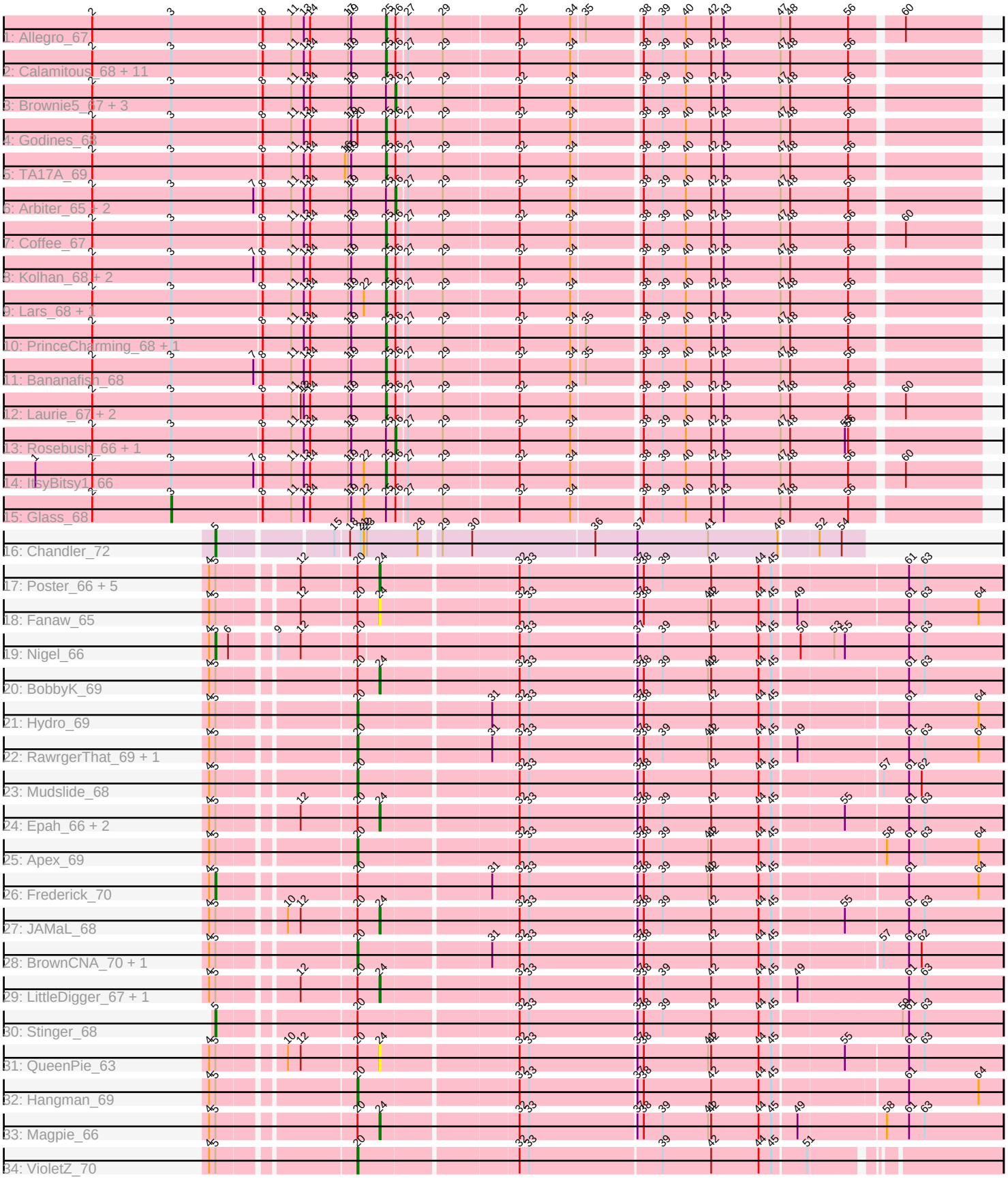
Pham 338264


1: Allegro_67
2: Calamitous_68 + 11
3: Brownie5_67 + 3
4: Godines_68
5: TA17A_69
6: Arbiter_65 + 2
7: Coffee_67
8: Kolhan_68 + 2
9: Lars_68 + 1
10: PrinceCharming_68 + 1
11: Bananafish_68
12: Laurie_67 + 2
13: Rosebush_66 + 1
14: ItsyBitsy1_66
15: Glass_68
16: Chandler_72
17: Poster_66 + 5
18: Fanaw_65
19: Nigel_66
20: BobbyK_69
21: Hydro_69
22: RawrgerThat_69 + 1
23: Mudslide_68
24: Epah_66 + 2
25: Apex_69
26: Frederick_70
27: JAMaL_68
28: BrownCNA_70 + 1
29: LittleDigger_67 + 1
30: Stinger_68
31: QueenPie_63
32: Hangman_69
33: Magpie_66
34: VioletZ_70

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 338264 Report

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

Pham number 338264 has 67 members, 10 are drafts.

Phages represented in each track:
• Track 1 : Allegro_67
• Track 2 : Calamitous_68, Kaleb_67, Eaglehorse_67, Boyle_67, MasterPo_68, Kheth_67, Sabella_67, Holeinone_67, Lephleur_67, FrenchFry_68, Opia_68, Blocker23_67
• Track 3 : Brownie5_67, Faze9_66, West99_67, Tinciduntsolum_68
• Track 4 : Godines_68
• Track 5 : TA17A_69
• Track 6 : Arbiter_65, Ares_67, LilSmirk_67
• Track 7 : Coffee_67
• Track 8 : Kolhan_68, Tres_67, Rhinoforte_67
• Track 9 : Lars_68, LizLemon_67
• Track 10 : PrinceCharming_68, Phantasmagoria_66
• Track 11 : Bananafish_68
• Track 12 : Laurie_67, Hedgerow_67, Vic9_00066
• Track 13 : Rosebush_66, Qyrzula_61
• Track 14 : ItsyBitsy1_66
• Track 15 : Glass_68
• Track 16 : Chandler_72
• Track 17 : Poster_66, Nanao_67, Lambano_66, Ahwei_66, ChrisnMich_68, Hally898_66
• Track 18 : Fanaw_65
• Track 19 : Nigel_66
• Track 20 : BobbyK_69
• Track 21 : Hydro_69
• Track 22 : RawrgerThat_69, Fortunato_69
• Track 23 : Mudslide_68
• Track 24 : Epah_66, GinPorsche_68, Antihero_66
• Track 25 : Apex_69
• Track 26 : Frederick_70
• Track 27 : JAMaL_68
• Track 28 : BrownCNA_70, Waleliano_68
• Track 29 : LittleDigger_67, Renkei_67
• Track 30 : Stinger_68
• Track 31 : QueenPie_63
• Track 32 : Hangman_69
• Track 33 : Magpie_66
• Track 34 : VioletZ_70

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

The start number called the most often in the published annotations is 25, it was called in 28 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Allegro_67, Bananafish_68, Blocker23_67, Boyle_67, Calamitous_68, Coffee_67, Eaglehorse_67, FrenchFry_68, Godines_68, Hedgerow_67, Holeinone_67, ItsyBitsy1_66, Kaleb_67, Kheth_67, Kolhan_68, Lars_68, Laurie_67, Lephleur_67, LizLemon_67, MasterPo_68, Opia_68, Phantasmagoria_66, PrinceCharming_68, Rhinoforte_67, Sabella_67, TA17A_69, Tres_67, Vic9_00066,

Genes that have the "Most Annotated" start but do not call it:
• Arbiter_65, Ares_67, Brownie5_67, Faze9_66, Glass_68, LilSmirk_67, Qyrzula_61, Rosebush_66, Tinciduntsolum_68, West99_67,

Genes that do not have the "Most Annotated" start:
• Ahwei_66, Antihero_66, Apex_69, BobbyK_69, BrownCNA_70, Chandler_72, ChrisnMich_68, Epah_66, Fanaw_65, Fortunato_69, Frederick_70, GinPorsche_68, Hally898_66, Hangman_69, Hydro_69, JAMaL_68, Lambano_66, LittleDigger_67, Magpie_66, Mudslide_68, Nanao_67, Nigel_66, Poster_66, QueenPie_63, RawrgerThat_69, Renkei_67, Stinger_68, VioletZ_70, Waleliano_68,

Summary by start number:

Start 3:
• Found in 38 of 67 (56.7%) of genes in pham
• Manual Annotations of this start: 1 of 57
• Called 2.6% of time when present
• Phage (with cluster) where this start called: Glass_68 (B2),

Start 5:
• Found in 29 of 67 (43.3%) of genes in pham
• Manual Annotations of this start: 4 of 57
• Called 13.8% of time when present
• Phage (with cluster) where this start called: Chandler_72 (B3), Frederick_70 (B4), Nigel_66 (B4), Stinger_68 (B4),

Start 20:
• Found in 29 of 67 (43.3%) of genes in pham
• Manual Annotations of this start: 9 of 57
• Called 31.0% of time when present
• Phage (with cluster) where this start called: Apex_69 (B4), BrownCNA_70 (B4), Fortunato_69 (B4), Hangman_69 (B4), Hydro_69 (B4), Mudslide_68 (B4), RawrgerThat_69 (B4), VioletZ_70 (B4), Waleliano_68 (B4),

Start 24:
• Found in 16 of 67 (23.9%) of genes in pham
• Manual Annotations of this start: 7 of 57

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ahwei_66 (B4), Antihero_66 (B4), BobbyK_69 (B4), ChrisnMich_68 (B4), Epah_66 (B4), Fanaw_65 (B4), GinPorsche_68 (B4), Hally898_66 (B4), JAMaL_68 (B4), Lambano_66 (B4), LittleDigger_67 (B4), Magpie_66 (B4), Nanao_67 (B4), Poster_66 (B4), QueenPie_63 (B4), Renkei_67 (B4),

Start 25:
• Found in 38 of 67 (56.7%) of genes in pham
• Manual Annotations of this start: 28 of 57
• Called 73.7% of time when present
• Phage (with cluster) where this start called: Allegro_67 (B2), Bananafish_68 (B2), Blocker23_67 (B2), Boyle_67 (B2), Calamitous_68 (B2), Coffee_67 (B2), Eaglehorse_67 (B2), FrenchFry_68 (B2), Godines_68 (B2), Hedgerow_67 (B2), Holeinone_67 (B2), ItsyBitsy1_66 (B2), Kaleb_67 (B2), Kheth_67 (B2), Kolhan_68 (B2), Lars_68 (B2), Laurie_67 (B2), Lephleur_67 (B2), LizLemon_67 (B2), MasterPo_68 (B2), Opia_68 (B2), Phantasmagoria_66 (B2), PrinceCharming_68 (B2), Rhinoforte_67 (B2), Sabella_67 (B2), TA17A_69 (B2), Tres_67 (B2), Vic9_00066 (B2),

Start 26:
• Found in 38 of 67 (56.7%) of genes in pham
• Manual Annotations of this start: 8 of 57
• Called 23.7% of time when present
• Phage (with cluster) where this start called: Arbiter_65 (B2), Ares_67 (B2), Brownie5_67 (B2), Faze9_66 (B2), LilSmirk_67 (B2), Qyrzula_61 (B2), Rosebush_66 (B2), Tinciduntsolum_68 (B2), West99_67 (B2),

Summary by clusters:

There are 3 clusters represented in this pham: B4, B2, B3,

Info for manual annotations of cluster B2:
•Start number 3 was manually annotated 1 time for cluster B2.
•Start number 25 was manually annotated 28 times for cluster B2.
•Start number 26 was manually annotated 8 times for cluster B2.

Info for manual annotations of cluster B3:
•Start number 5 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster B4:
•Start number 5 was manually annotated 3 times for cluster B4.
•Start number 20 was manually annotated 9 times for cluster B4.
•Start number 24 was manually annotated 7 times for cluster B4.

Gene Information:

Gene: Ahwei_66 Start: 59056, Stop: 59619, Start Num: 24
Candidate Starts for Ahwei_66:
(4, 58912), (Start: 5 @58918 has 4 MA's), (12, 58984), (Start: 20 @59035 has 9 MA's), (Start: 24 @59056 has 7 MA's), (32, 59176), (33, 59185), (37, 59284), (38, 59290), (39, 59308), (42, 59353), (44,

59398), (45, 59410), (61, 59530), (63, 59545),

Gene: Allegro_67 Start: 56819, Stop: 57352, Start Num: 25
Candidate Starts for Allegro_67:
(2, 56543), (Start: 3 @56618 has 1 MA's), (8, 56702), (11, 56729), (13, 56741), (14, 56747), (17, 56783), (19, 56786), (Start: 25 @56819 has 28 MA's), (Start: 26 @56828 has 8 MA's), (27, 56837), (29, 56870), (32, 56936), (34, 56984), (35, 56996), (38, 57044), (39, 57062), (40, 57083), (42, 57107), (43, 57119), (47, 57173), (48, 57182), (56, 57236), (60, 57281),

Gene: Antihero_66 Start: 59054, Stop: 59617, Start Num: 24
Candidate Starts for Antihero_66:
(4, 58910), (Start: 5 @58916 has 4 MA's), (12, 58982), (Start: 20 @59033 has 9 MA's), (Start: 24 @59054 has 7 MA's), (32, 59174), (33, 59183), (37, 59282), (38, 59288), (39, 59306), (42, 59351), (44, 59396), (45, 59408), (55, 59471), (61, 59528), (63, 59543),

Gene: Apex_69 Start: 60138, Stop: 60722, Start Num: 20
Candidate Starts for Apex_69:
(4, 60015), (Start: 5 @60021 has 4 MA's), (Start: 20 @60138 has 9 MA's), (32, 60279), (33, 60288), (37, 60387), (38, 60393), (39, 60411), (41, 60453), (42, 60456), (44, 60501), (45, 60513), (58, 60612), (61, 60633), (63, 60648), (64, 60699),

Gene: Arbiter_65 Start: 56863, Stop: 57387, Start Num: 26
Candidate Starts for Arbiter_65:
(2, 56578), (Start: 3 @56653 has 1 MA's), (7, 56731), (8, 56737), (11, 56764), (13, 56776), (14, 56782), (17, 56818), (19, 56821), (Start: 25 @56854 has 28 MA's), (Start: 26 @56863 has 8 MA's), (27, 56872), (29, 56905), (32, 56971), (34, 57019), (38, 57079), (39, 57097), (40, 57118), (42, 57142), (43, 57154), (47, 57208), (48, 57217), (56, 57271),

Gene: Ares_67 Start: 56834, Stop: 57358, Start Num: 26
Candidate Starts for Ares_67:
(2, 56549), (Start: 3 @56624 has 1 MA's), (7, 56702), (8, 56708), (11, 56735), (13, 56747), (14, 56753), (17, 56789), (19, 56792), (Start: 25 @56825 has 28 MA's), (Start: 26 @56834 has 8 MA's), (27, 56843), (29, 56876), (32, 56942), (34, 56990), (38, 57050), (39, 57068), (40, 57089), (42, 57113), (43, 57125), (47, 57179), (48, 57188), (56, 57242),

Gene: Bananafish_68 Start: 56755, Stop: 57288, Start Num: 25
Candidate Starts for Bananafish_68:
(2, 56479), (Start: 3 @56554 has 1 MA's), (7, 56632), (8, 56638), (11, 56665), (13, 56677), (14, 56683), (17, 56719), (19, 56722), (Start: 25 @56755 has 28 MA's), (Start: 26 @56764 has 8 MA's), (27, 56773), (29, 56806), (32, 56872), (34, 56920), (35, 56932), (38, 56980), (39, 56998), (40, 57019), (42, 57043), (43, 57055), (47, 57109), (48, 57118), (56, 57172),

Gene: Blocker23_67 Start: 56819, Stop: 57352, Start Num: 25
Candidate Starts for Blocker23_67:
(2, 56543), (Start: 3 @56618 has 1 MA's), (8, 56702), (11, 56729), (13, 56741), (14, 56747), (17, 56783), (19, 56786), (Start: 25 @56819 has 28 MA's), (Start: 26 @56828 has 8 MA's), (27, 56837), (29, 56870), (32, 56936), (34, 56984), (38, 57044), (39, 57062), (40, 57083), (42, 57107), (43, 57119), (47, 57173), (48, 57182), (56, 57236),

Gene: BobbyK_69 Start: 59936, Stop: 60499, Start Num: 24
Candidate Starts for BobbyK_69:
(4, 59792), (Start: 5 @59798 has 4 MA's), (Start: 20 @59915 has 9 MA's), (Start: 24 @59936 has 7 MA's), (32, 60056), (33, 60065), (37, 60164), (38, 60170), (39, 60188), (41, 60230), (42, 60233), (44,

60278), (45, 60290), (61, 60410), (63, 60425),

Gene: Boyle_67 Start: 56863, Stop: 57396, Start Num: 25
Candidate Starts for Boyle_67:
(2, 56587), (Start: 3 @56662 has 1 MA's), (8, 56746), (11, 56773), (13, 56785), (14, 56791), (17, 56827), (19, 56830), (Start: 25 @56863 has 28 MA's), (Start: 26 @56872 has 8 MA's), (27, 56881), (29, 56914), (32, 56980), (34, 57028), (38, 57088), (39, 57106), (40, 57127), (42, 57151), (43, 57163), (47, 57217), (48, 57226), (56, 57280),

Gene: BrownCNA_70 Start: 60292, Stop: 60873, Start Num: 20
Candidate Starts for BrownCNA_70:
(4, 60169), (Start: 5 @60175 has 4 MA's), (Start: 20 @60292 has 9 MA's), (31, 60409), (32, 60433), (33, 60442), (37, 60541), (38, 60547), (42, 60610), (44, 60655), (45, 60667), (57, 60760), (61, 60784), (62, 60796),

Gene: Brownie5_67 Start: 56874, Stop: 57398, Start Num: 26
Candidate Starts for Brownie5_67:
(2, 56589), (Start: 3 @56664 has 1 MA's), (8, 56748), (11, 56775), (13, 56787), (14, 56793), (17, 56829), (19, 56832), (Start: 25 @56865 has 28 MA's), (Start: 26 @56874 has 8 MA's), (27, 56883), (29, 56916), (32, 56982), (34, 57030), (38, 57090), (39, 57108), (40, 57129), (42, 57153), (43, 57165), (47, 57219), (48, 57228), (56, 57282),

Gene: Calamitous_68 Start: 56753, Stop: 57286, Start Num: 25
Candidate Starts for Calamitous_68:
(2, 56477), (Start: 3 @56552 has 1 MA's), (8, 56636), (11, 56663), (13, 56675), (14, 56681), (17, 56717), (19, 56720), (Start: 25 @56753 has 28 MA's), (Start: 26 @56762 has 8 MA's), (27, 56771), (29, 56804), (32, 56870), (34, 56918), (38, 56978), (39, 56996), (40, 57017), (42, 57041), (43, 57053), (47, 57107), (48, 57116), (56, 57170),

Gene: Chandler_72 Start: 59131, Stop: 59706, Start Num: 5
Candidate Starts for Chandler_72:
(Start: 5 @59131 has 4 MA's), (15, 59230), (18, 59242), (21, 59251), (22, 59254), (23, 59257), (28, 59302), (29, 59320), (30, 59347), (36, 59461), (37, 59500), (41, 59566), (46, 59632), (52, 59665), (54, 59686),

Gene: ChrisnMich_68 Start: 59038, Stop: 59601, Start Num: 24
Candidate Starts for ChrisnMich_68:
(4, 58894), (Start: 5 @58900 has 4 MA's), (12, 58966), (Start: 20 @59017 has 9 MA's), (Start: 24 @59038 has 7 MA's), (32, 59158), (33, 59167), (37, 59266), (38, 59272), (39, 59290), (42, 59335), (44, 59380), (45, 59392), (61, 59512), (63, 59527),

Gene: Coffee_67 Start: 56857, Stop: 57390, Start Num: 25
Candidate Starts for Coffee_67:
(2, 56581), (Start: 3 @56656 has 1 MA's), (8, 56740), (11, 56767), (13, 56779), (14, 56785), (17, 56821), (19, 56824), (Start: 25 @56857 has 28 MA's), (Start: 26 @56866 has 8 MA's), (27, 56875), (29, 56908), (32, 56974), (34, 57022), (38, 57082), (39, 57100), (40, 57121), (42, 57145), (43, 57157), (47, 57211), (48, 57220), (56, 57274), (60, 57319),

Gene: Eaglehorse_67 Start: 56743, Stop: 57276, Start Num: 25
Candidate Starts for Eaglehorse_67:
(2, 56467), (Start: 3 @56542 has 1 MA's), (8, 56626), (11, 56653), (13, 56665), (14, 56671), (17, 56707), (19, 56710), (Start: 25 @56743 has 28 MA's), (Start: 26 @56752 has 8 MA's), (27, 56761), (29, 56794), (32, 56860), (34, 56908), (38, 56968), (39, 56986), (40, 57007), (42, 57031), (43, 57043),

(47, 57097), (48, 57106), (56, 57160),

Gene: Epah_66 Start: 59054, Stop: 59617, Start Num: 24
Candidate Starts for Epah_66:
(4, 58910), (Start: 5 @58916 has 4 MA's), (12, 58982), (Start: 20 @59033 has 9 MA's), (Start: 24 @59054 has 7 MA's), (32, 59174), (33, 59183), (37, 59282), (38, 59288), (39, 59306), (42, 59351), (44, 59396), (45, 59408), (55, 59471), (61, 59528), (63, 59543),

Gene: Fanaw_65 Start: 60090, Stop: 60653, Start Num: 24
Candidate Starts for Fanaw_65:
(4, 59946), (Start: 5 @59952 has 4 MA's), (12, 60018), (Start: 20 @60069 has 9 MA's), (Start: 24 @60090 has 7 MA's), (32, 60210), (33, 60219), (37, 60318), (38, 60324), (41, 60384), (42, 60387), (44, 60432), (45, 60444), (49, 60465), (61, 60564), (63, 60579), (64, 60630),

Gene: Faze9_66 Start: 56891, Stop: 57415, Start Num: 26
Candidate Starts for Faze9_66:
(2, 56606), (Start: 3 @56681 has 1 MA's), (8, 56765), (11, 56792), (13, 56804), (14, 56810), (17, 56846), (19, 56849), (Start: 25 @56882 has 28 MA's), (Start: 26 @56891 has 8 MA's), (27, 56900), (29, 56933), (32, 56999), (34, 57047), (38, 57107), (39, 57125), (40, 57146), (42, 57170), (43, 57182), (47, 57236), (48, 57245), (56, 57299),

Gene: Fortunato_69 Start: 60068, Stop: 60652, Start Num: 20
Candidate Starts for Fortunato_69:
(4, 59945), (Start: 5 @59951 has 4 MA's), (Start: 20 @60068 has 9 MA's), (31, 60185), (32, 60209), (33, 60218), (37, 60317), (38, 60323), (39, 60341), (41, 60383), (42, 60386), (44, 60431), (45, 60443), (49, 60464), (61, 60563), (63, 60578), (64, 60629),

Gene: Frederick_70 Start: 59898, Stop: 60596, Start Num: 5
Candidate Starts for Frederick_70:
(4, 59892), (Start: 5 @59898 has 4 MA's), (Start: 20 @60015 has 9 MA's), (31, 60132), (32, 60156), (33, 60165), (37, 60264), (38, 60270), (39, 60288), (41, 60330), (42, 60333), (44, 60378), (45, 60390), (61, 60507), (64, 60573),

Gene: FrenchFry_68 Start: 56868, Stop: 57401, Start Num: 25
Candidate Starts for FrenchFry_68:
(2, 56592), (Start: 3 @56667 has 1 MA's), (8, 56751), (11, 56778), (13, 56790), (14, 56796), (17, 56832), (19, 56835), (Start: 25 @56868 has 28 MA's), (Start: 26 @56877 has 8 MA's), (27, 56886), (29, 56919), (32, 56985), (34, 57033), (38, 57093), (39, 57111), (40, 57132), (42, 57156), (43, 57168), (47, 57222), (48, 57231), (56, 57285),

Gene: GinPorsche_68 Start: 59054, Stop: 59617, Start Num: 24
Candidate Starts for GinPorsche_68:
(4, 58910), (Start: 5 @58916 has 4 MA's), (12, 58982), (Start: 20 @59033 has 9 MA's), (Start: 24 @59054 has 7 MA's), (32, 59174), (33, 59183), (37, 59282), (38, 59288), (39, 59306), (42, 59351), (44, 59396), (45, 59408), (55, 59471), (61, 59528), (63, 59543),

Gene: Glass_68 Start: 56669, Stop: 57403, Start Num: 3
Candidate Starts for Glass_68:
(2, 56594), (Start: 3 @56669 has 1 MA's), (8, 56753), (11, 56780), (13, 56792), (14, 56798), (17, 56834), (19, 56837), (22, 56849), (Start: 25 @56870 has 28 MA's), (Start: 26 @56879 has 8 MA's), (27, 56888), (29, 56921), (32, 56987), (34, 57035), (38, 57095), (39, 57113), (40, 57134), (42, 57158), (43, 57170), (47, 57224), (48, 57233), (56, 57287),

Gene: Godines_68 Start: 57120, Stop: 57656, Start Num: 25
Candidate Starts for Godines_68:
(2, 56844), (Start: 3 @56919 has 1 MA's), (8, 57003), (11, 57030), (13, 57042), (14, 57048), (17, 57084), (19, 57087), (Start: 20 @57093 has 9 MA's), (Start: 25 @57120 has 28 MA's), (Start: 26 @57129 has 8 MA's), (27, 57141), (29, 57174), (32, 57240), (34, 57288), (38, 57348), (39, 57366), (40, 57387), (42, 57411), (43, 57423), (47, 57477), (48, 57486), (56, 57540),

Gene: Hally898_66 Start: 59069, Stop: 59632, Start Num: 24
Candidate Starts for Hally898_66:
(4, 58925), (Start: 5 @58931 has 4 MA's), (12, 58997), (Start: 20 @59048 has 9 MA's), (Start: 24 @59069 has 7 MA's), (32, 59189), (33, 59198), (37, 59297), (38, 59303), (39, 59321), (42, 59366), (44, 59411), (45, 59423), (61, 59543), (63, 59558),

Gene: Hangman_69 Start: 60214, Stop: 60795, Start Num: 20
Candidate Starts for Hangman_69:
(4, 60091), (Start: 5 @60097 has 4 MA's), (Start: 20 @60214 has 9 MA's), (32, 60355), (33, 60364), (37, 60463), (38, 60469), (42, 60532), (44, 60577), (45, 60589), (61, 60706), (64, 60772),

Gene: Hedgerow_67 Start: 56820, Stop: 57353, Start Num: 25
Candidate Starts for Hedgerow_67:
(2, 56544), (Start: 3 @56619 has 1 MA's), (8, 56706), (11, 56733), (12, 56739), (13, 56742), (14, 56748), (17, 56784), (19, 56787), (Start: 25 @56820 has 28 MA's), (Start: 26 @56829 has 8 MA's), (27, 56838), (29, 56871), (32, 56937), (34, 56985), (38, 57045), (39, 57063), (40, 57084), (42, 57108), (43, 57120), (47, 57174), (48, 57183), (56, 57237), (60, 57282),

Gene: Holeinone_67 Start: 56725, Stop: 57258, Start Num: 25
Candidate Starts for Holeinone_67:
(2, 56449), (Start: 3 @56524 has 1 MA's), (8, 56608), (11, 56635), (13, 56647), (14, 56653), (17, 56689), (19, 56692), (Start: 25 @56725 has 28 MA's), (Start: 26 @56734 has 8 MA's), (27, 56743), (29, 56776), (32, 56842), (34, 56890), (38, 56950), (39, 56968), (40, 56989), (42, 57013), (43, 57025), (47, 57079), (48, 57088), (56, 57142),

Gene: Hydro_69 Start: 60152, Stop: 60733, Start Num: 20
Candidate Starts for Hydro_69:
(4, 60029), (Start: 5 @60035 has 4 MA's), (Start: 20 @60152 has 9 MA's), (31, 60269), (32, 60293), (33, 60302), (37, 60401), (38, 60407), (42, 60470), (44, 60515), (45, 60527), (61, 60644), (64, 60710),

Gene: ItsyBitsy1_66 Start: 56958, Stop: 57494, Start Num: 25
Candidate Starts for ItsyBitsy1_66:
(1, 56628), (2, 56682), (Start: 3 @56757 has 1 MA's), (7, 56835), (8, 56841), (11, 56868), (13, 56880), (14, 56886), (17, 56922), (19, 56925), (22, 56937), (Start: 25 @56958 has 28 MA's), (Start: 26 @56967 has 8 MA's), (27, 56979), (29, 57012), (32, 57078), (34, 57126), (38, 57186), (39, 57204), (40, 57225), (42, 57249), (43, 57261), (47, 57315), (48, 57324), (56, 57378), (60, 57423),

Gene: JAMaL_68 Start: 60063, Stop: 60626, Start Num: 24
Candidate Starts for JAMaL_68:
(4, 59919), (Start: 5 @59925 has 4 MA's), (10, 59979), (12, 59991), (Start: 20 @60042 has 9 MA's), (Start: 24 @60063 has 7 MA's), (32, 60183), (33, 60192), (37, 60291), (38, 60297), (39, 60315), (42, 60360), (44, 60405), (45, 60417), (55, 60480), (61, 60537), (63, 60552),

Gene: Kaleb_67 Start: 56875, Stop: 57408, Start Num: 25
Candidate Starts for Kaleb_67:

(2, 56599), (Start: 3 @56674 has 1 MA's), (8, 56758), (11, 56785), (13, 56797), (14, 56803), (17, 56839), (19, 56842), (Start: 25 @56875 has 28 MA's), (Start: 26 @56884 has 8 MA's), (27, 56893), (29, 56926), (32, 56992), (34, 57040), (38, 57100), (39, 57118), (40, 57139), (42, 57163), (43, 57175), (47, 57229), (48, 57238), (56, 57292),

Gene: Kheth_67 Start: 56787, Stop: 57320, Start Num: 25
Candidate Starts for Kheth_67:
(2, 56511), (Start: 3 @56586 has 1 MA's), (8, 56670), (11, 56697), (13, 56709), (14, 56715), (17, 56751), (19, 56754), (Start: 25 @56787 has 28 MA's), (Start: 26 @56796 has 8 MA's), (27, 56805), (29, 56838), (32, 56904), (34, 56952), (38, 57012), (39, 57030), (40, 57051), (42, 57075), (43, 57087), (47, 57141), (48, 57150), (56, 57204),

Gene: Kolhan_68 Start: 56764, Stop: 57297, Start Num: 25
Candidate Starts for Kolhan_68:
(2, 56488), (Start: 3 @56563 has 1 MA's), (7, 56641), (8, 56647), (11, 56674), (13, 56686), (14, 56692), (17, 56728), (19, 56731), (Start: 25 @56764 has 28 MA's), (Start: 26 @56773 has 8 MA's), (27, 56782), (29, 56815), (32, 56881), (34, 56929), (38, 56989), (39, 57007), (40, 57028), (42, 57052), (43, 57064), (47, 57118), (48, 57127), (56, 57181),

Gene: Lambano_66 Start: 59069, Stop: 59632, Start Num: 24
Candidate Starts for Lambano_66:
(4, 58925), (Start: 5 @58931 has 4 MA's), (12, 58997), (Start: 20 @59048 has 9 MA's), (Start: 24 @59069 has 7 MA's), (32, 59189), (33, 59198), (37, 59297), (38, 59303), (39, 59321), (42, 59366), (44, 59411), (45, 59423), (61, 59543), (63, 59558),

Gene: Lars_68 Start: 56848, Stop: 57381, Start Num: 25
Candidate Starts for Lars_68:
(2, 56572), (Start: 3 @56647 has 1 MA's), (8, 56731), (11, 56758), (13, 56770), (14, 56776), (17, 56812), (19, 56815), (22, 56827), (Start: 25 @56848 has 28 MA's), (Start: 26 @56857 has 8 MA's), (27, 56866), (29, 56899), (32, 56965), (34, 57013), (38, 57073), (39, 57091), (40, 57112), (42, 57136), (43, 57148), (47, 57202), (48, 57211), (56, 57265),

Gene: Laurie_67 Start: 56525, Stop: 57058, Start Num: 25
Candidate Starts for Laurie_67:
(2, 56249), (Start: 3 @56324 has 1 MA's), (8, 56411), (11, 56438), (12, 56444), (13, 56447), (14, 56453), (17, 56489), (19, 56492), (Start: 25 @56525 has 28 MA's), (Start: 26 @56534 has 8 MA's), (27, 56543), (29, 56576), (32, 56642), (34, 56690), (38, 56750), (39, 56768), (40, 56789), (42, 56813), (43, 56825), (47, 56879), (48, 56888), (56, 56942), (60, 56987),

Gene: Lephleur_67 Start: 56710, Stop: 57243, Start Num: 25
Candidate Starts for Lephleur_67:
(2, 56434), (Start: 3 @56509 has 1 MA's), (8, 56593), (11, 56620), (13, 56632), (14, 56638), (17, 56674), (19, 56677), (Start: 25 @56710 has 28 MA's), (Start: 26 @56719 has 8 MA's), (27, 56728), (29, 56761), (32, 56827), (34, 56875), (38, 56935), (39, 56953), (40, 56974), (42, 56998), (43, 57010), (47, 57064), (48, 57073), (56, 57127),

Gene: LilSmirk_67 Start: 56755, Stop: 57279, Start Num: 26
Candidate Starts for LilSmirk_67:
(2, 56470), (Start: 3 @56545 has 1 MA's), (7, 56623), (8, 56629), (11, 56656), (13, 56668), (14, 56674), (17, 56710), (19, 56713), (Start: 25 @56746 has 28 MA's), (Start: 26 @56755 has 8 MA's), (27, 56764), (29, 56797), (32, 56863), (34, 56911), (38, 56971), (39, 56989), (40, 57010), (42, 57034), (43, 57046), (47, 57100), (48, 57109), (56, 57163),

Gene: LittleDigger_67 Start: 58992, Stop: 59558, Start Num: 24
Candidate Starts for LittleDigger_67:
(4, 58848), (Start: 5 @58854 has 4 MA's), (12, 58920), (Start: 20 @58971 has 9 MA's), (Start: 24 @58992 has 7 MA's), (32, 59112), (33, 59121), (37, 59220), (38, 59226), (39, 59244), (42, 59289), (44, 59334), (45, 59346), (49, 59367), (61, 59469), (63, 59484),

Gene: LizLemon_67 Start: 56875, Stop: 57408, Start Num: 25
Candidate Starts for LizLemon_67:
(2, 56599), (Start: 3 @56674 has 1 MA's), (8, 56758), (11, 56785), (13, 56797), (14, 56803), (17, 56839), (19, 56842), (22, 56854), (Start: 25 @56875 has 28 MA's), (Start: 26 @56884 has 8 MA's), (27, 56893), (29, 56926), (32, 56992), (34, 57040), (38, 57100), (39, 57118), (40, 57139), (42, 57163), (43, 57175), (47, 57229), (48, 57238), (56, 57292),

Gene: Magpie_66 Start: 59929, Stop: 60492, Start Num: 24
Candidate Starts for Magpie_66:
(4, 59785), (Start: 5 @59791 has 4 MA's), (Start: 20 @59908 has 9 MA's), (Start: 24 @59929 has 7 MA's), (32, 60049), (33, 60058), (37, 60157), (38, 60163), (39, 60181), (41, 60223), (42, 60226), (44, 60271), (45, 60283), (49, 60304), (58, 60382), (61, 60403), (63, 60418),

Gene: MasterPo_68 Start: 56742, Stop: 57275, Start Num: 25
Candidate Starts for MasterPo_68:
(2, 56466), (Start: 3 @56541 has 1 MA's), (8, 56625), (11, 56652), (13, 56664), (14, 56670), (17, 56706), (19, 56709), (Start: 25 @56742 has 28 MA's), (Start: 26 @56751 has 8 MA's), (27, 56760), (29, 56793), (32, 56859), (34, 56907), (38, 56967), (39, 56985), (40, 57006), (42, 57030), (43, 57042), (47, 57096), (48, 57105), (56, 57159),

Gene: Mudslide_68 Start: 60243, Stop: 60824, Start Num: 20
Candidate Starts for Mudslide_68:
(4, 60120), (Start: 5 @60126 has 4 MA's), (Start: 20 @60243 has 9 MA's), (32, 60384), (33, 60393), (37, 60492), (38, 60498), (42, 60561), (44, 60606), (45, 60618), (57, 60711), (61, 60735), (62, 60747),

Gene: Nanao_67 Start: 59059, Stop: 59622, Start Num: 24
Candidate Starts for Nanao_67:
(4, 58915), (Start: 5 @58921 has 4 MA's), (12, 58987), (Start: 20 @59038 has 9 MA's), (Start: 24 @59059 has 7 MA's), (32, 59179), (33, 59188), (37, 59287), (38, 59293), (39, 59311), (42, 59356), (44, 59401), (45, 59413), (61, 59533), (63, 59548),

Gene: Nigel_66 Start: 58741, Stop: 59442, Start Num: 5
Candidate Starts for Nigel_66:
(4, 58735), (Start: 5 @58741 has 4 MA's), (6, 58753), (9, 58786), (12, 58807), (Start: 20 @58858 has 9 MA's), (32, 58996), (33, 59005), (37, 59104), (39, 59128), (42, 59173), (44, 59218), (45, 59230), (50, 59254), (53, 59284), (55, 59293), (61, 59353), (63, 59368),

Gene: Opia_68 Start: 56768, Stop: 57301, Start Num: 25
Candidate Starts for Opia_68:
(2, 56492), (Start: 3 @56567 has 1 MA's), (8, 56651), (11, 56678), (13, 56690), (14, 56696), (17, 56732), (19, 56735), (Start: 25 @56768 has 28 MA's), (Start: 26 @56777 has 8 MA's), (27, 56786), (29, 56819), (32, 56885), (34, 56933), (38, 56993), (39, 57011), (40, 57032), (42, 57056), (43, 57068), (47, 57122), (48, 57131), (56, 57185),

Gene: Phantasmagoria_66 Start: 56757, Stop: 57290, Start Num: 25
Candidate Starts for Phantasmagoria_66:

(2, 56481), (Start: 3 @56556 has 1 MA's), (8, 56640), (11, 56667), (13, 56679), (14, 56685), (17, 56721), (19, 56724), (Start: 25 @56757 has 28 MA's), (Start: 26 @56766 has 8 MA's), (27, 56775), (29, 56808), (32, 56874), (34, 56922), (35, 56934), (38, 56982), (39, 57000), (40, 57021), (42, 57045), (43, 57057), (47, 57111), (48, 57120), (56, 57174),

Gene: Poster_66 Start: 59060, Stop: 59623, Start Num: 24
Candidate Starts for Poster_66:
(4, 58916), (Start: 5 @58922 has 4 MA's), (12, 58988), (Start: 20 @59039 has 9 MA's), (Start: 24 @59060 has 7 MA's), (32, 59180), (33, 59189), (37, 59288), (38, 59294), (39, 59312), (42, 59357), (44, 59402), (45, 59414), (61, 59534), (63, 59549),

Gene: PrinceCharming_68 Start: 56797, Stop: 57330, Start Num: 25
Candidate Starts for PrinceCharming_68:
(2, 56521), (Start: 3 @56596 has 1 MA's), (8, 56680), (11, 56707), (13, 56719), (14, 56725), (17, 56761), (19, 56764), (Start: 25 @56797 has 28 MA's), (Start: 26 @56806 has 8 MA's), (27, 56815), (29, 56848), (32, 56914), (34, 56962), (35, 56974), (38, 57022), (39, 57040), (40, 57061), (42, 57085), (43, 57097), (47, 57151), (48, 57160), (56, 57214),

Gene: QueenPie_63 Start: 59162, Stop: 59725, Start Num: 24
Candidate Starts for QueenPie_63:
(4, 59018), (Start: 5 @59024 has 4 MA's), (10, 59078), (12, 59090), (Start: 20 @59141 has 9 MA's), (Start: 24 @59162 has 7 MA's), (32, 59282), (33, 59291), (37, 59390), (38, 59396), (41, 59456), (42, 59459), (44, 59504), (45, 59516), (55, 59579), (61, 59636), (63, 59651),

Gene: Qyrzula_61 Start: 56891, Stop: 57415, Start Num: 26
Candidate Starts for Qyrzula_61:
(2, 56606), (Start: 3 @56681 has 1 MA's), (8, 56765), (11, 56792), (13, 56804), (14, 56810), (17, 56846), (19, 56849), (Start: 25 @56882 has 28 MA's), (Start: 26 @56891 has 8 MA's), (27, 56900), (29, 56933), (32, 56999), (34, 57047), (38, 57107), (39, 57125), (40, 57146), (42, 57170), (43, 57182), (47, 57236), (48, 57245), (55, 57296), (56, 57299),

Gene: RawrgerThat_69 Start: 60046, Stop: 60630, Start Num: 20
Candidate Starts for RawrgerThat_69:
(4, 59923), (Start: 5 @59929 has 4 MA's), (Start: 20 @60046 has 9 MA's), (31, 60163), (32, 60187), (33, 60196), (37, 60295), (38, 60301), (39, 60319), (41, 60361), (42, 60364), (44, 60409), (45, 60421), (49, 60442), (61, 60541), (63, 60556), (64, 60607),

Gene: Renkei_67 Start: 58986, Stop: 59552, Start Num: 24
Candidate Starts for Renkei_67:
(4, 58842), (Start: 5 @58848 has 4 MA's), (12, 58914), (Start: 20 @58965 has 9 MA's), (Start: 24 @58986 has 7 MA's), (32, 59106), (33, 59115), (37, 59214), (38, 59220), (39, 59238), (42, 59283), (44, 59328), (45, 59340), (49, 59361), (61, 59463), (63, 59478),

Gene: Rhinoforte_67 Start: 56795, Stop: 57328, Start Num: 25
Candidate Starts for Rhinoforte_67:
(2, 56519), (Start: 3 @56594 has 1 MA's), (7, 56672), (8, 56678), (11, 56705), (13, 56717), (14, 56723), (17, 56759), (19, 56762), (Start: 25 @56795 has 28 MA's), (Start: 26 @56804 has 8 MA's), (27, 56813), (29, 56846), (32, 56912), (34, 56960), (38, 57020), (39, 57038), (40, 57059), (42, 57083), (43, 57095), (47, 57149), (48, 57158), (56, 57212),

Gene: Rosebush_66 Start: 56870, Stop: 57394, Start Num: 26
Candidate Starts for Rosebush_66:

(2, 56585), (Start: 3 @56660 has 1 MA's), (8, 56744), (11, 56771), (13, 56783), (14, 56789), (17, 56825), (19, 56828), (Start: 25 @56861 has 28 MA's), (Start: 26 @56870 has 8 MA's), (27, 56879), (29, 56912), (32, 56978), (34, 57026), (38, 57086), (39, 57104), (40, 57125), (42, 57149), (43, 57161), (47, 57215), (48, 57224), (55, 57275), (56, 57278),

Gene: Sabella_67 Start: 56697, Stop: 57230, Start Num: 25
Candidate Starts for Sabella_67:
(2, 56421), (Start: 3 @56496 has 1 MA's), (8, 56580), (11, 56607), (13, 56619), (14, 56625), (17, 56661), (19, 56664), (Start: 25 @56697 has 28 MA's), (Start: 26 @56706 has 8 MA's), (27, 56715), (29, 56748), (32, 56814), (34, 56862), (38, 56922), (39, 56940), (40, 56961), (42, 56985), (43, 56997), (47, 57051), (48, 57060), (56, 57114),

Gene: Stinger_68 Start: 58864, Stop: 59568, Start Num: 5
Candidate Starts for Stinger_68:
(Start: 5 @58864 has 4 MA's), (Start: 20 @58981 has 9 MA's), (32, 59122), (33, 59131), (37, 59230), (38, 59236), (39, 59254), (42, 59299), (44, 59344), (45, 59356), (59, 59473), (61, 59479), (63, 59494),

Gene: TA17A_69 Start: 56700, Stop: 57236, Start Num: 25
Candidate Starts for TA17A_69:
(2, 56424), (Start: 3 @56499 has 1 MA's), (8, 56583), (11, 56610), (13, 56622), (14, 56628), (16, 56661), (17, 56664), (19, 56667), (Start: 25 @56700 has 28 MA's), (Start: 26 @56709 has 8 MA's), (27, 56721), (29, 56754), (32, 56820), (34, 56868), (38, 56928), (39, 56946), (40, 56967), (42, 56991), (43, 57003), (47, 57057), (48, 57066), (56, 57120),

Gene: Tinciduntsolum_68 Start: 56873, Stop: 57397, Start Num: 26
Candidate Starts for Tinciduntsolum_68:
(2, 56588), (Start: 3 @56663 has 1 MA's), (8, 56747), (11, 56774), (13, 56786), (14, 56792), (17, 56828), (19, 56831), (Start: 25 @56864 has 28 MA's), (Start: 26 @56873 has 8 MA's), (27, 56882), (29, 56915), (32, 56981), (34, 57029), (38, 57089), (39, 57107), (40, 57128), (42, 57152), (43, 57164), (47, 57218), (48, 57227), (56, 57281),

Gene: Tres_67 Start: 56718, Stop: 57251, Start Num: 25
Candidate Starts for Tres_67:
(2, 56442), (Start: 3 @56517 has 1 MA's), (7, 56595), (8, 56601), (11, 56628), (13, 56640), (14, 56646), (17, 56682), (19, 56685), (Start: 25 @56718 has 28 MA's), (Start: 26 @56727 has 8 MA's), (27, 56736), (29, 56769), (32, 56835), (34, 56883), (38, 56943), (39, 56961), (40, 56982), (42, 57006), (43, 57018), (47, 57072), (48, 57081), (56, 57135),

Gene: Vic9_00066 Start: 57555, Stop: 58088, Start Num: 25
Candidate Starts for Vic9_00066:
(2, 57279), (Start: 3 @57354 has 1 MA's), (8, 57441), (11, 57468), (12, 57474), (13, 57477), (14, 57483), (17, 57519), (19, 57522), (Start: 25 @57555 has 28 MA's), (Start: 26 @57564 has 8 MA's), (27, 57573), (29, 57606), (32, 57672), (34, 57720), (38, 57780), (39, 57798), (40, 57819), (42, 57843), (43, 57855), (47, 57909), (48, 57918), (56, 57972), (60, 58017),

Gene: VioletZ_70 Start: 60156, Stop: 60719, Start Num: 20
Candidate Starts for VioletZ_70:
(4, 60033), (Start: 5 @60039 has 4 MA's), (Start: 20 @60156 has 9 MA's), (32, 60297), (33, 60306), (39, 60429), (42, 60474), (44, 60519), (45, 60531), (51, 60561),

Gene: Waleliano_68 Start: 60045, Stop: 60626, Start Num: 20
Candidate Starts for Waleliano_68:

(4, 59922), (Start: 5 @59928 has 4 MA's), (Start: 20 @60045 has 9 MA's), (31, 60162), (32, 60186), (33, 60195), (37, 60294), (38, 60300), (42, 60363), (44, 60408), (45, 60420), (57, 60513), (61, 60537), (62, 60549),

Gene: West99_67 Start: 56900, Stop: 57427, Start Num: 26
Candidate Starts for West99_67:
(2, 56615), (Start: 3 @56690 has 1 MA's), (8, 56777), (11, 56804), (13, 56813), (14, 56819), (17, 56855), (19, 56858), (Start: 25 @56891 has 28 MA's), (Start: 26 @56900 has 8 MA's), (27, 56912), (29, 56945), (32, 57011), (34, 57059), (38, 57119), (39, 57137), (40, 57158), (42, 57182), (43, 57194), (47, 57248), (48, 57257), (56, 57311),