Cafasso_38, ModicumRichard_38
- Track 27 : Morgana_38
- Track 28 : ObLaDi_38
- Track 29 : LunaStella_44, MooMoo_43
- Track 30 : TChen_46
- Track 31 : Colossa_35
- Track 32 : VanLee_35

• Track 33 : PhaoMing_36
• Track 34 : Cepens_38, Argie_39, Jeon_38, GodPhather_39, Megabear_38, Taptic_38
• Track 35 : PR_38, D12_37

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

The start number called the most often in the published annotations is 35, it was called in 26 of the 60 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ArchiDore_44, Asapag_53, BearBQ_50, BeeGee_49, Birdsong_53, Blino_47, BotCity_55, CarolAnn_46, D12_37, LunaStella_44, Lutum_57, Malibo_45, MooMoo_43, Moosehead_41, MortyNRick_48, OneDirection_34, PCoral7_44, PR_38, Phabuloso_54, Powerball_42, PrincePatrick_43, Ruthy_44, Soilmate_49, ThankyouJordi_44, WelcomeAyanna_44, Whitney_52, William_45,

Genes that have the "Most Annotated" start but do not call it:
• Argie_39, Cepens_38, DumpsterDude_46, Ecliptus_56, Fairfaxidum_45, FroggyToad_45, GodPhather_39, Jeon_38, Megabear_38, Morkie_37, PhaoMing_36, TChen_46, Taptic_38, Toast_44,

Genes that do not have the "Most Annotated" start:
• Aleemily_37, Ayotoya_41, BetterKatz_41, Bock_41, Brylie_41, Cafasso_38, Chop_41, Colossa_35, DelRio_42, Francois_40, GrandSlam_41, Hamood_41, ModicumRichard_38, Morgana_38, Mulch_41, Nadeem_41, NancyRae_41, ObLaDi_38, Parada_41, Pimento_42, SussRoloMann_42, VanLee_35, WheatThin_41,

Summary by start number:

Start 16:
• Found in 5 of 64 (7.8%) of genes in pham
• Manual Annotations of this start: 5 of 60
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aleemily_37 (DZ), Cafasso_38 (DZ), ModicumRichard_38 (DZ), Morgana_38 (DZ), ObLaDi_38 (DZ),

Start 21:
• Found in 3 of 64 (4.7%) of genes in pham
• Manual Annotations of this start: 2 of 60
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Colossa_35 (KA), VanLee_35 (KA),

Start 22:
• Found in 6 of 64 (9.4%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 16.7% of time when present
• Phage (with cluster) where this start called: TChen_46 (F4),

Start 23:
• Found in 9 of 64 (14.1%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Morkie_37 (DH),

Start 25:
• Found in 8 of 64 (12.5%) of genes in pham
• Manual Annotations of this start: 2 of 60
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Fairfaxidum_45 (CV), Toast_44 (CV),

Start 26:
• Found in 4 of 64 (6.2%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Ecliptus_56 (DN),

Start 27:
• Found in 5 of 64 (7.8%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 20.0% of time when present
• Phage (with cluster) where this start called: DumpsterDude_46 (DW),

Start 31:
• Found in 16 of 64 (25.0%) of genes in pham
• Manual Annotations of this start: 14 of 60
• Called 87.5% of time when present
• Phage (with cluster) where this start called: Ayotoya_41 (DI), BetterKatz_41 (DI), Brylie_41 (DI), Chop_41 (DI), DelRio_42 (DI), Francois_40 (DI), GrandSlam_41 (DI), Hamood_41 (DI), Mulch_41 (DI), Nadeem_41 (DI), NancyRae_41 (DI), Parada_41 (DI), Pimento_42 (DI), WheatThin_41 (DI),

Start 33:
• Found in 16 of 64 (25.0%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Bock_41 (DI), SussRoloMann_42 (DI),

Start 34:
• Found in 16 of 64 (25.0%) of genes in pham
• Manual Annotations of this start: 6 of 60
• Called 37.5% of time when present
• Phage (with cluster) where this start called: Argie_39 (W), Cepens_38 (W), GodPhather_39 (W), Jeon_38 (W), Megabear_38 (W), Taptic_38 (W),

Start 35:
• Found in 41 of 64 (64.1%) of genes in pham
• Manual Annotations of this start: 26 of 60
• Called 65.9% of time when present
• Phage (with cluster) where this start called: ArchiDore_44 (DW), Asapag_53 (DN1), BearBQ_50 (DN), BeeGee_49 (CY5), Birdsong_53 (DN), Blino_47 (CV), BotCity_55 (DN), CarolAnn_46 (CV), D12_37 (W), LunaStella_44 (F4), Lutum_57 (DN1),

Malibo_45 (DW), MooMoo_43 (singleton), Moosehead_41 (CZ6), MortyNRick_48 (DN), OneDirection_34 (CZ6), PCoral7_44 (CV), PR_38 (W), Phabuloso_54 (DN1), Powerball_42 (CZ4), PrincePatrick_43 (CV), Ruthy_44 (DW), Soilmate_49 (CV), ThankyouJordi_44 (CZ1), WelcomeAyanna_44 (CZ1), Whitney_52 (DN1), William_45 (CV),

Start 39:
• Found in 54 of 64 (84.4%) of genes in pham
• No Manual Annotations of this start.
• Called 1.9% of time when present
• Phage (with cluster) where this start called: PhaoMing_36 (UNK),

Start 42:
• Found in 23 of 64 (35.9%) of genes in pham
• No Manual Annotations of this start.
• Called 4.3% of time when present
• Phage (with cluster) where this start called: FroggyToad_45 (CZ2),

Summary by clusters:

There are 17 clusters represented in this pham: DN, KA, F4, DH, CY5, DI, CZ2, CZ1, CZ6, singleton, CZ4, DZ, W, DW, DN1, UNK, CV,

Info for manual annotations of cluster CV:
•Start number 25 was manually annotated 2 times for cluster CV.
•Start number 35 was manually annotated 5 times for cluster CV.

Info for manual annotations of cluster CY5:
•Start number 35 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CZ1:
•Start number 35 was manually annotated 2 times for cluster CZ1.

Info for manual annotations of cluster CZ4:
•Start number 35 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ6:
•Start number 35 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster DH:
•Start number 23 was manually annotated 1 time for cluster DH.

Info for manual annotations of cluster DI:
•Start number 31 was manually annotated 14 times for cluster DI.
•Start number 33 was manually annotated 1 time for cluster DI.

Info for manual annotations of cluster DN:
•Start number 26 was manually annotated 1 time for cluster DN.
•Start number 35 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 35 was manually annotated 4 times for cluster DN1.

Info for manual annotations of cluster DW:
•Start number 27 was manually annotated 1 time for cluster DW.
•Start number 35 was manually annotated 3 times for cluster DW.

Info for manual annotations of cluster DZ:
•Start number 16 was manually annotated 5 times for cluster DZ.

Info for manual annotations of cluster F4:
•Start number 22 was manually annotated 1 time for cluster F4.
•Start number 35 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster KA:
•Start number 21 was manually annotated 2 times for cluster KA.

Info for manual annotations of cluster W:
•Start number 34 was manually annotated 6 times for cluster W.
•Start number 35 was manually annotated 2 times for cluster W.

Gene Information:

Gene: Aleemily_37 Start: 31413, Stop: 31730, Start Num: 16
Candidate Starts for Aleemily_37:
(Start: 16 @31413 has 5 MA's), (24, 31446), (28, 31452), (Start: 34 @31479 has 6 MA's), (41, 31536), (52, 31686),

Gene: ArchiDore_44 Start: 36013, Stop: 36261, Start Num: 35
Candidate Starts for ArchiDore_44:
(18, 35947), (Start: 27 @35980 has 1 MA's), (Start: 35 @36013 has 26 MA's), (39, 36049), (41, 36064), (42, 36070), (49, 36193), (51, 36208),

Gene: Argie_39 Start: 38767, Stop: 39039, Start Num: 34
Candidate Starts for Argie_39:
(32, 38758), (Start: 34 @38767 has 6 MA's), (Start: 35 @38773 has 26 MA's), (39, 38809), (41, 38824), (51, 38974),

Gene: Asapag_53 Start: 35734, Stop: 35991, Start Num: 35
Candidate Starts for Asapag_53:
(17, 35665), (Start: 23 @35692 has 1 MA's), (Start: 35 @35734 has 26 MA's), (39, 35770), (41, 35785), (45, 35824), (54, 35947), (58, 35983),

Gene: Ayotoya_41 Start: 33075, Stop: 33353, Start Num: 31
Candidate Starts for Ayotoya_41:
(Start: 31 @33075 has 14 MA's), (Start: 33 @33084 has 1 MA's), (36, 33111), (38, 33123), (39, 33126), (41, 33141), (43, 33156), (48, 33264), (50, 33276), (54, 33294),

Gene: BearBQ_50 Start: 36850, Stop: 37101, Start Num: 35
Candidate Starts for BearBQ_50:
(Start: 22 @36805 has 1 MA's), (Start: 35 @36850 has 26 MA's), (39, 36886), (42, 36907), (46, 36994), (48, 37024), (54, 37054), (59, 37090),

Gene: BeeGee_49 Start: 36014, Stop: 36271, Start Num: 35
Candidate Starts for BeeGee_49:
(Start: 23 @35972 has 1 MA's), (Start: 35 @36014 has 26 MA's), (42, 36074),

Gene: BetterKatz_41 Start: 32601, Stop: 32837, Start Num: 31
Candidate Starts for BetterKatz_41:
(Start: 31 @32601 has 14 MA's), (Start: 33 @32610 has 1 MA's), (36, 32637), (38, 32649), (39, 32652), (48, 32790), (50, 32802), (54, 32820),

Gene: Birdsong_53 Start: 35955, Stop: 36212, Start Num: 35
Candidate Starts for Birdsong_53:
(17, 35886), (Start: 23 @35913 has 1 MA's), (Start: 35 @35955 has 26 MA's), (39, 35991), (41, 36006), (45, 36045), (54, 36168), (58, 36204),

Gene: Blino_47 Start: 38067, Stop: 38321, Start Num: 35
Candidate Starts for Blino_47:
(Start: 25 @38031 has 2 MA's), (Start: 35 @38067 has 26 MA's), (39, 38103), (40, 38109), (42, 38124), (48, 38241), (49, 38247),

Gene: Bock_41 Start: 32304, Stop: 32573, Start Num: 33
Candidate Starts for Bock_41:
(14, 32238), (15, 32241), (Start: 31 @32295 has 14 MA's), (Start: 33 @32304 has 1 MA's), (36, 32331), (38, 32343), (39, 32346), (43, 32376), (48, 32484), (50, 32496), (54, 32514),

Gene: BotCity_55 Start: 36501, Stop: 36758, Start Num: 35
Candidate Starts for BotCity_55:
(17, 36432), (Start: 23 @36459 has 1 MA's), (Start: 35 @36501 has 26 MA's), (39, 36537), (41, 36552), (54, 36714),

Gene: Brylie_41 Start: 32342, Stop: 32620, Start Num: 31
Candidate Starts for Brylie_41:
(Start: 31 @32342 has 14 MA's), (Start: 33 @32351 has 1 MA's), (36, 32378), (38, 32390), (39, 32393), (41, 32408), (43, 32423), (48, 32531), (50, 32543), (54, 32561),

Gene: Cafasso_38 Start: 31987, Stop: 32304, Start Num: 16
Candidate Starts for Cafasso_38:
(Start: 16 @31987 has 5 MA's), (24, 32020), (28, 32026), (Start: 34 @32053 has 6 MA's), (41, 32110), (52, 32260),

Gene: CarolAnn_46 Start: 38066, Stop: 38320, Start Num: 35
Candidate Starts for CarolAnn_46:
(Start: 25 @38030 has 2 MA's), (Start: 35 @38066 has 26 MA's), (39, 38102), (40, 38108), (42, 38123), (48, 38240), (49, 38246),

Gene: Cepens_38 Start: 38482, Stop: 38754, Start Num: 34
Candidate Starts for Cepens_38:
(32, 38473), (Start: 34 @38482 has 6 MA's), (Start: 35 @38488 has 26 MA's), (39, 38524), (41, 38539), (51, 38689),

Gene: Chop_41 Start: 32822, Stop: 33100, Start Num: 31
Candidate Starts for Chop_41:

(Start: 31 @32822 has 14 MA's), (Start: 33 @32831 has 1 MA's), (36, 32858), (38, 32870), (39, 32873), (41, 32888), (43, 32903), (48, 33011), (50, 33023), (54, 33041),

Gene: Colossa_35 Start: 29052, Stop: 29354, Start Num: 21
Candidate Starts for Colossa_35:
(4, 28962), (5, 28974), (10, 29001), (11, 29004), (Start: 21 @29052 has 2 MA's), (Start: 26 @29064 has 1 MA's), (Start: 34 @29094 has 6 MA's), (37, 29124), (39, 29136), (53, 29304), (62, 29349),

Gene: D12_37 Start: 39036, Stop: 39302, Start Num: 35
Candidate Starts for D12_37:
(32, 39021), (Start: 34 @39030 has 6 MA's), (Start: 35 @39036 has 26 MA's), (39, 39072), (41, 39087), (51, 39237),

Gene: DelRio_42 Start: 33530, Stop: 33808, Start Num: 31
Candidate Starts for DelRio_42:
(Start: 31 @33530 has 14 MA's), (Start: 33 @33539 has 1 MA's), (36, 33566), (38, 33578), (39, 33581), (48, 33719), (50, 33731), (54, 33749),

Gene: DumpsterDude_46 Start: 38205, Stop: 38486, Start Num: 27
Candidate Starts for DumpsterDude_46:
(18, 38172), (Start: 27 @38205 has 1 MA's), (Start: 35 @38238 has 26 MA's), (39, 38274), (41, 38289), (42, 38295), (51, 38433),

Gene: Ecliptus_56 Start: 37774, Stop: 38064, Start Num: 26
Candidate Starts for Ecliptus_56:
(3, 37624), (6, 37690), (12, 37723), (20, 37756), (Start: 21 @37762 has 2 MA's), (Start: 26 @37774 has 1 MA's), (Start: 35 @37810 has 26 MA's), (39, 37846), (42, 37867), (48, 37984), (51, 38005), (59, 38053),

Gene: Fairfaxidum_45 Start: 35457, Stop: 35756, Start Num: 25
Candidate Starts for Fairfaxidum_45:
(Start: 25 @35457 has 2 MA's), (Start: 35 @35493 has 26 MA's), (39, 35529), (42, 35550), (48, 35667), (51, 35688),

Gene: Francois_40 Start: 32426, Stop: 32704, Start Num: 31
Candidate Starts for Francois_40:
(Start: 31 @32426 has 14 MA's), (Start: 33 @32435 has 1 MA's), (36, 32462), (38, 32474), (39, 32477), (41, 32492), (48, 32615), (50, 32627), (54, 32645),

Gene: FroggyToad_45 Start: 32883, Stop: 33119, Start Num: 42
Candidate Starts for FroggyToad_45:
(7, 32709), (19, 32766), (Start: 26 @32790 has 1 MA's), (30, 32799), (Start: 35 @32826 has 26 MA's), (41, 32877), (42, 32883), (57, 33093), (60, 33099), (61, 33102),

Gene: GodPhather_39 Start: 39246, Stop: 39518, Start Num: 34
Candidate Starts for GodPhather_39:
(32, 39237), (Start: 34 @39246 has 6 MA's), (Start: 35 @39252 has 26 MA's), (39, 39288), (41, 39303), (51, 39453),

Gene: GrandSlam_41 Start: 32822, Stop: 33100, Start Num: 31
Candidate Starts for GrandSlam_41:
(Start: 31 @32822 has 14 MA's), (Start: 33 @32831 has 1 MA's), (36, 32858), (38, 32870), (39, 32873), (41, 32888), (43, 32903), (48, 33011), (50, 33023), (54, 33041),

Gene: Hamood_41 Start: 32822, Stop: 33100, Start Num: 31
Candidate Starts for Hamood_41:
(Start: 31 @32822 has 14 MA's), (Start: 33 @32831 has 1 MA's), (36, 32858), (38, 32870), (39, 32873), (41, 32888), (43, 32903), (48, 33011), (50, 33023), (54, 33041),

Gene: Jeon_38 Start: 38988, Stop: 39260, Start Num: 34
Candidate Starts for Jeon_38:
(32, 38979), (Start: 34 @38988 has 6 MA's), (Start: 35 @38994 has 26 MA's), (39, 39030), (41, 39045), (51, 39195),

Gene: LunaStella_44 Start: 33802, Stop: 34059, Start Num: 35
Candidate Starts for LunaStella_44:
(Start: 22 @33766 has 1 MA's), (Start: 35 @33802 has 26 MA's), (39, 33838), (48, 33976), (54, 34006), (55, 34021),

Gene: Lutum_57 Start: 36995, Stop: 37252, Start Num: 35
Candidate Starts for Lutum_57:
(Start: 23 @36953 has 1 MA's), (Start: 35 @36995 has 26 MA's), (42, 37055), (48, 37178),

Gene: Malibo_45 Start: 35237, Stop: 35485, Start Num: 35
Candidate Starts for Malibo_45:
(18, 35171), (Start: 27 @35204 has 1 MA's), (Start: 35 @35237 has 26 MA's), (39, 35273), (41, 35288), (42, 35294), (51, 35432),

Gene: Megabear_38 Start: 38403, Stop: 38675, Start Num: 34
Candidate Starts for Megabear_38:
(32, 38394), (Start: 34 @38403 has 6 MA's), (Start: 35 @38409 has 26 MA's), (39, 38445), (41, 38460), (51, 38610),

Gene: ModicumRichard_38 Start: 31986, Stop: 32303, Start Num: 16
Candidate Starts for ModicumRichard_38:
(Start: 16 @31986 has 5 MA's), (24, 32019), (28, 32025), (Start: 34 @32052 has 6 MA's), (41, 32109), (52, 32259),

Gene: MooMoo_43 Start: 34078, Stop: 34335, Start Num: 35
Candidate Starts for MooMoo_43:
(Start: 22 @34042 has 1 MA's), (Start: 35 @34078 has 26 MA's), (39, 34114), (48, 34252), (54, 34282), (55, 34297),

Gene: Moosehead_41 Start: 28984, Stop: 29241, Start Num: 35
Candidate Starts for Moosehead_41:
(17, 28915), (Start: 23 @28942 has 1 MA's), (Start: 35 @28984 has 26 MA's), (39, 29020), (41, 29035), (45, 29074), (54, 29197),

Gene: Morgana_38 Start: 31938, Stop: 32255, Start Num: 16
Candidate Starts for Morgana_38:
(Start: 16 @31938 has 5 MA's), (28, 31977), (Start: 34 @32004 has 6 MA's), (41, 32061), (43, 32073), (52, 32211), (56, 32238),

Gene: Morkie_37 Start: 28817, Stop: 29116, Start Num: 23
Candidate Starts for Morkie_37:
(Start: 23 @28817 has 1 MA's), (Start: 35 @28859 has 26 MA's), (42, 28919),

Gene: MortyNRick_48 Start: 36007, Stop: 36261, Start Num: 35
Candidate Starts for MortyNRick_48:
(13, 35923), (29, 35977), (Start: 34 @36001 has 6 MA's), (Start: 35 @36007 has 26 MA's), (39, 36043), (44, 36085), (47, 36181), (51, 36208), (54, 36217),

Gene: Mulch_41 Start: 32342, Stop: 32620, Start Num: 31
Candidate Starts for Mulch_41:
(Start: 31 @32342 has 14 MA's), (Start: 33 @32351 has 1 MA's), (36, 32378), (38, 32390), (39, 32393), (41, 32408), (43, 32423), (48, 32531), (50, 32543), (54, 32561),

Gene: Nadeem_41 Start: 32342, Stop: 32620, Start Num: 31
Candidate Starts for Nadeem_41:
(Start: 31 @32342 has 14 MA's), (Start: 33 @32351 has 1 MA's), (36, 32378), (38, 32390), (39, 32393), (41, 32408), (43, 32423), (48, 32531), (50, 32543), (54, 32561),

Gene: NancyRae_41 Start: 32352, Stop: 32630, Start Num: 31
Candidate Starts for NancyRae_41:
(14, 32295), (15, 32298), (Start: 31 @32352 has 14 MA's), (Start: 33 @32361 has 1 MA's), (36, 32388), (38, 32400), (39, 32403), (43, 32433), (48, 32541), (50, 32553), (54, 32571),

Gene: ObLaDi_38 Start: 31970, Stop: 32287, Start Num: 16
Candidate Starts for ObLaDi_38:
(Start: 16 @31970 has 5 MA's), (24, 32003), (28, 32009), (Start: 34 @32036 has 6 MA's), (41, 32093), (52, 32243), (56, 32270),

Gene: OneDirection_34 Start: 27370, Stop: 27627, Start Num: 35
Candidate Starts for OneDirection_34:
(17, 27301), (Start: 23 @27328 has 1 MA's), (Start: 35 @27370 has 26 MA's), (39, 27406), (41, 27421), (54, 27583),

Gene: PCoral7_44 Start: 34911, Stop: 35174, Start Num: 35
Candidate Starts for PCoral7_44:
(Start: 25 @34875 has 2 MA's), (Start: 35 @34911 has 26 MA's), (39, 34947), (42, 34968), (48, 35085), (51, 35106),

Gene: PR_38 Start: 39013, Stop: 39279, Start Num: 35
Candidate Starts for PR_38:
(32, 38998), (Start: 34 @39007 has 6 MA's), (Start: 35 @39013 has 26 MA's), (39, 39049), (41, 39064), (51, 39214),

Gene: Parada_41 Start: 32342, Stop: 32620, Start Num: 31
Candidate Starts for Parada_41:
(Start: 31 @32342 has 14 MA's), (Start: 33 @32351 has 1 MA's), (36, 32378), (38, 32390), (39, 32393), (41, 32408), (43, 32423), (48, 32531), (50, 32543), (54, 32561),

Gene: Phabuloso_54 Start: 36332, Stop: 36589, Start Num: 35
Candidate Starts for Phabuloso_54:
(17, 36263), (Start: 23 @36290 has 1 MA's), (Start: 35 @36332 has 26 MA's), (39, 36368), (41, 36383), (45, 36422), (54, 36545),

Gene: PhaoMing_36 Start: 32372, Stop: 32587, Start Num: 39
Candidate Starts for PhaoMing_36:

(Start: 22 @32291 has 1 MA's), (Start: 35 @32336 has 26 MA's), (39, 32372), (42, 32393), (46, 32480), (48, 32510), (54, 32540), (59, 32576),

Gene: Pimento_42 Start: 31999, Stop: 32277, Start Num: 31
Candidate Starts for Pimento_42:
(Start: 31 @31999 has 14 MA's), (Start: 33 @32008 has 1 MA's), (36, 32035), (38, 32047), (39, 32050), (48, 32188), (50, 32200), (54, 32218),

Gene: Powerball_42 Start: 33050, Stop: 33301, Start Num: 35
Candidate Starts for Powerball_42:
(18, 32984), (Start: 27 @33017 has 1 MA's), (Start: 35 @33050 has 26 MA's), (39, 33086), (41, 33101), (42, 33107), (51, 33245),

Gene: PrincePatrick_43 Start: 33264, Stop: 33527, Start Num: 35
Candidate Starts for PrincePatrick_43:
(Start: 25 @33228 has 2 MA's), (Start: 35 @33264 has 26 MA's), (39, 33300), (42, 33321), (48, 33438), (51, 33459),

Gene: Ruthy_44 Start: 35600, Stop: 35848, Start Num: 35
Candidate Starts for Ruthy_44:
(18, 35534), (Start: 27 @35567 has 1 MA's), (Start: 35 @35600 has 26 MA's), (39, 35636), (41, 35651), (42, 35657), (51, 35795),

Gene: Soilmate_49 Start: 38066, Stop: 38320, Start Num: 35
Candidate Starts for Soilmate_49:
(Start: 25 @38030 has 2 MA's), (Start: 35 @38066 has 26 MA's), (39, 38102), (40, 38108), (42, 38123), (48, 38240), (49, 38246),

Gene: SussRoloMann_42 Start: 32351, Stop: 32620, Start Num: 33
Candidate Starts for SussRoloMann_42:
(Start: 31 @32342 has 14 MA's), (Start: 33 @32351 has 1 MA's), (36, 32378), (38, 32390), (39, 32393), (41, 32408), (43, 32423), (48, 32531), (50, 32543), (54, 32561),

Gene: TChen_46 Start: 35717, Stop: 36010, Start Num: 22
Candidate Starts for TChen_46:
(Start: 22 @35717 has 1 MA's), (Start: 35 @35753 has 26 MA's), (39, 35789), (48, 35927), (54, 35957), (55, 35972),

Gene: Taptic_38 Start: 38403, Stop: 38675, Start Num: 34
Candidate Starts for Taptic_38:
(32, 38394), (Start: 34 @38403 has 6 MA's), (Start: 35 @38409 has 26 MA's), (39, 38445), (41, 38460), (51, 38610),

Gene: ThankyouJordi_44 Start: 36245, Stop: 36499, Start Num: 35
Candidate Starts for ThankyouJordi_44:
(1, 35879), (2, 36056), (8, 36134), (9, 36137), (28, 36212), (Start: 35 @36245 has 26 MA's), (39, 36281), (41, 36296), (42, 36302),

Gene: Toast_44 Start: 34875, Stop: 35174, Start Num: 25
Candidate Starts for Toast_44:
(Start: 25 @34875 has 2 MA's), (Start: 35 @34911 has 26 MA's), (39, 34947), (42, 34968), (48, 35085), (51, 35106),

Gene: VanLee_35 Start: 29075, Stop: 29377, Start Num: 21
Candidate Starts for VanLee_35:
(Start: 21 @29075 has 2 MA's), (Start: 26 @29087 has 1 MA's), (Start: 34 @29117 has 6 MA's), (37, 29147), (62, 29372),

Gene: WelcomeAyanna_44 Start: 36392, Stop: 36646, Start Num: 35
Candidate Starts for WelcomeAyanna_44:
(1, 36026), (2, 36203), (8, 36281), (9, 36284), (28, 36359), (Start: 35 @36392 has 26 MA's), (39, 36428), (41, 36443), (42, 36449),

Gene: WheatThin_41 Start: 32342, Stop: 32620, Start Num: 31
Candidate Starts for WheatThin_41:
(Start: 31 @32342 has 14 MA's), (Start: 33 @32351 has 1 MA's), (36, 32378), (38, 32390), (39, 32393), (41, 32408), (43, 32423), (48, 32531), (50, 32543), (54, 32561),

Gene: Whitney_52 Start: 37087, Stop: 37338, Start Num: 35
Candidate Starts for Whitney_52:
(Start: 22 @37042 has 1 MA's), (Start: 35 @37087 has 26 MA's), (39, 37123), (42, 37144), (48, 37261), (54, 37291), (59, 37327),

Gene: William_45 Start: 34949, Stop: 35212, Start Num: 35
Candidate Starts for William_45:
(Start: 25 @34913 has 2 MA's), (Start: 35 @34949 has 26 MA's), (39, 34985), (42, 35006), (48, 35123), (51, 35144),