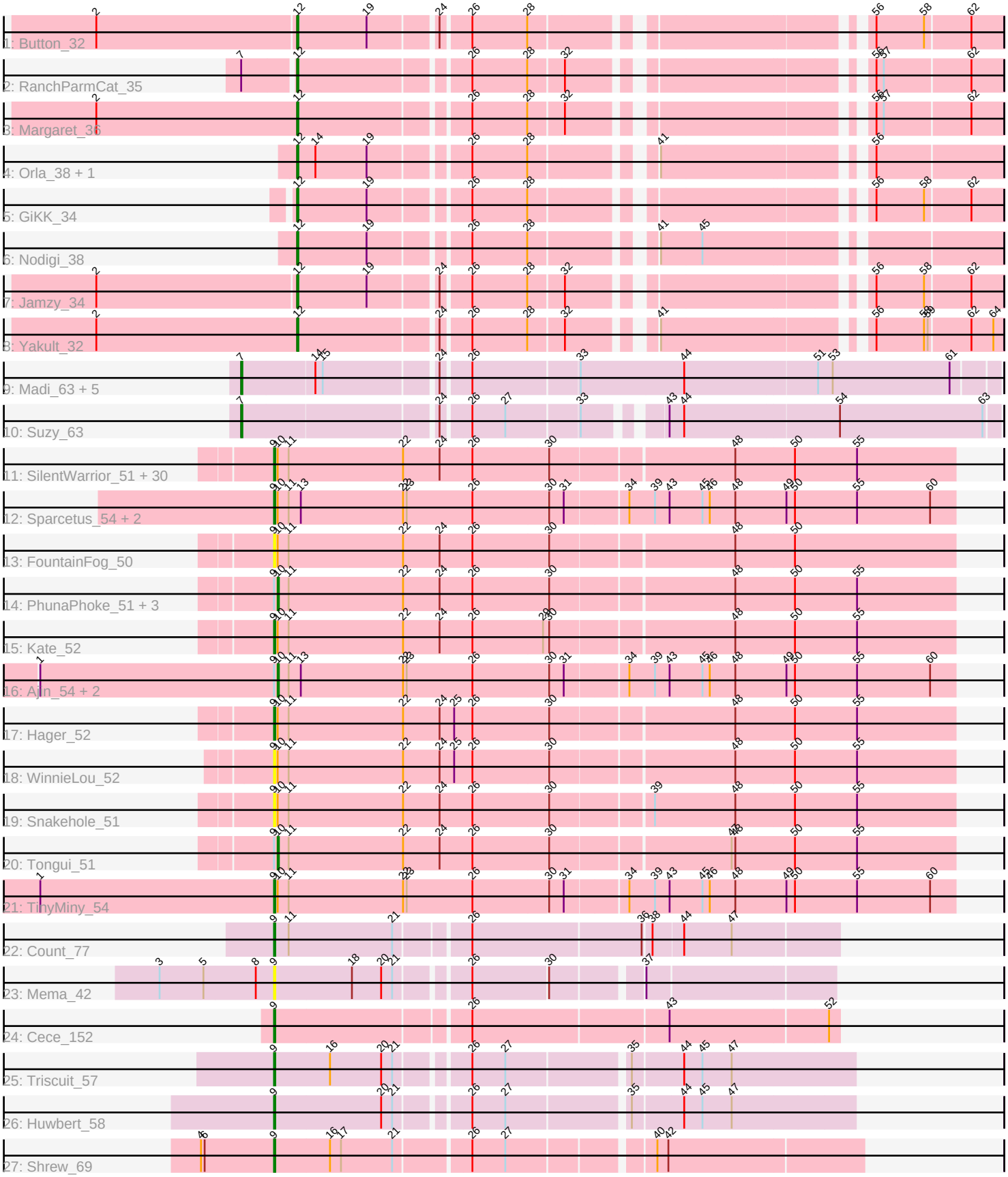
Pham 343961


1: Button_32
2: RanchParmCat_35
3: Margaret_36
4: Orla_38 + 1
5: GiKK_34
6: Nodigi_38
7: Jamzy_34
8: Yakult_32
9: Madi_63 + 5
10: Suzy_63
11: SilentWarrior_51 + 30
12: Sparcetus_54 + 2
13: FountainFog_50
14: PhunaPhoke_51 + 3
15: Kate_52
16: Ajin_54 + 2
17: Hager_52
18: WinnieLou_52
19: Snakehole_51
20: Tongui_51
21: TinyMiny_54
22: Count_77
23: Mema_42
24: Cece_152
25: Triscuit_57
26: Huwbert_58
27: Shrew_69

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 343961 Report

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

Pham number 343961 has 70 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Button_32
• Track 2 : RanchParmCat_35
• Track 3 : Margaret_36
• Track 4 : Orla_38, Hexbug_38
• Track 5 : GiKK_34
• Track 6 : Nodigi_38
• Track 7 : Jamzy_34
• Track 8 : Yakult_32
• Track 9 : Madi_63, BiteSize_63, Terapin_64, Beyoncage_63, Sienna_63, Djokovic_63
• Track 10 : Suzy_63
• Track 11 : SilentWarrior_51, JingleBells_51, Tedro_51, CoolCookie_51, Cybele_51, Erudite_50, OverHedge_51, Hiddenleaf_51, FreddieHg_51, DannyDe_51, MortySmith_49, Artiphact_51, AnnaSerena_51, Gilda_51, Rie18_51, OhDear_51, NarutoRun_51, Aesir_50, SafetyGuy_51, Krampus_51, Chivey_51, Potty_51, Pharpay_51, JDawG_50, Anakin_51, Neptune_51, Crestdrop_51, Poultress_50, Rachella_51, Dauntless_50, Haunter_51
• Track 12 : Sparcetus_54, Kors_54, RikSengupta_54
• Track 13 : FountainFog_50
• Track 14 : PhunaPhoke_51, Karate_50, Annapurna_51, Tiggy93_51
• Track 15 : Kate_52
• Track 16 : Ajin_54, LordBart_54, Bramble_54
• Track 17 : Hager_52
• Track 18 : WinnieLou_52
• Track 19 : Snakehole_51
• Track 20 : Tongui_51
• Track 21 : TinyMiny_54
• Track 22 : Count_77
• Track 23 : Mema_42
• Track 24 : Cece_152
• Track 25 : Triscuit_57
• Track 26 : Huwbert_58
• Track 27 : Shrew_69

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 41 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aesir_50, Anakin_51, AnnaSerena_51, Artiphact_51, Cece_152, Chivey_51, CoolCookie_51, Count_77, Crestdrop_51, Cybele_51, DannyDe_51, Dauntless_50, Erudite_50, FountainFog_50, FreddieHg_51, Gilda_51, Hager_52, Haunter_51, Hiddenleaf_51, Huwbert_58, JDawG_50, JingleBells_51, Kate_52, Kors_54, Krampus_51, Mema_42, MortySmith_49, NarutoRun_51, Neptune_51, OhDear_51, OverHedge_51, Pharpay_51, Potty_51, Poultress_50, Rachella_51, Rie18_51, RikSengupta_54, SafetyGuy_51, Shrew_69, SilentWarrior_51, Snakehole_51, Sparcetus_54, Tedro_51, TinyMiny_54, Triscuit_57, WinnieLou_52,

Genes that have the "Most Annotated" start but do not call it:
• Ajin_54, Annapurna_51, Bramble_54, Karate_50, LordBart_54, PhunaPhoke_51, Tiggy93_51, Tongui_51,

Genes that do not have the "Most Annotated" start:
• Beyoncage_63, BiteSize_63, Button_32, Djokovic_63, GiKK_34, Hexbug_38, Jamzy_34, Madi_63, Margaret_36, Nodigi_38, Orla_38, RanchParmCat_35, Sienna_63, Suzy_63, Terapin_64, Yakult_32,

Summary by start number:

Start 7:
• Found in 8 of 70 (11.4%) of genes in pham
• Manual Annotations of this start: 7 of 65
• Called 87.5% of time when present
• Phage (with cluster) where this start called: Beyoncage_63 (DG1), BiteSize_63 (DG1), Djokovic_63 (DG1), Madi_63 (DG1), Sienna_63 (DG1), Suzy_63 (DG1), Terapin_64 (DG1),

Start 9:
• Found in 54 of 70 (77.1%) of genes in pham
• Manual Annotations of this start: 41 of 65
• Called 85.2% of time when present
• Phage (with cluster) where this start called: Aesir_50 (EF), Anakin_51 (EF), AnnaSerena_51 (EF), Artiphact_51 (EF), Cece_152 (GD3), Chivey_51 (EF), CoolCookie_51 (EF), Count_77 (EL), Crestdrop_51 (EF), Cybele_51 (EF), DannyDe_51 (EF), Dauntless_50 (EF), Erudite_50 (EF), FountainFog_50 (EF), FreddieHg_51 (EF), Gilda_51 (EF), Hager_52 (EF), Haunter_51 (EF), Hiddenleaf_51 (EF), Huwbert_58 (GG), JDawG_50 (EF), JingleBells_51 (EF), Kate_52 (EF), Kors_54 (EF), Krampus_51 (EF), Mema_42 (EL), MortySmith_49 (EF), NarutoRun_51 (EF), Neptune_51 (EF), OhDear_51 (EF), OverHedge_51 (EF), Pharpay_51 (EF), Potty_51 (EF), Poultress_50 (EF), Rachella_51 (EF), Rie18_51 (EF), RikSengupta_54 (EF), SafetyGuy_51 (EF), Shrew_69 (singleton), SilentWarrior_51 (EF), Snakehole_51 (EF), Sparcetus_54 (EF), Tedro_51 (EF), TinyMiny_54 (EF), Triscuit_57 (GG), WinnieLou_52 (EF),

Start 10:
• Found in 48 of 70 (68.6%) of genes in pham
• Manual Annotations of this start: 8 of 65

• Called 16.7% of time when present
• Phage (with cluster) where this start called: Ajin_54 (EF), Annapurna_51 (EF), Bramble_54 (EF), Karate_50 (EF), LordBart_54 (EF), PhunaPhoke_51 (EF), Tiggy93_51 (EF), Tongui_51 (EF),

Start 12:
• Found in 9 of 70 (12.9%) of genes in pham
• Manual Annotations of this start: 9 of 65
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Button_32 (CT), GiKK_34 (CT), Hexbug_38 (CT), Jamzy_34 (CT), Margaret_36 (CT), Nodigi_38 (CT), Orla_38 (CT), RanchParmCat_35 (CT), Yakult_32 (CT),

Summary by clusters:

There are 7 clusters represented in this pham: EL, singleton, GD3, EF, GG, DG1, CT,

Info for manual annotations of cluster CT:
•Start number 12 was manually annotated 9 times for cluster CT.

Info for manual annotations of cluster DG1:
•Start number 7 was manually annotated 7 times for cluster DG1.

Info for manual annotations of cluster EF:
•Start number 9 was manually annotated 36 times for cluster EF.
•Start number 10 was manually annotated 8 times for cluster EF.

Info for manual annotations of cluster EL:
•Start number 9 was manually annotated 1 time for cluster EL.

Info for manual annotations of cluster GD3:
•Start number 9 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GG:
•Start number 9 was manually annotated 2 times for cluster GG.

Gene Information:

Gene: Aesir_50 Start: 36292, Stop: 36837, Start Num: 9
Candidate Starts for Aesir_50:
(Start: 9 @36292 has 41 MA's), (Start: 10 @36295 has 8 MA's), (11, 36304), (22, 36397), (24, 36427), (26, 36454), (30, 36514), (48, 36658), (50, 36706), (55, 36757),

Gene: Ajin_54 Start: 37227, Stop: 37772, Start Num: 10
Candidate Starts for Ajin_54:
(1, 37032), (Start: 9 @37224 has 41 MA's), (Start: 10 @37227 has 8 MA's), (11, 37236), (13, 37245), (22, 37329), (23, 37332), (26, 37386), (30, 37446), (31, 37458), (34, 37506), (39, 37527), (43, 37539), (45, 37566), (46, 37572), (48, 37593), (49, 37635), (50, 37641), (55, 37692), (60, 37752),

Gene: Anakin_51 Start: 36651, Stop: 37196, Start Num: 9
Candidate Starts for Anakin_51:

(Start: 9 @36651 has 41 MA's), (Start: 10 @36654 has 8 MA's), (11, 36663), (22, 36756), (24, 36786), (26, 36813), (30, 36873), (48, 37017), (50, 37065), (55, 37116),

Gene: AnnaSerena_51 Start: 36685, Stop: 37230, Start Num: 9
Candidate Starts for AnnaSerena_51:
(Start: 9 @36685 has 41 MA's), (Start: 10 @36688 has 8 MA's), (11, 36697), (22, 36790), (24, 36820), (26, 36847), (30, 36907), (48, 37051), (50, 37099), (55, 37150),

Gene: Annapurna_51 Start: 35762, Stop: 36304, Start Num: 10
Candidate Starts for Annapurna_51:
(Start: 9 @35759 has 41 MA's), (Start: 10 @35762 has 8 MA's), (11, 35771), (22, 35864), (24, 35894), (26, 35921), (30, 35981), (48, 36125), (50, 36173), (55, 36224),

Gene: Artiphact_51 Start: 36675, Stop: 37220, Start Num: 9
Candidate Starts for Artiphact_51:
(Start: 9 @36675 has 41 MA's), (Start: 10 @36678 has 8 MA's), (11, 36687), (22, 36780), (24, 36810), (26, 36837), (30, 36897), (48, 37041), (50, 37089), (55, 37140),

Gene: Beyoncage_63 Start: 45935, Stop: 46522, Start Num: 7
Candidate Starts for Beyoncage_63:
(Start: 7 @45935 has 7 MA's), (14, 45992), (15, 45998), (24, 46085), (26, 46106), (33, 46190), (44, 46274), (51, 46379), (53, 46391), (61, 46487),

Gene: BiteSize_63 Start: 46021, Stop: 46608, Start Num: 7
Candidate Starts for BiteSize_63:
(Start: 7 @46021 has 7 MA's), (14, 46078), (15, 46084), (24, 46171), (26, 46192), (33, 46276), (44, 46360), (51, 46465), (53, 46477), (61, 46573),

Gene: Bramble_54 Start: 37276, Stop: 37821, Start Num: 10
Candidate Starts for Bramble_54:
(1, 37081), (Start: 9 @37273 has 41 MA's), (Start: 10 @37276 has 8 MA's), (11, 37285), (13, 37294), (22, 37378), (23, 37381), (26, 37435), (30, 37495), (31, 37507), (34, 37555), (39, 37576), (43, 37588), (45, 37615), (46, 37621), (48, 37642), (49, 37684), (50, 37690), (55, 37741), (60, 37801),

Gene: Button_32 Start: 24393, Stop: 23887, Start Num: 12
Candidate Starts for Button_32:
(2, 24555), (Start: 12 @24393 has 9 MA's), (19, 24336), (24, 24285), (26, 24264), (28, 24219), (56, 23988), (58, 23949), (62, 23913),

Gene: Cece_152 Start: 95876, Stop: 96316, Start Num: 9
Candidate Starts for Cece_152:
(Start: 9 @95876 has 41 MA's), (26, 96026), (43, 96182), (52, 96308),

Gene: Chivey_51 Start: 35720, Stop: 36265, Start Num: 9
Candidate Starts for Chivey_51:
(Start: 9 @35720 has 41 MA's), (Start: 10 @35723 has 8 MA's), (11, 35732), (22, 35825), (24, 35855), (26, 35882), (30, 35942), (48, 36086), (50, 36134), (55, 36185),

Gene: CoolCookie_51 Start: 36678, Stop: 37223, Start Num: 9
Candidate Starts for CoolCookie_51:
(Start: 9 @36678 has 41 MA's), (Start: 10 @36681 has 8 MA's), (11, 36690), (22, 36783), (24, 36813), (26, 36840), (30, 36900), (48, 37044), (50, 37092), (55, 37143),

Gene: Count_77 Start: 54096, Stop: 54533, Start Num: 9
Candidate Starts for Count_77:
(Start: 9 @54096 has 41 MA's), (11, 54108), (21, 54192), (26, 54246), (36, 54381), (38, 54387), (44, 54411), (47, 54450),

Gene: Crestdrop_51 Start: 35900, Stop: 36445, Start Num: 9
Candidate Starts for Crestdrop_51:
(Start: 9 @35900 has 41 MA's), (Start: 10 @35903 has 8 MA's), (11, 35912), (22, 36005), (24, 36035), (26, 36062), (30, 36122), (48, 36266), (50, 36314), (55, 36365),

Gene: Cybele_51 Start: 36651, Stop: 37196, Start Num: 9
Candidate Starts for Cybele_51:
(Start: 9 @36651 has 41 MA's), (Start: 10 @36654 has 8 MA's), (11, 36663), (22, 36756), (24, 36786), (26, 36813), (30, 36873), (48, 37017), (50, 37065), (55, 37116),

Gene: DannyDe_51 Start: 35714, Stop: 36259, Start Num: 9
Candidate Starts for DannyDe_51:
(Start: 9 @35714 has 41 MA's), (Start: 10 @35717 has 8 MA's), (11, 35726), (22, 35819), (24, 35849), (26, 35876), (30, 35936), (48, 36080), (50, 36128), (55, 36179),

Gene: Dauntless_50 Start: 36227, Stop: 36772, Start Num: 9
Candidate Starts for Dauntless_50:
(Start: 9 @36227 has 41 MA's), (Start: 10 @36230 has 8 MA's), (11, 36239), (22, 36332), (24, 36362), (26, 36389), (30, 36449), (48, 36593), (50, 36641), (55, 36692),

Gene: Djokovic_63 Start: 45934, Stop: 46521, Start Num: 7
Candidate Starts for Djokovic_63:
(Start: 7 @45934 has 7 MA's), (14, 45991), (15, 45997), (24, 46084), (26, 46105), (33, 46189), (44, 46273), (51, 46378), (53, 46390), (61, 46486),

Gene: Erudite_50 Start: 36227, Stop: 36772, Start Num: 9
Candidate Starts for Erudite_50:
(Start: 9 @36227 has 41 MA's), (Start: 10 @36230 has 8 MA's), (11, 36239), (22, 36332), (24, 36362), (26, 36389), (30, 36449), (48, 36593), (50, 36641), (55, 36692),

Gene: FountainFog_50 Start: 35910, Stop: 36455, Start Num: 9
Candidate Starts for FountainFog_50:
(Start: 9 @35910 has 41 MA's), (Start: 10 @35913 has 8 MA's), (11, 35922), (22, 36015), (24, 36045), (26, 36072), (30, 36132), (48, 36276), (50, 36324),

Gene: FreddieHg_51 Start: 35730, Stop: 36275, Start Num: 9
Candidate Starts for FreddieHg_51:
(Start: 9 @35730 has 41 MA's), (Start: 10 @35733 has 8 MA's), (11, 35742), (22, 35835), (24, 35865), (26, 35892), (30, 35952), (48, 36096), (50, 36144), (55, 36195),

Gene: GiKK_34 Start: 24696, Stop: 24190, Start Num: 12
Candidate Starts for GiKK_34:
(Start: 12 @24696 has 9 MA's), (19, 24639), (26, 24567), (28, 24522), (56, 24291), (58, 24252), (62, 24216),

Gene: Gilda_51 Start: 36672, Stop: 37217, Start Num: 9
Candidate Starts for Gilda_51:

(Start: 9 @36672 has 41 MA's), (Start: 10 @36675 has 8 MA's), (11, 36684), (22, 36777), (24, 36807), (26, 36834), (30, 36894), (48, 37038), (50, 37086), (55, 37137),

Gene: Hager_52 Start: 36092, Stop: 36637, Start Num: 9
Candidate Starts for Hager_52:
(Start: 9 @36092 has 41 MA's), (Start: 10 @36095 has 8 MA's), (11, 36104), (22, 36197), (24, 36227), (25, 36239), (26, 36254), (30, 36314), (48, 36458), (50, 36506), (55, 36557),

Gene: Haunter_51 Start: 35892, Stop: 36437, Start Num: 9
Candidate Starts for Haunter_51:
(Start: 9 @35892 has 41 MA's), (Start: 10 @35895 has 8 MA's), (11, 35904), (22, 35997), (24, 36027), (26, 36054), (30, 36114), (48, 36258), (50, 36306), (55, 36357),

Gene: Hexbug_38 Start: 26930, Stop: 26424, Start Num: 12
Candidate Starts for Hexbug_38:
(Start: 12 @26930 has 9 MA's), (14, 26915), (19, 26873), (26, 26801), (28, 26756), (41, 26675), (56, 26525),

Gene: Hiddenleaf_51 Start: 35720, Stop: 36265, Start Num: 9
Candidate Starts for Hiddenleaf_51:
(Start: 9 @35720 has 41 MA's), (Start: 10 @35723 has 8 MA's), (11, 35732), (22, 35825), (24, 35855), (26, 35882), (30, 35942), (48, 36086), (50, 36134), (55, 36185),

Gene: Huwbert_58 Start: 36365, Stop: 36808, Start Num: 9
Candidate Starts for Huwbert_58:
(Start: 9 @36365 has 41 MA's), (20, 36452), (21, 36461), (26, 36512), (27, 36539), (35, 36632), (44, 36671), (45, 36686), (47, 36710),

Gene: JDawG_50 Start: 36287, Stop: 36832, Start Num: 9
Candidate Starts for JDawG_50:
(Start: 9 @36287 has 41 MA's), (Start: 10 @36290 has 8 MA's), (11, 36299), (22, 36392), (24, 36422), (26, 36449), (30, 36509), (48, 36653), (50, 36701), (55, 36752),

Gene: Jamzy_34 Start: 24705, Stop: 24199, Start Num: 12
Candidate Starts for Jamzy_34:
(2, 24867), (Start: 12 @24705 has 9 MA's), (19, 24648), (24, 24597), (26, 24576), (28, 24531), (32, 24504), (56, 24300), (58, 24261), (62, 24225),

Gene: JingleBells_51 Start: 35822, Stop: 36367, Start Num: 9
Candidate Starts for JingleBells_51:
(Start: 9 @35822 has 41 MA's), (Start: 10 @35825 has 8 MA's), (11, 35834), (22, 35927), (24, 35957), (26, 35984), (30, 36044), (48, 36188), (50, 36236), (55, 36287),

Gene: Karate_50 Start: 36483, Stop: 37025, Start Num: 10
Candidate Starts for Karate_50:
(Start: 9 @36480 has 41 MA's), (Start: 10 @36483 has 8 MA's), (11, 36492), (22, 36585), (24, 36615), (26, 36642), (30, 36702), (48, 36846), (50, 36894), (55, 36945),

Gene: Kate_52 Start: 36590, Stop: 37135, Start Num: 9
Candidate Starts for Kate_52:
(Start: 9 @36590 has 41 MA's), (Start: 10 @36593 has 8 MA's), (11, 36602), (22, 36695), (24, 36725), (26, 36752), (29, 36809), (30, 36812), (48, 36956), (50, 37004), (55, 37055),

Gene: Kors_54 Start: 37313, Stop: 37861, Start Num: 9
Candidate Starts for Kors_54:
(Start: 9 @37313 has 41 MA's), (Start: 10 @37316 has 8 MA's), (11, 37325), (13, 37334), (22, 37418), (23, 37421), (26, 37475), (30, 37535), (31, 37547), (34, 37595), (39, 37616), (43, 37628), (45, 37655), (46, 37661), (48, 37682), (49, 37724), (50, 37730), (55, 37781), (60, 37841),

Gene: Krampus_51 Start: 36686, Stop: 37231, Start Num: 9
Candidate Starts for Krampus_51:
(Start: 9 @36686 has 41 MA's), (Start: 10 @36689 has 8 MA's), (11, 36698), (22, 36791), (24, 36821), (26, 36848), (30, 36908), (48, 37052), (50, 37100), (55, 37151),

Gene: LordBart_54 Start: 37213, Stop: 37758, Start Num: 10
Candidate Starts for LordBart_54:
(1, 37018), (Start: 9 @37210 has 41 MA's), (Start: 10 @37213 has 8 MA's), (11, 37222), (13, 37231), (22, 37315), (23, 37318), (26, 37372), (30, 37432), (31, 37444), (34, 37492), (39, 37513), (43, 37525), (45, 37552), (46, 37558), (48, 37579), (49, 37621), (50, 37627), (55, 37678), (60, 37738),

Gene: Madi_63 Start: 46012, Stop: 46599, Start Num: 7
Candidate Starts for Madi_63:
(Start: 7 @46012 has 7 MA's), (14, 46069), (15, 46075), (24, 46162), (26, 46183), (33, 46267), (44, 46351), (51, 46456), (53, 46468), (61, 46564),

Gene: Margaret_36 Start: 25349, Stop: 24843, Start Num: 12
Candidate Starts for Margaret_36:
(2, 25514), (Start: 12 @25349 has 9 MA's), (26, 25220), (28, 25175), (32, 25148), (56, 24944), (57, 24938), (62, 24869),

Gene: Mema_42 Start: 33083, Stop: 33502, Start Num: 9
Candidate Starts for Mema_42:
(3, 32990), (5, 33026), (8, 33068), (Start: 9 @33083 has 41 MA's), (18, 33146), (20, 33170), (21, 33179), (26, 33230), (30, 33290), (37, 33356),

Gene: MortySmith_49 Start: 35704, Stop: 36249, Start Num: 9
Candidate Starts for MortySmith_49:
(Start: 9 @35704 has 41 MA's), (Start: 10 @35707 has 8 MA's), (11, 35716), (22, 35809), (24, 35839), (26, 35866), (30, 35926), (48, 36070), (50, 36118), (55, 36169),

Gene: NarutoRun_51 Start: 36651, Stop: 37196, Start Num: 9
Candidate Starts for NarutoRun_51:
(Start: 9 @36651 has 41 MA's), (Start: 10 @36654 has 8 MA's), (11, 36663), (22, 36756), (24, 36786), (26, 36813), (30, 36873), (48, 37017), (50, 37065), (55, 37116),

Gene: Neptune_51 Start: 36651, Stop: 37196, Start Num: 9
Candidate Starts for Neptune_51:
(Start: 9 @36651 has 41 MA's), (Start: 10 @36654 has 8 MA's), (11, 36663), (22, 36756), (24, 36786), (26, 36813), (30, 36873), (48, 37017), (50, 37065), (55, 37116),

Gene: Nodigi_38 Start: 26927, Stop: 26421, Start Num: 12
Candidate Starts for Nodigi_38:
(Start: 12 @26927 has 9 MA's), (19, 26870), (26, 26798), (28, 26753), (41, 26672), (45, 26639),

Gene: OhDear_51 Start: 36649, Stop: 37194, Start Num: 9
Candidate Starts for OhDear_51:

(Start: 9 @36649 has 41 MA's), (Start: 10 @36652 has 8 MA's), (11, 36661), (22, 36754), (24, 36784), (26, 36811), (30, 36871), (48, 37015), (50, 37063), (55, 37114),

Gene: Orla_38 Start: 26901, Stop: 26395, Start Num: 12
Candidate Starts for Orla_38:
(Start: 12 @26901 has 9 MA's), (14, 26886), (19, 26844), (26, 26772), (28, 26727), (41, 26646), (56, 26496),

Gene: OverHedge_51 Start: 36548, Stop: 37093, Start Num: 9
Candidate Starts for OverHedge_51:
(Start: 9 @36548 has 41 MA's), (Start: 10 @36551 has 8 MA's), (11, 36560), (22, 36653), (24, 36683), (26, 36710), (30, 36770), (48, 36914), (50, 36962), (55, 37013),

Gene: Pharpay_51 Start: 36696, Stop: 37241, Start Num: 9
Candidate Starts for Pharpay_51:
(Start: 9 @36696 has 41 MA's), (Start: 10 @36699 has 8 MA's), (11, 36708), (22, 36801), (24, 36831), (26, 36858), (30, 36918), (48, 37062), (50, 37110), (55, 37161),

Gene: PhunaPhoke_51 Start: 36669, Stop: 37211, Start Num: 10
Candidate Starts for PhunaPhoke_51:
(Start: 9 @36666 has 41 MA's), (Start: 10 @36669 has 8 MA's), (11, 36678), (22, 36771), (24, 36801), (26, 36828), (30, 36888), (48, 37032), (50, 37080), (55, 37131),

Gene: Potty_51 Start: 36578, Stop: 37123, Start Num: 9
Candidate Starts for Potty_51:
(Start: 9 @36578 has 41 MA's), (Start: 10 @36581 has 8 MA's), (11, 36590), (22, 36683), (24, 36713), (26, 36740), (30, 36800), (48, 36944), (50, 36992), (55, 37043),

Gene: Poultress_50 Start: 36896, Stop: 37441, Start Num: 9
Candidate Starts for Poultress_50:
(Start: 9 @36896 has 41 MA's), (Start: 10 @36899 has 8 MA's), (11, 36908), (22, 37001), (24, 37031), (26, 37058), (30, 37118), (48, 37262), (50, 37310), (55, 37361),

Gene: Rachella_51 Start: 36677, Stop: 37222, Start Num: 9
Candidate Starts for Rachella_51:
(Start: 9 @36677 has 41 MA's), (Start: 10 @36680 has 8 MA's), (11, 36689), (22, 36782), (24, 36812), (26, 36839), (30, 36899), (48, 37043), (50, 37091), (55, 37142),

Gene: RanchParmCat_35 Start: 25554, Stop: 25048, Start Num: 12
Candidate Starts for RanchParmCat_35:
(Start: 7 @25593 has 7 MA's), (Start: 12 @25554 has 9 MA's), (26, 25425), (28, 25380), (32, 25353), (56, 25149), (57, 25143), (62, 25074),

Gene: Rie18_51 Start: 36174, Stop: 36719, Start Num: 9
Candidate Starts for Rie18_51:
(Start: 9 @36174 has 41 MA's), (Start: 10 @36177 has 8 MA's), (11, 36186), (22, 36279), (24, 36309), (26, 36336), (30, 36396), (48, 36540), (50, 36588), (55, 36639),

Gene: RikSengupta_54 Start: 37338, Stop: 37886, Start Num: 9
Candidate Starts for RikSengupta_54:
(Start: 9 @37338 has 41 MA's), (Start: 10 @37341 has 8 MA's), (11, 37350), (13, 37359), (22, 37443), (23, 37446), (26, 37500), (30, 37560), (31, 37572), (34, 37620), (39, 37641), (43, 37653), (45, 37680), (46, 37686), (48, 37707), (49, 37749), (50, 37755), (55, 37806), (60, 37866),

Gene: SafetyGuy_51 Start: 36657, Stop: 37202, Start Num: 9
Candidate Starts for SafetyGuy_51:
(Start: 9 @36657 has 41 MA's), (Start: 10 @36660 has 8 MA's), (11, 36669), (22, 36762), (24, 36792), (26, 36819), (30, 36879), (48, 37023), (50, 37071), (55, 37122),

Gene: Shrew_69 Start: 40329, Stop: 40781, Start Num: 9
Candidate Starts for Shrew_69:
(4, 40269), (6, 40272), (Start: 9 @40329 has 41 MA's), (16, 40374), (17, 40383), (21, 40425), (26, 40482), (27, 40509), (40, 40617), (42, 40626),

Gene: Sienna_63 Start: 46012, Stop: 46599, Start Num: 7
Candidate Starts for Sienna_63:
(Start: 7 @46012 has 7 MA's), (14, 46069), (15, 46075), (24, 46162), (26, 46183), (33, 46267), (44, 46351), (51, 46456), (53, 46468), (61, 46564),

Gene: SilentWarrior_51 Start: 35690, Stop: 36235, Start Num: 9
Candidate Starts for SilentWarrior_51:
(Start: 9 @35690 has 41 MA's), (Start: 10 @35693 has 8 MA's), (11, 35702), (22, 35795), (24, 35825), (26, 35852), (30, 35912), (48, 36056), (50, 36104), (55, 36155),

Gene: Snakehole_51 Start: 35698, Stop: 36243, Start Num: 9
Candidate Starts for Snakehole_51:
(Start: 9 @35698 has 41 MA's), (Start: 10 @35701 has 8 MA's), (11, 35710), (22, 35803), (24, 35833), (26, 35860), (30, 35920), (39, 35998), (48, 36064), (50, 36112), (55, 36163),

Gene: Sparcetus_54 Start: 37215, Stop: 37763, Start Num: 9
Candidate Starts for Sparcetus_54:
(Start: 9 @37215 has 41 MA's), (Start: 10 @37218 has 8 MA's), (11, 37227), (13, 37236), (22, 37320), (23, 37323), (26, 37377), (30, 37437), (31, 37449), (34, 37497), (39, 37518), (43, 37530), (45, 37557), (46, 37563), (48, 37584), (49, 37626), (50, 37632), (55, 37683), (60, 37743),

Gene: Suzy_63 Start: 47223, Stop: 47792, Start Num: 7
Candidate Starts for Suzy_63:
(Start: 7 @47223 has 7 MA's), (24, 47373), (26, 47394), (27, 47421), (33, 47478), (43, 47529), (44, 47541), (54, 47664), (63, 47781),

Gene: Tedro_51 Start: 36110, Stop: 36655, Start Num: 9
Candidate Starts for Tedro_51:
(Start: 9 @36110 has 41 MA's), (Start: 10 @36113 has 8 MA's), (11, 36122), (22, 36215), (24, 36245), (26, 36272), (30, 36332), (48, 36476), (50, 36524), (55, 36575),

Gene: Terapin_64 Start: 45936, Stop: 46523, Start Num: 7
Candidate Starts for Terapin_64:
(Start: 7 @45936 has 7 MA's), (14, 45993), (15, 45999), (24, 46086), (26, 46107), (33, 46191), (44, 46275), (51, 46380), (53, 46392), (61, 46488),

Gene: Tiggy93_51 Start: 36680, Stop: 37222, Start Num: 10
Candidate Starts for Tiggy93_51:
(Start: 9 @36677 has 41 MA's), (Start: 10 @36680 has 8 MA's), (11, 36689), (22, 36782), (24, 36812), (26, 36839), (30, 36899), (48, 37043), (50, 37091), (55, 37142),

Gene: TinyMiny_54 Start: 37236, Stop: 37784, Start Num: 9

Candidate Starts for TinyMiny_54:
(1, 37044), (Start: 9 @37236 has 41 MA's), (Start: 10 @37239 has 8 MA's), (11, 37248), (22, 37341), (23, 37344), (26, 37398), (30, 37458), (31, 37470), (34, 37518), (39, 37539), (43, 37551), (45, 37578), (46, 37584), (48, 37605), (49, 37647), (50, 37653), (55, 37704), (60, 37764),

Gene: Tongui_51 Start: 36092, Stop: 36634, Start Num: 10
Candidate Starts for Tongui_51:
(Start: 9 @36089 has 41 MA's), (Start: 10 @36092 has 8 MA's), (11, 36101), (22, 36194), (24, 36224), (26, 36251), (30, 36311), (47, 36452), (48, 36455), (50, 36503), (55, 36554),

Gene: Triscuit_57 Start: 36287, Stop: 36730, Start Num: 9
Candidate Starts for Triscuit_57:
(Start: 9 @36287 has 41 MA's), (16, 36332), (20, 36374), (21, 36383), (26, 36434), (27, 36461), (35, 36554), (44, 36593), (45, 36608), (47, 36632),

Gene: WinnieLou_52 Start: 36071, Stop: 36616, Start Num: 9
Candidate Starts for WinnieLou_52:
(Start: 9 @36071 has 41 MA's), (Start: 10 @36074 has 8 MA's), (11, 36083), (22, 36176), (24, 36206), (25, 36218), (26, 36233), (30, 36293), (48, 36437), (50, 36485), (55, 36536),

Gene: Yakult_32 Start: 24317, Stop: 23811, Start Num: 12
Candidate Starts for Yakult_32:
(2, 24482), (Start: 12 @24317 has 9 MA's), (24, 24209), (26, 24188), (28, 24143), (32, 24116), (41, 24062), (56, 23912), (58, 23873), (59, 23870), (62, 23837), (64, 23819),