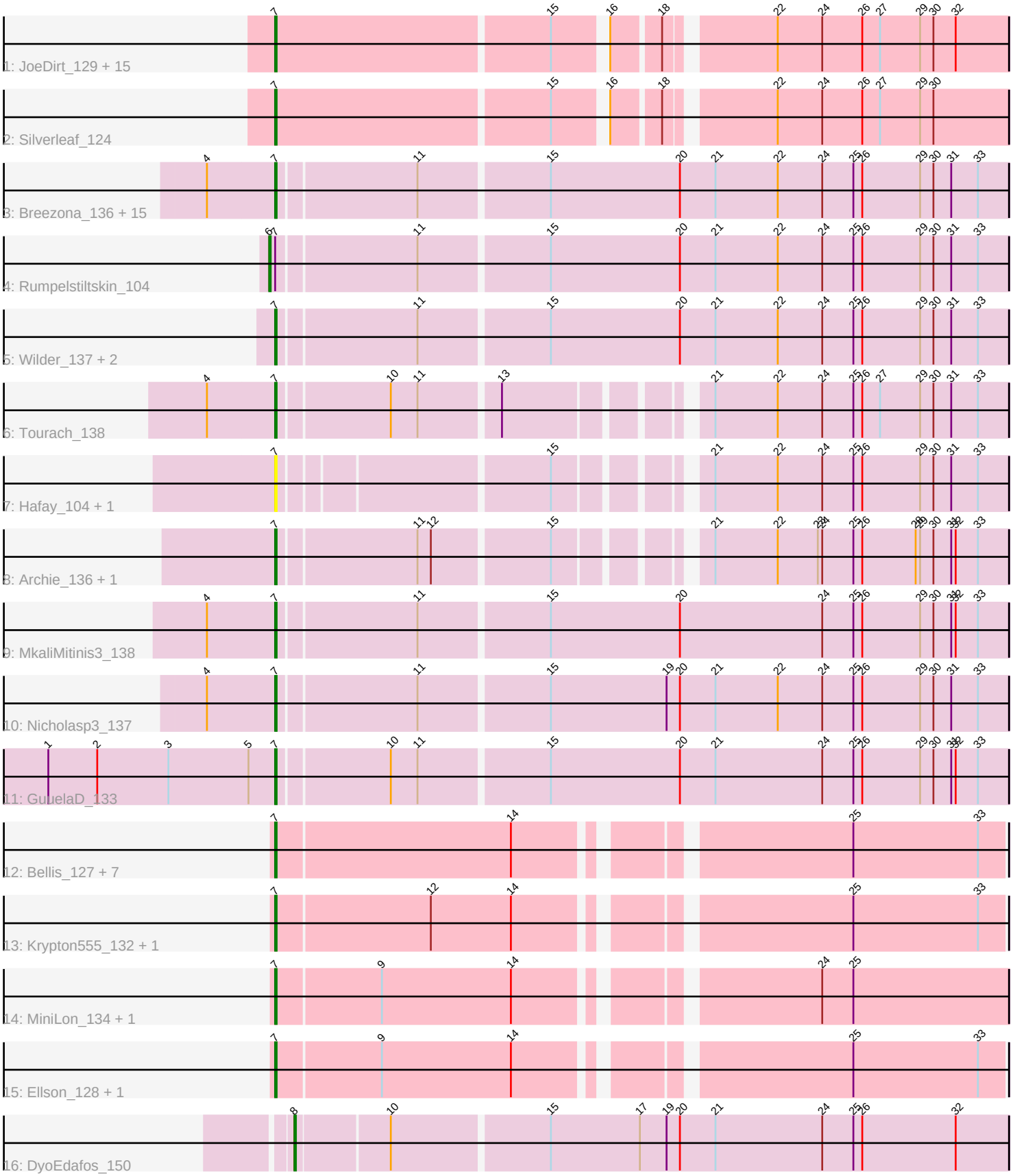
Pham 85585


1: JoeDirt_129 + 15
2: Silverleaf_124
3: Breezona_136 + 15
4: Rumpelstiltskin_104
5: Wilder_137 + 2
6: Tourach_138
7: Hafay_104 + 1
8: Archie_136 + 1
9: MkaliMitinis3_138
10: Nicholasp3_137
11: GuuelaD_133
12: Bellis_127 + 7
13: Krypton555_132 + 1
14: MiniLon_134 + 1
15: Ellson_128 + 1
16: DyoEdafos_150

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 85585 Report

This analysis was run 04/28/24 on database version 559.

Pham number 85585 has 60 members, 6 are drafts.

Phages represented in each track:
• Track 1 : JoeDirt_129, CicholasNage_120, Acquire49_127, AvadaKedavra_127, MAckerman_125, Rose5_128, Zaria_131, UPIE_126, LeBron_126, OhShagHennessy_119, Halena_127, Wamburgrxpress_129, Wyatt2_127, Appletree2_126, Tyson_128, Calm_134
• Track 2 : Silverleaf_124
• Track 3 : Breezona_136, Itos_136, Crossroads_139, DrSeegs_134, Vetrix_136, Gabriela_136, Finemlucis_135, Zakai_138, Gardann_136, Lewan_138, Netyap_134, Winky_136, Miley16_136, Faith1_134, Wigglewiggle_137, Loadrie_137
• Track 4 : Rumpelstiltskin_104
• Track 5 : Wilder_137, LilDestine_133, Kahlid_136
• Track 6 : Tourach_138
• Track 7 : Hafay_104, ZhongYanYuan_135
• Track 8 : Archie_136, Bazzle_135
• Track 9 : MkaliMitinis3_138
• Track 10 : Nicholasp3_137
• Track 11 : GuuelaD_133
• Track 12 : Bellis_127, Jubie_130, Lumos_130, MsGreen_131, Snenia_129, Jobypre_131, Finnry_128, Samty_128
• Track 13 : Krypton555_132, Whirlwind_131
• Track 14 : MiniLon_134, Lolly9_130
• Track 15 : Ellson_128, DuncansLeg_130
• Track 16 : DyoEdafos_150

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

The start number called the most often in the published annotations is 7, it was called in 52 of the 54 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acquire49_127, Appletree2_126, Archie_136, AvadaKedavra_127, Bazzle_135, Bellis_127, Breezona_136, Calm_134, CicholasNage_120, Crossroads_139, DrSeegs_134, DuncansLeg_130, Ellson_128, Faith1_134, Finemlucis_135, Finnry_128, Gabriela_136, Gardann_136, GuuelaD_133, Hafay_104, Halena_127, Itos_136, Jobypre_131, JoeDirt_129, Jubie_130, Kahlid_136, Krypton555_132,

LeBron_126, Lewan_138, LilDestine_133, Loadrie_137, Lolly9_130, Lumos_130, MAckerman_125, Miley16_136, MiniLon_134, MkaliMitinis3_138, MsGreen_131, Netyap_134, Nicholasp3_137, OhShagHennessy_119, Rose5_128, Samty_128, Silverleaf_124, Snenia_129, Tourach_138, Tyson_128, UPIE_126, Vetrix_136, Wamburgrxpress_129, Whirlwind_131, Wigglewiggle_137, Wilder_137, Winky_136, Wyatt2_127, Zakai_138, Zaria_131, ZhongYanYuan_135,

Genes that have the "Most Annotated" start but do not call it:
• Rumpelstiltskin_104,

Genes that do not have the "Most Annotated" start:
• DyoEdafos_150,

Summary by start number:

Start 6:
• Found in 1 of 60 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 54
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Rumpelstiltskin_104 (L2),

Start 7:
• Found in 59 of 60 (98.3%) of genes in pham
• Manual Annotations of this start: 52 of 54
• Called 98.3% of time when present
• Phage (with cluster) where this start called: Acquire49_127 (L1), Appletree2_126 (L1), Archie_136 (L2), AvadaKedavra_127 (L1), Bazzle_135 (L2), Bellis_127 (L3), Breezona_136 (L2), Calm_134 (L1), CicholasNage_120 (L1), Crossroads_139 (L2), DrSeegs_134 (L2), DuncansLeg_130 (L3), Ellson_128 (L3), Faith1_134 (L2), Finemlucis_135 (L2), Finnry_128 (L3), Gabriela_136 (L2), Gardann_136 (L2), GuuelaD_133 (L2), Hafay_104 (L2), Halena_127 (L1), Itos_136 (L2), Jobypre_131 (L3), JoeDirt_129 (L1), Jubie_130 (L3), Kahlid_136 (L2), Krypton555_132 (L3), LeBron_126 (L1), Lewan_138 (L2), LilDestine_133 (L2), Loadrie_137 (L2), Lolly9_130 (L3), Lumos_130 (L3), MAckerman_125 (L1), Miley16_136 (L2), MiniLon_134 (L3), MkaliMitinis3_138 (L2), MsGreen_131 (L3), Netyap_134 (L2), Nicholasp3_137 (L2), OhShagHennessy_119 (L1), Rose5_128 (L1), Samty_128 (L3), Silverleaf_124 (L1), Snenia_129 (L3), Tourach_138 (L2), Tyson_128 (L1), UPIE_126 (L1), Vetrix_136 (L2), Wamburgrxpress_129 (L1), Whirlwind_131 (L3), Wigglewiggle_137 (L2), Wilder_137 (L2), Winky_136 (L2), Wyatt2_127 (L1), Zakai_138 (L2), Zaria_131 (L1), ZhongYanYuan_135 (L2),

Start 8:
• Found in 1 of 60 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 54
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DyoEdafos_150 (L4),

Summary by clusters:

There are 4 clusters represented in this pham: L4, L2, L3, L1,

Info for manual annotations of cluster L1:
•Start number 7 was manually annotated 16 times for cluster L1.

Info for manual annotations of cluster L2:
•Start number 6 was manually annotated 1 time for cluster L2.
•Start number 7 was manually annotated 25 times for cluster L2.

Info for manual annotations of cluster L3:
•Start number 7 was manually annotated 11 times for cluster L3.

Info for manual annotations of cluster L4:
•Start number 8 was manually annotated 1 time for cluster L4.

Gene Information:

Gene: Acquire49_127 Start: 67772, Stop: 68230, Start Num: 7
Candidate Starts for Acquire49_127:
(Start: 7 @67772 has 52 MA's), (15, 67952), (16, 67982), (18, 68012), (22, 68075), (24, 68105), (26, 68132), (27, 68144), (29, 68171), (30, 68180), (32, 68195),

Gene: Appletree2_126 Start: 67828, Stop: 68286, Start Num: 7
Candidate Starts for Appletree2_126:
(Start: 7 @67828 has 52 MA's), (15, 68008), (16, 68038), (18, 68068), (22, 68131), (24, 68161), (26, 68188), (27, 68200), (29, 68227), (30, 68236), (32, 68251),

Gene: Archie_136 Start: 70829, Stop: 71281, Start Num: 7
Candidate Starts for Archie_136:
(Start: 7 @70829 has 52 MA's), (11, 70919), (12, 70928), (15, 71003), (21, 71084), (22, 71126), (23, 71153), (24, 71156), (25, 71177), (26, 71183), (28, 71219), (29, 71222), (30, 71231), (31, 71243), (32, 71246), (33, 71261),

Gene: AvadaKedavra_127 Start: 67886, Stop: 68344, Start Num: 7
Candidate Starts for AvadaKedavra_127:
(Start: 7 @67886 has 52 MA's), (15, 68066), (16, 68096), (18, 68126), (22, 68189), (24, 68219), (26, 68246), (27, 68258), (29, 68285), (30, 68294), (32, 68309),

Gene: Bazzle_135 Start: 71223, Stop: 71675, Start Num: 7
Candidate Starts for Bazzle_135:
(Start: 7 @71223 has 52 MA's), (11, 71313), (12, 71322), (15, 71397), (21, 71478), (22, 71520), (23, 71547), (24, 71550), (25, 71571), (26, 71577), (28, 71613), (29, 71616), (30, 71625), (31, 71637), (32, 71640), (33, 71655),

Gene: Bellis_127 Start: 69765, Stop: 70220, Start Num: 7
Candidate Starts for Bellis_127:
(Start: 7 @69765 has 52 MA's), (14, 69921), (25, 70119), (33, 70203),

Gene: Breezona_136 Start: 70819, Stop: 71301, Start Num: 7
Candidate Starts for Breezona_136:
(4, 70774), (Start: 7 @70819 has 52 MA's), (11, 70909), (15, 70993), (20, 71080), (21, 71104), (22, 71146), (24, 71176), (25, 71197), (26, 71203), (29, 71242), (30, 71251), (31, 71263), (33, 71281),

Gene: Calm_134 Start: 68987, Stop: 69445, Start Num: 7
Candidate Starts for Calm_134:

(Start: 7 @68987 has 52 MA's), (15, 69167), (16, 69197), (18, 69227), (22, 69290), (24, 69320), (26, 69347), (27, 69359), (29, 69386), (30, 69395), (32, 69410),

Gene: CicholasNage_120 Start: 68117, Stop: 68575, Start Num: 7
Candidate Starts for CicholasNage_120:
(Start: 7 @68117 has 52 MA's), (15, 68297), (16, 68327), (18, 68357), (22, 68420), (24, 68450), (26, 68477), (27, 68489), (29, 68516), (30, 68525), (32, 68540),

Gene: Crossroads_139 Start: 70753, Stop: 71235, Start Num: 7
Candidate Starts for Crossroads_139:
(4, 70708), (Start: 7 @70753 has 52 MA's), (11, 70843), (15, 70927), (20, 71014), (21, 71038), (22, 71080), (24, 71110), (25, 71131), (26, 71137), (29, 71176), (30, 71185), (31, 71197), (33, 71215),

Gene: DrSeegs_134 Start: 70819, Stop: 71301, Start Num: 7
Candidate Starts for DrSeegs_134:
(4, 70774), (Start: 7 @70819 has 52 MA's), (11, 70909), (15, 70993), (20, 71080), (21, 71104), (22, 71146), (24, 71176), (25, 71197), (26, 71203), (29, 71242), (30, 71251), (31, 71263), (33, 71281),

Gene: DuncansLeg_130 Start: 70061, Stop: 70516, Start Num: 7
Candidate Starts for DuncansLeg_130:
(Start: 7 @70061 has 52 MA's), (9, 70130), (14, 70217), (25, 70415), (33, 70499),

Gene: DyoEdafos_150 Start: 72414, Stop: 72884, Start Num: 8
Candidate Starts for DyoEdafos_150:
(Start: 8 @72414 has 1 MA's), (10, 72474), (15, 72576), (17, 72636), (19, 72654), (20, 72663), (21, 72687), (24, 72759), (25, 72780), (26, 72786), (32, 72849),

Gene: Ellson_128 Start: 70317, Stop: 70772, Start Num: 7
Candidate Starts for Ellson_128:
(Start: 7 @70317 has 52 MA's), (9, 70386), (14, 70473), (25, 70671), (33, 70755),

Gene: Faith1_134 Start: 70127, Stop: 70609, Start Num: 7
Candidate Starts for Faith1_134:
(4, 70082), (Start: 7 @70127 has 52 MA's), (11, 70217), (15, 70301), (20, 70388), (21, 70412), (22, 70454), (24, 70484), (25, 70505), (26, 70511), (29, 70550), (30, 70559), (31, 70571), (33, 70589),

Gene: Finemlucis_135 Start: 71580, Stop: 72062, Start Num: 7
Candidate Starts for Finemlucis_135:
(4, 71535), (Start: 7 @71580 has 52 MA's), (11, 71670), (15, 71754), (20, 71841), (21, 71865), (22, 71907), (24, 71937), (25, 71958), (26, 71964), (29, 72003), (30, 72012), (31, 72024), (33, 72042),

Gene: Finnry_128 Start: 70113, Stop: 70568, Start Num: 7
Candidate Starts for Finnry_128:
(Start: 7 @70113 has 52 MA's), (14, 70269), (25, 70467), (33, 70551),

Gene: Gabriela_136 Start: 69915, Stop: 70397, Start Num: 7
Candidate Starts for Gabriela_136:
(4, 69870), (Start: 7 @69915 has 52 MA's), (11, 70005), (15, 70089), (20, 70176), (21, 70200), (22, 70242), (24, 70272), (25, 70293), (26, 70299), (29, 70338), (30, 70347), (31, 70359), (33, 70377),

Gene: Gardann_136 Start: 70592, Stop: 71074, Start Num: 7
Candidate Starts for Gardann_136:

(4, 70547), (Start: 7 @70592 has 52 MA's), (11, 70682), (15, 70766), (20, 70853), (21, 70877), (22, 70919), (24, 70949), (25, 70970), (26, 70976), (29, 71015), (30, 71024), (31, 71036), (33, 71054),

Gene: GuuelaD_133 Start: 70637, Stop: 71119, Start Num: 7
Candidate Starts for GuuelaD_133:
(1, 70484), (2, 70517), (3, 70565), (5, 70619), (Start: 7 @70637 has 52 MA's), (10, 70709), (11, 70727), (15, 70811), (20, 70898), (21, 70922), (24, 70994), (25, 71015), (26, 71021), (29, 71060), (30, 71069), (31, 71081), (32, 71084), (33, 71099),

Gene: Hafay_104 Start: 62592, Stop: 63038, Start Num: 7
Candidate Starts for Hafay_104:
(Start: 7 @62592 has 52 MA's), (15, 62760), (21, 62841), (22, 62883), (24, 62913), (25, 62934), (26, 62940), (29, 62979), (30, 62988), (31, 63000), (33, 63018),

Gene: Halena_127 Start: 67760, Stop: 68218, Start Num: 7
Candidate Starts for Halena_127:
(Start: 7 @67760 has 52 MA's), (15, 67940), (16, 67970), (18, 68000), (22, 68063), (24, 68093), (26, 68120), (27, 68132), (29, 68159), (30, 68168), (32, 68183),

Gene: Itos_136 Start: 69033, Stop: 69515, Start Num: 7
Candidate Starts for Itos_136:
(4, 68988), (Start: 7 @69033 has 52 MA's), (11, 69123), (15, 69207), (20, 69294), (21, 69318), (22, 69360), (24, 69390), (25, 69411), (26, 69417), (29, 69456), (30, 69465), (31, 69477), (33, 69495),

Gene: Jobypre_131 Start: 69874, Stop: 70329, Start Num: 7
Candidate Starts for Jobypre_131:
(Start: 7 @69874 has 52 MA's), (14, 70030), (25, 70228), (33, 70312),

Gene: JoeDirt_129 Start: 68991, Stop: 69449, Start Num: 7
Candidate Starts for JoeDirt_129:
(Start: 7 @68991 has 52 MA's), (15, 69171), (16, 69201), (18, 69231), (22, 69294), (24, 69324), (26, 69351), (27, 69363), (29, 69390), (30, 69399), (32, 69414),

Gene: Jubie_130 Start: 70009, Stop: 70464, Start Num: 7
Candidate Starts for Jubie_130:
(Start: 7 @70009 has 52 MA's), (14, 70165), (25, 70363), (33, 70447),

Gene: Kahlid_136 Start: 70517, Stop: 70999, Start Num: 7
Candidate Starts for Kahlid_136:
(Start: 7 @70517 has 52 MA's), (11, 70607), (15, 70691), (20, 70778), (21, 70802), (22, 70844), (24, 70874), (25, 70895), (26, 70901), (29, 70940), (30, 70949), (31, 70961), (33, 70979),

Gene: Krypton555_132 Start: 70255, Stop: 70710, Start Num: 7
Candidate Starts for Krypton555_132:
(Start: 7 @70255 has 52 MA's), (12, 70357), (14, 70411), (25, 70609), (33, 70693),

Gene: LeBron_126 Start: 67391, Stop: 67849, Start Num: 7
Candidate Starts for LeBron_126:
(Start: 7 @67391 has 52 MA's), (15, 67571), (16, 67601), (18, 67631), (22, 67694), (24, 67724), (26, 67751), (27, 67763), (29, 67790), (30, 67799), (32, 67814),

Gene: Lewan_138 Start: 71162, Stop: 71644, Start Num: 7
Candidate Starts for Lewan_138:

(4, 71117), (Start: 7 @71162 has 52 MA's), (11, 71252), (15, 71336), (20, 71423), (21, 71447), (22, 71489), (24, 71519), (25, 71540), (26, 71546), (29, 71585), (30, 71594), (31, 71606), (33, 71624),

Gene: LilDestine_133 Start: 69687, Stop: 70169, Start Num: 7
Candidate Starts for LilDestine_133:
(Start: 7 @69687 has 52 MA's), (11, 69777), (15, 69861), (20, 69948), (21, 69972), (22, 70014), (24, 70044), (25, 70065), (26, 70071), (29, 70110), (30, 70119), (31, 70131), (33, 70149),

Gene: Loadrie_137 Start: 71143, Stop: 71625, Start Num: 7
Candidate Starts for Loadrie_137:
(4, 71098), (Start: 7 @71143 has 52 MA's), (11, 71233), (15, 71317), (20, 71404), (21, 71428), (22, 71470), (24, 71500), (25, 71521), (26, 71527), (29, 71566), (30, 71575), (31, 71587), (33, 71605),

Gene: Lolly9_130 Start: 70414, Stop: 70872, Start Num: 7
Candidate Starts for Lolly9_130:
(Start: 7 @70414 has 52 MA's), (9, 70483), (14, 70570), (24, 70747), (25, 70768),

Gene: Lumos_130 Start: 69871, Stop: 70326, Start Num: 7
Candidate Starts for Lumos_130:
(Start: 7 @69871 has 52 MA's), (14, 70027), (25, 70225), (33, 70309),

Gene: MAckerman_125 Start: 67753, Stop: 68211, Start Num: 7
Candidate Starts for MAckerman_125:
(Start: 7 @67753 has 52 MA's), (15, 67933), (16, 67963), (18, 67993), (22, 68056), (24, 68086), (26, 68113), (27, 68125), (29, 68152), (30, 68161), (32, 68176),

Gene: Miley16_136 Start: 70819, Stop: 71301, Start Num: 7
Candidate Starts for Miley16_136:
(4, 70774), (Start: 7 @70819 has 52 MA's), (11, 70909), (15, 70993), (20, 71080), (21, 71104), (22, 71146), (24, 71176), (25, 71197), (26, 71203), (29, 71242), (30, 71251), (31, 71263), (33, 71281),

Gene: MiniLon_134 Start: 70415, Stop: 70873, Start Num: 7
Candidate Starts for MiniLon_134:
(Start: 7 @70415 has 52 MA's), (9, 70484), (14, 70571), (24, 70748), (25, 70769),

Gene: MkaliMitinis3_138 Start: 70524, Stop: 71006, Start Num: 7
Candidate Starts for MkaliMitinis3_138:
(4, 70479), (Start: 7 @70524 has 52 MA's), (11, 70614), (15, 70698), (20, 70785), (24, 70881), (25, 70902), (26, 70908), (29, 70947), (30, 70956), (31, 70968), (32, 70971), (33, 70986),

Gene: MsGreen_131 Start: 69874, Stop: 70329, Start Num: 7
Candidate Starts for MsGreen_131:
(Start: 7 @69874 has 52 MA's), (14, 70030), (25, 70228), (33, 70312),

Gene: Netyap_134 Start: 70533, Stop: 71015, Start Num: 7
Candidate Starts for Netyap_134:
(4, 70488), (Start: 7 @70533 has 52 MA's), (11, 70623), (15, 70707), (20, 70794), (21, 70818), (22, 70860), (24, 70890), (25, 70911), (26, 70917), (29, 70956), (30, 70965), (31, 70977), (33, 70995),

Gene: Nicholasp3_137 Start: 70592, Stop: 71074, Start Num: 7
Candidate Starts for Nicholasp3_137:
(4, 70547), (Start: 7 @70592 has 52 MA's), (11, 70682), (15, 70766), (19, 70844), (20, 70853), (21, 70877), (22, 70919), (24, 70949), (25, 70970), (26, 70976), (29, 71015), (30, 71024), (31, 71036), (33,

71054),

Gene: OhShagHennessy_119 Start: 66553, Stop: 67011, Start Num: 7
Candidate Starts for OhShagHennessy_119:
(Start: 7 @66553 has 52 MA's), (15, 66733), (16, 66763), (18, 66793), (22, 66856), (24, 66886), (26, 66913), (27, 66925), (29, 66952), (30, 66961), (32, 66976),

Gene: Rose5_128 Start: 68051, Stop: 68509, Start Num: 7
Candidate Starts for Rose5_128:
(Start: 7 @68051 has 52 MA's), (15, 68231), (16, 68261), (18, 68291), (22, 68354), (24, 68384), (26, 68411), (27, 68423), (29, 68450), (30, 68459), (32, 68474),

Gene: Rumpelstiltskin_104 Start: 63541, Stop: 64026, Start Num: 6
Candidate Starts for Rumpelstiltskin_104:
(Start: 6 @63541 has 1 MA's), (Start: 7 @63544 has 52 MA's), (11, 63634), (15, 63718), (20, 63805), (21, 63829), (22, 63871), (24, 63901), (25, 63922), (26, 63928), (29, 63967), (30, 63976), (31, 63988), (33, 64006),

Gene: Samty_128 Start: 69856, Stop: 70311, Start Num: 7
Candidate Starts for Samty_128:
(Start: 7 @69856 has 52 MA's), (14, 70012), (25, 70210), (33, 70294),

Gene: Silverleaf_124 Start: 67478, Stop: 67936, Start Num: 7
Candidate Starts for Silverleaf_124:
(Start: 7 @67478 has 52 MA's), (15, 67658), (16, 67688), (18, 67718), (22, 67781), (24, 67811), (26, 67838), (27, 67850), (29, 67877), (30, 67886),

Gene: Snenia_129 Start: 69875, Stop: 70330, Start Num: 7
Candidate Starts for Snenia_129:
(Start: 7 @69875 has 52 MA's), (14, 70031), (25, 70229), (33, 70313),

Gene: Tourach_138 Start: 72308, Stop: 72760, Start Num: 7
Candidate Starts for Tourach_138:
(4, 72263), (Start: 7 @72308 has 52 MA's), (10, 72380), (11, 72398), (13, 72449), (21, 72563), (22, 72605), (24, 72635), (25, 72656), (26, 72662), (27, 72674), (29, 72701), (30, 72710), (31, 72722), (33, 72740),

Gene: Tyson_128 Start: 68480, Stop: 68938, Start Num: 7
Candidate Starts for Tyson_128:
(Start: 7 @68480 has 52 MA's), (15, 68660), (16, 68690), (18, 68720), (22, 68783), (24, 68813), (26, 68840), (27, 68852), (29, 68879), (30, 68888), (32, 68903),

Gene: UPIE_126 Start: 67717, Stop: 68175, Start Num: 7
Candidate Starts for UPIE_126:
(Start: 7 @67717 has 52 MA's), (15, 67897), (16, 67927), (18, 67957), (22, 68020), (24, 68050), (26, 68077), (27, 68089), (29, 68116), (30, 68125), (32, 68140),

Gene: Vetrix_136 Start: 71129, Stop: 71611, Start Num: 7
Candidate Starts for Vetrix_136:
(4, 71084), (Start: 7 @71129 has 52 MA's), (11, 71219), (15, 71303), (20, 71390), (21, 71414), (22, 71456), (24, 71486), (25, 71507), (26, 71513), (29, 71552), (30, 71561), (31, 71573), (33, 71591),

Gene: Wamburgrxpress_129 Start: 68383, Stop: 68841, Start Num: 7

Candidate Starts for Wamburgrxpress_129:
(Start: 7 @68383 has 52 MA's), (15, 68563), (16, 68593), (18, 68623), (22, 68686), (24, 68716), (26, 68743), (27, 68755), (29, 68782), (30, 68791), (32, 68806),

Gene: Whirlwind_131 Start: 70350, Stop: 70805, Start Num: 7
Candidate Starts for Whirlwind_131:
(Start: 7 @70350 has 52 MA's), (12, 70452), (14, 70506), (25, 70704), (33, 70788),

Gene: Wigglewiggle_137 Start: 70725, Stop: 71207, Start Num: 7
Candidate Starts for Wigglewiggle_137:
(4, 70680), (Start: 7 @70725 has 52 MA's), (11, 70815), (15, 70899), (20, 70986), (21, 71010), (22, 71052), (24, 71082), (25, 71103), (26, 71109), (29, 71148), (30, 71157), (31, 71169), (33, 71187),

Gene: Wilder_137 Start: 70371, Stop: 70853, Start Num: 7
Candidate Starts for Wilder_137:
(Start: 7 @70371 has 52 MA's), (11, 70461), (15, 70545), (20, 70632), (21, 70656), (22, 70698), (24, 70728), (25, 70749), (26, 70755), (29, 70794), (30, 70803), (31, 70815), (33, 70833),

Gene: Winky_136 Start: 70820, Stop: 71302, Start Num: 7
Candidate Starts for Winky_136:
(4, 70775), (Start: 7 @70820 has 52 MA's), (11, 70910), (15, 70994), (20, 71081), (21, 71105), (22, 71147), (24, 71177), (25, 71198), (26, 71204), (29, 71243), (30, 71252), (31, 71264), (33, 71282),

Gene: Wyatt2_127 Start: 68144, Stop: 68602, Start Num: 7
Candidate Starts for Wyatt2_127:
(Start: 7 @68144 has 52 MA's), (15, 68324), (16, 68354), (18, 68384), (22, 68447), (24, 68477), (26, 68504), (27, 68516), (29, 68543), (30, 68552), (32, 68567),

Gene: Zakai_138 Start: 70530, Stop: 71012, Start Num: 7
Candidate Starts for Zakai_138:
(4, 70485), (Start: 7 @70530 has 52 MA's), (11, 70620), (15, 70704), (20, 70791), (21, 70815), (22, 70857), (24, 70887), (25, 70908), (26, 70914), (29, 70953), (30, 70962), (31, 70974), (33, 70992),

Gene: Zaria_131 Start: 68452, Stop: 68910, Start Num: 7
Candidate Starts for Zaria_131:
(Start: 7 @68452 has 52 MA's), (15, 68632), (16, 68662), (18, 68692), (22, 68755), (24, 68785), (26, 68812), (27, 68824), (29, 68851), (30, 68860), (32, 68875),

Gene: ZhongYanYuan_135 Start: 70540, Stop: 70986, Start Num: 7
Candidate Starts for ZhongYanYuan_135:
(Start: 7 @70540 has 52 MA's), (15, 70708), (21, 70789), (22, 70831), (24, 70861), (25, 70882), (26, 70888), (29, 70927), (30, 70936), (31, 70948), (33, 70966),