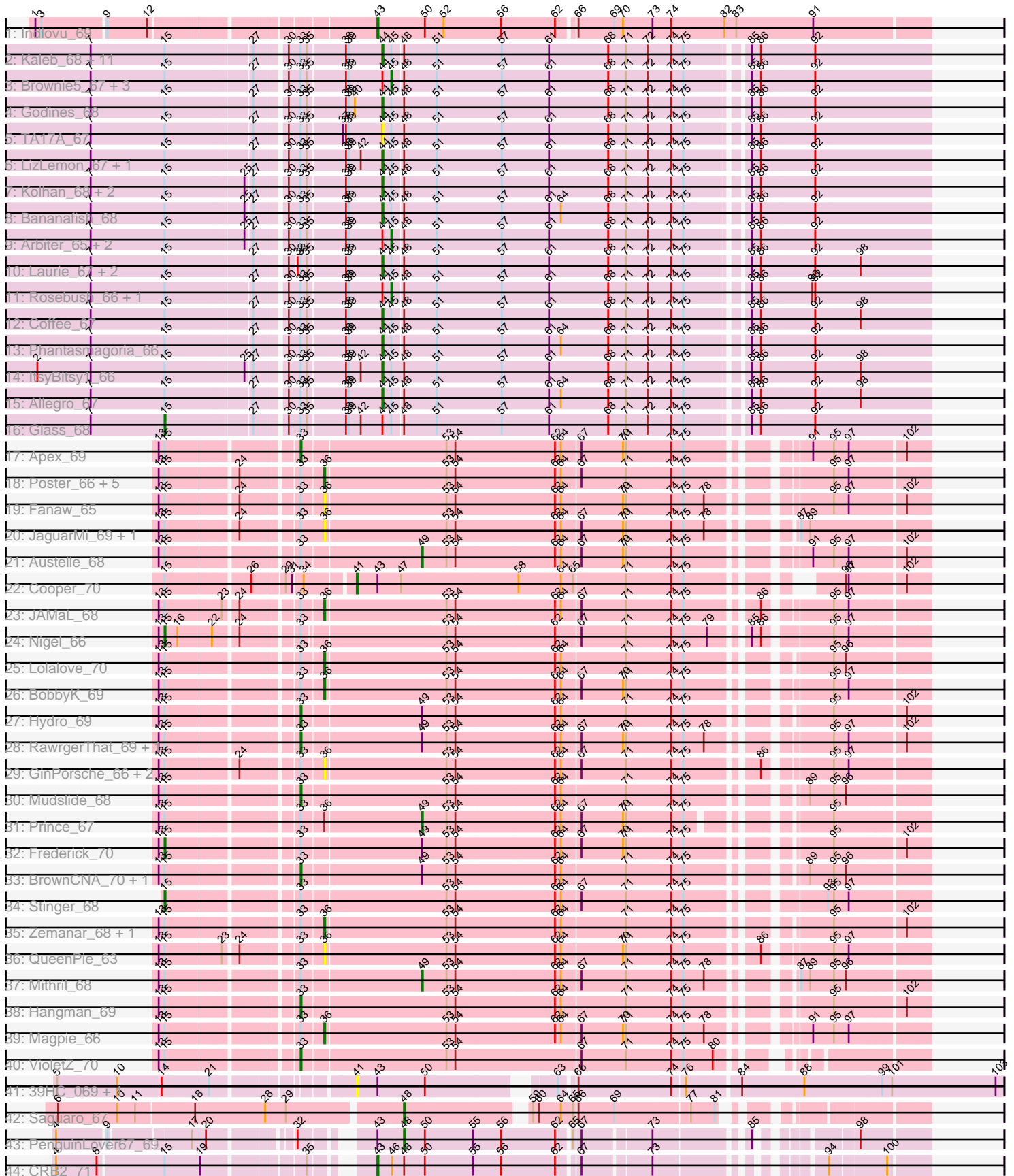


Pham 202891



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 202891 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202891 has 78 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Indlovu_69
- Track 2 : Kaleb_68, Calamitous_68, Eaglehorse_67, Boyle_67, MasterPo_68, Kheth_67, Sabella_67, Lephleur_67, FrenchFry_68, Opia_68, Holeinone_67, Blocker23_67
- Track 3 : Brownie5_67, West99_67, Faze9_66, Tinciduntsolum_68
- Track 4 : Godines_68
- Track 5 : TA17A_67
- Track 6 : LizLemon_67, Lars_68
- Track 7 : Kolhan_68, Tres_67, Rhinoforte_67
- Track 8 : Bananafish_68
- Track 9 : Arbitrator_65, Ares_67, LilSmirk_67
- Track 10 : Laurie_67, Vic9_69, Hedgerow_67
- Track 11 : Rosebush_66, Qyrzula_61
- Track 12 : Coffee_67
- Track 13 : Phantasmagoria_66
- Track 14 : ItsyBitsy1_66
- Track 15 : Allegro_67
- Track 16 : Glass_68
- Track 17 : Apex_69
- Track 18 : Poster_66, Ahwei_66, ChrisnMich_68, Hally898_66, Lambano_66, Nanao_67
- Track 19 : Fanaw_65
- Track 20 : JaguarMi_69, Xincheng_68
- Track 21 : Austelle_68
- Track 22 : Cooper_70
- Track 23 : JAMaL_68
- Track 24 : Nigel_66
- Track 25 : Lolalove_70
- Track 26 : BobbyK_69
- Track 27 : Hydro_69
- Track 28 : RawrgerThat_69, Fortunato_69
- Track 29 : GinPorsche_66, Epah_66, Antihero_66
- Track 30 : Mudslide_68
- Track 31 : Prince_67
- Track 32 : Frederick_70
- Track 33 : BrownCNA_70, Waleliano_68
- Track 34 : Stinger_68

- Track 35 : Zemanar_68, Heath_68
- Track 36 : QueenPie_63
- Track 37 : Mithril_68
- Track 38 : Hangman_69
- Track 39 : Magpie_66
- Track 40 : VioletZ_70
- Track 41 : 39HC_069, 40BC_069
- Track 42 : Saguaro_67
- Track 43 : PenguinLover67_69
- Track 44 : CRB2_71

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

The start number called the most often in the published annotations is 44, it was called in 23 of the 59 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_68, Kheth_67, Kolhan_68, Lars_68, Laurie_67, Lephleur_67, LizLemon_67, MasterPo_68, Opia_68, Phantasmagoria_66, Rhinoforte_67, Sabella_67, TA17A_67, Tres_67, Vic9_69,

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, Tinciduntolum_68, West99_67,

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

- 39HC_069, 40BC_069, Ahwei_66, Antihero_66, Apex_69, Austelle_68, BobbyK_69, BrownCNA_70, CRB2_71, ChrisnMich_68, Cooper_70, Epah_66, Fanaw_65, Fortunato_69, Frederick_70, GinPorsche_66, Hally898_66, Hangman_69, Heath_68, Hydro_69, Indlovu_69, JAMaL_68, JaguarMi_69, Lambano_66, Lolalove_70, Magpie_66, Mithril_68, Mudslide_68, Nanao_67, Nigel_66, PenguinLover67_69, Poster_66, Prince_67, QueenPie_63, RawrgerThat_69, Saguaro_67, Stinger_68, VioletZ_70, Waleliano_68, Xincheng_68, Zemanar_68,

Summary by start number:

Start 15:

- Found in 73 of 78 (93.6%) of genes in pham
- Manual Annotations of this start: 4 of 59
- Called 5.5% of time when present
- Phage (with cluster) where this start called: Frederick_70 (B4), Glass_68 (B2), Nigel_66 (B4), Stinger_68 (B4),

Start 33:

- Found in 71 of 78 (91.0%) of genes in pham
- Manual Annotations of this start: 9 of 59
- Called 12.7% 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 36:

- Found in 20 of 78 (25.6%) of genes in pham
- Manual Annotations of this start: 7 of 59
- Called 95.0% 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_66 (B4), Hally898_66 (B4), Heath_68 (B4), JAMaL_68 (B4), JaguarMi_69 (B4), Lambano_66 (B4), Lolalove_70 (B4), Magpie_66 (B4), Nanao_67 (B4), Poster_66 (B4), QueenPie_63 (B4), Xincheng_68 (B4), Zemanar_68 (B4),

Start 41:

- Found in 3 of 78 (3.8%) of genes in pham
- Manual Annotations of this start: 1 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_069 (B6), 40BC_069 (B6), Cooper_70 (B4),

Start 43:

- Found in 6 of 78 (7.7%) of genes in pham
- Manual Annotations of this start: 2 of 59
- Called 33.3% of time when present
- Phage (with cluster) where this start called: CRB2_71 (B9), Indlovu_69 (B11),

Start 44:

- Found in 37 of 78 (47.4%) of genes in pham
- Manual Annotations of this start: 23 of 59
- Called 73.0% 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_68 (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), Rhinoforte_67 (B2), Sabella_67 (B2), TA17A_67 (B2), Tres_67 (B2), Vic9_69 (B2),

Start 45:

- Found in 37 of 78 (47.4%) of genes in pham
- Manual Annotations of this start: 8 of 59
- Called 24.3% 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), Tinciduntolum_68 (B2), West99_67 (B2),

Start 48:

- Found in 40 of 78 (51.3%) of genes in pham
- Manual Annotations of this start: 2 of 59
- Called 5.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67_69 (B9), Saguaro_67 (B7),

Start 49:

- Found in 9 of 78 (11.5%) of genes in pham
- Manual Annotations of this start: 3 of 59
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Austelle_68 (B4), Mithril_68 (B4), Prince_67 (B4),

Summary by clusters:

There are 6 clusters represented in this pham: B4, B6, B7, B2, B11, B9,

Info for manual annotations of cluster B11:

- Start number 43 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B2:

- Start number 15 was manually annotated 1 time for cluster B2.
- Start number 44 was manually annotated 23 times for cluster B2.
- Start number 45 was manually annotated 8 times for cluster B2.

Info for manual annotations of cluster B4:

- Start number 15 was manually annotated 3 times for cluster B4.
- Start number 33 was manually annotated 9 times for cluster B4.
- Start number 36 was manually annotated 7 times for cluster B4.
- Start number 41 was manually annotated 1 time for cluster B4.
- Start number 49 was manually annotated 3 times for cluster B4.

Info for manual annotations of cluster B7:

- Start number 48 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 43 was manually annotated 1 time for cluster B9.
- Start number 48 was manually annotated 1 time for cluster B9.

Gene Information:

Gene: 39HC_069 Start: 58780, Stop: 59388, Start Num: 41

Candidate Starts for 39HC_069:

(5, 58525), (10, 58585), (14, 58630), (21, 58675), (Start: 41 @58780 has 1 MA's), (Start: 43 @58801 has 2 MA's), (50, 58849), (63, 58957), (66, 58969), (74, 59062), (76, 59074), (84, 59125), (88, 59188), (99, 59266), (101, 59275), (103, 59380),

Gene: 40BC_069 Start: 58780, Stop: 59388, Start Num: 41

Candidate Starts for 40BC_069:

(5, 58525), (10, 58585), (14, 58630), (21, 58675), (Start: 41 @58780 has 1 MA's), (Start: 43 @58801 has 2 MA's), (50, 58849), (63, 58957), (66, 58969), (74, 59062), (76, 59074), (84, 59125), (88, 59188), (99, 59266), (101, 59275), (103, 59380),

Gene: Ahwei_66 Start: 59056, Stop: 59619, Start Num: 36

Candidate Starts for Ahwei_66:

(13, 58912), (Start: 15 @58918 has 4 MA's), (24, 58984), (Start: 33 @59035 has 9 MA's), (Start: 36 @59056 has 7 MA's), (53, 59176), (54, 59185), (62, 59284), (64, 59290), (67, 59308), (71, 59353), (74, 59398), (75, 59410), (95, 59530), (97, 59545),

Gene: Allegro_67 Start: 56819, Stop: 57352, Start Num: 44

Candidate Starts for Allegro_67:

(7, 56543), (Start: 15 @56618 has 4 MA's), (27, 56702), (30, 56729), (Start: 33 @56741 has 9 MA's), (35, 56747), (38, 56783), (39, 56786), (Start: 44 @56819 has 23 MA's), (Start: 45 @56828 has 8 MA's), (Start: 48 @56837 has 2 MA's), (51, 56870), (57, 56936), (61, 56984), (64, 56996), (68, 57044), (71, 57062), (72, 57083), (74, 57107), (75, 57119), (85, 57173), (86, 57182), (92, 57236), (98, 57281),

Gene: Antihero_66 Start: 59054, Stop: 59617, Start Num: 36

Candidate Starts for Antihero_66:

(13, 58910), (Start: 15 @58916 has 4 MA's), (24, 58982), (Start: 33 @59033 has 9 MA's), (Start: 36 @59054 has 7 MA's), (53, 59174), (54, 59183), (62, 59282), (64, 59288), (67, 59306), (71, 59351), (74, 59396), (75, 59408), (86, 59471), (95, 59528), (97, 59543),

Gene: Apex_69 Start: 60138, Stop: 60722, Start Num: 33

Candidate Starts for Apex_69:

(13, 60015), (Start: 15 @60021 has 4 MA's), (Start: 33 @60138 has 9 MA's), (53, 60279), (54, 60288), (62, 60387), (64, 60393), (67, 60411), (70, 60453), (71, 60456), (74, 60501), (75, 60513), (91, 60612), (95, 60633), (97, 60648), (102, 60699),

Gene: Arbiter_65 Start: 56863, Stop: 57387, Start Num: 45

Candidate Starts for Arbiter_65:

(7, 56578), (Start: 15 @56653 has 4 MA's), (25, 56731), (27, 56737), (30, 56764), (Start: 33 @56776 has 9 MA's), (35, 56782), (38, 56818), (39, 56821), (Start: 44 @56854 has 23 MA's), (Start: 45 @56863 has 8 MA's), (Start: 48 @56872 has 2 MA's), (51, 56905), (57, 56971), (61, 57019), (68, 57079), (71, 57097), (72, 57118), (74, 57142), (75, 57154), (85, 57208), (86, 57217), (92, 57271),

Gene: Ares_67 Start: 56834, Stop: 57358, Start Num: 45

Candidate Starts for Ares_67:

(7, 56549), (Start: 15 @56624 has 4 MA's), (25, 56702), (27, 56708), (30, 56735), (Start: 33 @56747 has 9 MA's), (35, 56753), (38, 56789), (39, 56792), (Start: 44 @56825 has 23 MA's), (Start: 45 @56834 has 8 MA's), (Start: 48 @56843 has 2 MA's), (51, 56876), (57, 56942), (61, 56990), (68, 57050), (71, 57068), (72, 57089), (74, 57113), (75, 57125), (85, 57179), (86, 57188), (92, 57242),

Gene: Austelle_68 Start: 60772, Stop: 61239, Start Num: 49

Candidate Starts for Austelle_68:

(13, 60532), (Start: 15 @60538 has 4 MA's), (Start: 33 @60655 has 9 MA's), (Start: 49 @60772 has 3 MA's), (53, 60796), (54, 60805), (62, 60904), (64, 60910), (67, 60928), (70, 60970), (71, 60973), (74, 61018), (75, 61030), (91, 61129), (95, 61150), (97, 61165), (102, 61216),

Gene: Bananafish_68 Start: 56755, Stop: 57288, Start Num: 44

Candidate Starts for Bananafish_68:

(7, 56479), (Start: 15 @56554 has 4 MA's), (25, 56632), (27, 56638), (30, 56665), (Start: 33 @56677 has 9 MA's), (35, 56683), (38, 56719), (39, 56722), (Start: 44 @56755 has 23 MA's), (Start: 45 @56764 has 8 MA's), (Start: 48 @56773 has 2 MA's), (51, 56806), (57, 56872), (61, 56920), (64, 56932), (68, 56980), (71, 56998), (72, 57019), (74, 57043), (75, 57055), (85, 57109), (86, 57118), (92, 57172),

Gene: Blocker23_67 Start: 56819, Stop: 57352, Start Num: 44

Candidate Starts for Blocker23_67:

(7, 56543), (Start: 15 @56618 has 4 MA's), (27, 56702), (30, 56729), (Start: 33 @56741 has 9 MA's), (35, 56747), (38, 56783), (39, 56786), (Start: 44 @56819 has 23 MA's), (Start: 45 @56828 has 8 MA's), (Start: 48 @56837 has 2 MA's), (51, 56870), (57, 56936), (61, 56984), (68, 57044), (71, 57062), (72, 57083), (74, 57107), (75, 57119), (85, 57173), (86, 57182), (92, 57236),

Gene: BobbyK_69 Start: 59936, Stop: 60499, Start Num: 36

Candidate Starts for BobbyK_69:

(13, 59792), (Start: 15 @59798 has 4 MA's), (Start: 33 @59915 has 9 MA's), (Start: 36 @59936 has 7 MA's), (53, 60056), (54, 60065), (62, 60164), (64, 60170), (67, 60188), (70, 60230), (71, 60233), (74, 60278), (75, 60290), (95, 60410), (97, 60425),

Gene: Boyle_67 Start: 56863, Stop: 57396, Start Num: 44

Candidate Starts for Boyle_67:

(7, 56587), (Start: 15 @56662 has 4 MA's), (27, 56746), (30, 56773), (Start: 33 @56785 has 9 MA's), (35, 56791), (38, 56827), (39, 56830), (Start: 44 @56863 has 23 MA's), (Start: 45 @56872 has 8 MA's), (Start: 48 @56881 has 2 MA's), (51, 56914), (57, 56980), (61, 57028), (68, 57088), (71, 57106), (72, 57127), (74, 57151), (75, 57163), (85, 57217), (86, 57226), (92, 57280),

Gene: BrownCNA_70 Start: 60292, Stop: 60873, Start Num: 33

Candidate Starts for BrownCNA_70:

(13, 60169), (Start: 15 @60175 has 4 MA's), (Start: 33 @60292 has 9 MA's), (Start: 49 @60409 has 3 MA's), (53, 60433), (54, 60442), (62, 60541), (64, 60547), (71, 60610), (74, 60655), (75, 60667), (89, 60760), (95, 60784), (96, 60796),

Gene: Brownie5_67 Start: 56874, Stop: 57398, Start Num: 45

Candidate Starts for Brownie5_67:

(7, 56589), (Start: 15 @56664 has 4 MA's), (27, 56748), (30, 56775), (Start: 33 @56787 has 9 MA's), (35, 56793), (38, 56829), (39, 56832), (Start: 44 @56865 has 23 MA's), (Start: 45 @56874 has 8 MA's), (Start: 48 @56883 has 2 MA's), (51, 56916), (57, 56982), (61, 57030), (68, 57090), (71, 57108), (72, 57129), (74, 57153), (75, 57165), (85, 57219), (86, 57228), (92, 57282),

Gene: CRB2_71 Start: 61691, Stop: 62164, Start Num: 43

Candidate Starts for CRB2_71:

(4, 61424), (8, 61463), (Start: 15 @61526 has 4 MA's), (19, 61559), (35, 61649), (Start: 43 @61691 has 2 MA's), (46, 61706), (Start: 48 @61718 has 2 MA's), (50, 61739), (55, 61787), (56, 61814), (62, 61868), (67, 61886), (73, 61949), (94, 62075), (100, 62126),

Gene: Calamitous_68 Start: 56753, Stop: 57286, Start Num: 44

Candidate Starts for Calamitous_68:

(7, 56477), (Start: 15 @56552 has 4 MA's), (27, 56636), (30, 56663), (Start: 33 @56675 has 9 MA's), (35, 56681), (38, 56717), (39, 56720), (Start: 44 @56753 has 23 MA's), (Start: 45 @56762 has 8 MA's), (Start: 48 @56771 has 2 MA's), (51, 56804), (57, 56870), (61, 56918), (68, 56978), (71, 56996), (72, 57017), (74, 57041), (75, 57053), (85, 57107), (86, 57116), (92, 57170),

Gene: ChrisnMich_68 Start: 59038, Stop: 59601, Start Num: 36

Candidate Starts for ChrisnMich_68:

(13, 58894), (Start: 15 @58900 has 4 MA's), (24, 58966), (Start: 33 @59017 has 9 MA's), (Start: 36 @59038 has 7 MA's), (53, 59158), (54, 59167), (62, 59266), (64, 59272), (67, 59290), (71, 59335), (74, 59380), (75, 59392), (95, 59512), (97, 59527),

Gene: Coffee_67 Start: 56857, Stop: 57390, Start Num: 44

Candidate Starts for Coffee_67:

(7, 56581), (Start: 15 @56656 has 4 MA's), (27, 56740), (30, 56767), (Start: 33 @56779 has 9 MA's), (35, 56785), (38, 56821), (39, 56824), (Start: 44 @56857 has 23 MA's), (Start: 45 @56866 has 8 MA's), (Start: 48 @56875 has 2 MA's), (51, 56908), (57, 56974), (61, 57022), (68, 57082), (71, 57100), (72, 57121), (74, 57145), (75, 57157), (85, 57211), (86, 57220), (92, 57274), (98, 57319),

Gene: Cooper_70 Start: 59759, Stop: 60271, Start Num: 41

Candidate Starts for Cooper_70:

(Start: 15 @59591 has 4 MA's), (26, 59669), (29, 59699), (31, 59705), (34, 59714), (Start: 41 @59759 has 1 MA's), (Start: 43 @59780 has 2 MA's), (47, 59804), (58, 59921), (64, 59963), (65, 59975), (71, 60026), (74, 60071), (75, 60083), (96, 60194), (97, 60197), (102, 60248),

Gene: Eaglehorse_67 Start: 56743, Stop: 57276, Start Num: 44

Candidate Starts for Eaglehorse_67:

(7, 56467), (Start: 15 @56542 has 4 MA's), (27, 56626), (30, 56653), (Start: 33 @56665 has 9 MA's), (35, 56671), (38, 56707), (39, 56710), (Start: 44 @56743 has 23 MA's), (Start: 45 @56752 has 8 MA's), (Start: 48 @56761 has 2 MA's), (51, 56794), (57, 56860), (61, 56908), (68, 56968), (71, 56986), (72, 57007), (74, 57031), (75, 57043), (85, 57097), (86, 57106), (92, 57160),

Gene: Epah_66 Start: 59054, Stop: 59617, Start Num: 36

Candidate Starts for Epah_66:

(13, 58910), (Start: 15 @58916 has 4 MA's), (24, 58982), (Start: 33 @59033 has 9 MA's), (Start: 36 @59054 has 7 MA's), (53, 59174), (54, 59183), (62, 59282), (64, 59288), (67, 59306), (71, 59351), (74, 59396), (75, 59408), (86, 59471), (95, 59528), (97, 59543),

Gene: Fanaw_65 Start: 60090, Stop: 60653, Start Num: 36

Candidate Starts for Fanaw_65:

(13, 59946), (Start: 15 @59952 has 4 MA's), (24, 60018), (Start: 33 @60069 has 9 MA's), (Start: 36 @60090 has 7 MA's), (53, 60210), (54, 60219), (62, 60318), (64, 60324), (70, 60384), (71, 60387), (74, 60432), (75, 60444), (78, 60465), (95, 60564), (97, 60579), (102, 60630),

Gene: Faze9_66 Start: 56891, Stop: 57415, Start Num: 45

Candidate Starts for Faze9_66:

(7, 56606), (Start: 15 @56681 has 4 MA's), (27, 56765), (30, 56792), (Start: 33 @56804 has 9 MA's), (35, 56810), (38, 56846), (39, 56849), (Start: 44 @56882 has 23 MA's), (Start: 45 @56891 has 8 MA's), (Start: 48 @56900 has 2 MA's), (51, 56933), (57, 56999), (61, 57047), (68, 57107), (71, 57125), (72, 57146), (74, 57170), (75, 57182), (85, 57236), (86, 57245), (92, 57299),

Gene: Fortunato_69 Start: 60068, Stop: 60652, Start Num: 33

Candidate Starts for Fortunato_69:

(13, 59945), (Start: 15 @59951 has 4 MA's), (Start: 33 @60068 has 9 MA's), (Start: 49 @60185 has 3 MA's), (53, 60209), (54, 60218), (62, 60317), (64, 60323), (67, 60341), (70, 60383), (71, 60386), (74, 60431), (75, 60443), (78, 60464), (95, 60563), (97, 60578), (102, 60629),

Gene: Frederick_70 Start: 59898, Stop: 60596, Start Num: 15

Candidate Starts for Frederick_70:

(13, 59892), (Start: 15 @59898 has 4 MA's), (Start: 33 @60015 has 9 MA's), (Start: 49 @60132 has 3 MA's), (53, 60156), (54, 60165), (62, 60264), (64, 60270), (67, 60288), (70, 60330), (71, 60333), (74, 60378), (75, 60390), (95, 60507), (102, 60573),

Gene: FrenchFry_68 Start: 56868, Stop: 57401, Start Num: 44

Candidate Starts for FrenchFry_68:

(7, 56592), (Start: 15 @56667 has 4 MA's), (27, 56751), (30, 56778), (Start: 33 @56790 has 9 MA's), (35, 56796), (38, 56832), (39, 56835), (Start: 44 @56868 has 23 MA's), (Start: 45 @56877 has 8

MA's), (Start: 48 @56886 has 2 MA's), (51, 56919), (57, 56985), (61, 57033), (68, 57093), (71, 57111), (72, 57132), (74, 57156), (75, 57168), (85, 57222), (86, 57231), (92, 57285),

Gene: GinPorsche_66 Start: 59054, Stop: 59617, Start Num: 36

Candidate Starts for GinPorsche_66:

(13, 58910), (Start: 15 @58916 has 4 MA's), (24, 58982), (Start: 33 @59033 has 9 MA's), (Start: 36 @59054 has 7 MA's), (53, 59174), (54, 59183), (62, 59282), (64, 59288), (67, 59306), (71, 59351), (74, 59396), (75, 59408), (86, 59471), (95, 59528), (97, 59543),

Gene: Glass_68 Start: 56669, Stop: 57403, Start Num: 15

Candidate Starts for Glass_68:

(7, 56594), (Start: 15 @56669 has 4 MA's), (27, 56753), (30, 56780), (Start: 33 @56792 has 9 MA's), (35, 56798), (38, 56834), (39, 56837), (42, 56849), (Start: 44 @56870 has 23 MA's), (Start: 45 @56879 has 8 MA's), (Start: 48 @56888 has 2 MA's), (51, 56921), (57, 56987), (61, 57035), (68, 57095), (71, 57113), (72, 57134), (74, 57158), (75, 57170), (85, 57224), (86, 57233), (92, 57287),

Gene: Godines_68 Start: 57120, Stop: 57656, Start Num: 44

Candidate Starts for Godines_68:

(7, 56844), (Start: 15 @56919 has 4 MA's), (27, 57003), (30, 57030), (Start: 33 @57042 has 9 MA's), (35, 57048), (38, 57084), (39, 57087), (40, 57093), (Start: 44 @57120 has 23 MA's), (Start: 45 @57129 has 8 MA's), (Start: 48 @57141 has 2 MA's), (51, 57174), (57, 57240), (61, 57288), (68, 57348), (71, 57366), (72, 57387), (74, 57411), (75, 57423), (85, 57477), (86, 57486), (92, 57540),

Gene: Hally898_66 Start: 59069, Stop: 59632, Start Num: 36

Candidate Starts for Hally898_66:

(13, 58925), (Start: 15 @58931 has 4 MA's), (24, 58997), (Start: 33 @59048 has 9 MA's), (Start: 36 @59069 has 7 MA's), (53, 59189), (54, 59198), (62, 59297), (64, 59303), (67, 59321), (71, 59366), (74, 59411), (75, 59423), (95, 59543), (97, 59558),

Gene: Hangman_69 Start: 60214, Stop: 60795, Start Num: 33

Candidate Starts for Hangman_69:

(13, 60091), (Start: 15 @60097 has 4 MA's), (Start: 33 @60214 has 9 MA's), (53, 60355), (54, 60364), (62, 60463), (64, 60469), (71, 60532), (74, 60577), (75, 60589), (95, 60706), (102, 60772),

Gene: Heath_68 Start: 59862, Stop: 60422, Start Num: 36

Candidate Starts for Heath_68:

(13, 59718), (Start: 15 @59724 has 4 MA's), (Start: 33 @59841 has 9 MA's), (Start: 36 @59862 has 7 MA's), (53, 59982), (54, 59991), (62, 60090), (64, 60096), (71, 60159), (74, 60204), (75, 60216), (95, 60333), (102, 60399),

Gene: Hedgerow_67 Start: 56820, Stop: 57353, Start Num: 44

Candidate Starts for Hedgerow_67:

(7, 56544), (Start: 15 @56619 has 4 MA's), (27, 56706), (30, 56733), (32, 56739), (Start: 33 @56742 has 9 MA's), (35, 56748), (38, 56784), (39, 56787), (Start: 44 @56820 has 23 MA's), (Start: 45 @56829 has 8 MA's), (Start: 48 @56838 has 2 MA's), (51, 56871), (57, 56937), (61, 56985), (68, 57045), (71, 57063), (72, 57084), (74, 57108), (75, 57120), (85, 57174), (86, 57183), (92, 57237), (98, 57282),

Gene: Holeinone_67 Start: 56725, Stop: 57258, Start Num: 44

Candidate Starts for Holeinone_67:

(7, 56449), (Start: 15 @56524 has 4 MA's), (27, 56608), (30, 56635), (Start: 33 @56647 has 9 MA's), (35, 56653), (38, 56689), (39, 56692), (Start: 44 @56725 has 23 MA's), (Start: 45 @56734 has 8 MA's), (Start: 48 @56743 has 2 MA's), (51, 56776), (57, 56842), (61, 56890), (68, 56950), (71, 56968),

(72, 56989), (74, 57013), (75, 57025), (85, 57079), (86, 57088), (92, 57142),

Gene: Hydro_69 Start: 60152, Stop: 60733, Start Num: 33

Candidate Starts for Hydro_69:

(13, 60029), (Start: 15 @60035 has 4 MA's), (Start: 33 @60152 has 9 MA's), (Start: 49 @60269 has 3 MA's), (53, 60293), (54, 60302), (62, 60401), (64, 60407), (71, 60470), (74, 60515), (75, 60527), (95, 60644), (102, 60710),

Gene: Indlovu_69 Start: 59915, Stop: 60454, Start Num: 43

Candidate Starts for Indlovu_69:

(1, 59609), (3, 59615), (9, 59675), (12, 59714), (Start: 43 @59915 has 2 MA's), (50, 59963), (52, 59981), (56, 60038), (62, 60092), (66, 60107), (69, 60143), (70, 60152), (73, 60182), (74, 60200), (82, 60254), (83, 60266), (91, 60344),

Gene: ItsyBitsy1_66 Start: 56958, Stop: 57494, Start Num: 44

Candidate Starts for ItsyBitsy1_66:

(2, 56628), (7, 56682), (Start: 15 @56757 has 4 MA's), (25, 56835), (27, 56841), (30, 56868), (Start: 33 @56880 has 9 MA's), (35, 56886), (38, 56922), (39, 56925), (42, 56937), (Start: 44 @56958 has 23 MA's), (Start: 45 @56967 has 8 MA's), (Start: 48 @56979 has 2 MA's), (51, 57012), (57, 57078), (61, 57126), (68, 57186), (71, 57204), (72, 57225), (74, 57249), (75, 57261), (85, 57315), (86, 57324), (92, 57378), (98, 57423),

Gene: JAMaL_68 Start: 60063, Stop: 60626, Start Num: 36

Candidate Starts for JAMaL_68:

(13, 59919), (Start: 15 @59925 has 4 MA's), (23, 59979), (24, 59991), (Start: 33 @60042 has 9 MA's), (Start: 36 @60063 has 7 MA's), (53, 60183), (54, 60192), (62, 60291), (64, 60297), (67, 60315), (71, 60360), (74, 60405), (75, 60417), (86, 60480), (95, 60537), (97, 60552),

Gene: JaguarMi_69 Start: 61329, Stop: 61889, Start Num: 36

Candidate Starts for JaguarMi_69:

(13, 61182), (Start: 15 @61188 has 4 MA's), (24, 61254), (Start: 33 @61305 has 9 MA's), (Start: 36 @61329 has 7 MA's), (53, 61449), (54, 61458), (62, 61557), (64, 61563), (67, 61581), (70, 61623), (71, 61626), (74, 61671), (75, 61683), (78, 61704), (87, 61767), (89, 61776),

Gene: Kaleb_68 Start: 56875, Stop: 57408, Start Num: 44

Candidate Starts for Kaleb_68:

(7, 56599), (Start: 15 @56674 has 4 MA's), (27, 56758), (30, 56785), (Start: 33 @56797 has 9 MA's), (35, 56803), (38, 56839), (39, 56842), (Start: 44 @56875 has 23 MA's), (Start: 45 @56884 has 8 MA's), (Start: 48 @56893 has 2 MA's), (51, 56926), (57, 56992), (61, 57040), (68, 57100), (71, 57118), (72, 57139), (74, 57163), (75, 57175), (85, 57229), (86, 57238), (92, 57292),

Gene: Kheth_67 Start: 56787, Stop: 57320, Start Num: 44

Candidate Starts for Kheth_67:

(7, 56511), (Start: 15 @56586 has 4 MA's), (27, 56670), (30, 56697), (Start: 33 @56709 has 9 MA's), (35, 56715), (38, 56751), (39, 56754), (Start: 44 @56787 has 23 MA's), (Start: 45 @56796 has 8 MA's), (Start: 48 @56805 has 2 MA's), (51, 56838), (57, 56904), (61, 56952), (68, 57012), (71, 57030), (72, 57051), (74, 57075), (75, 57087), (85, 57141), (86, 57150), (92, 57204),

Gene: Kolhan_68 Start: 56764, Stop: 57297, Start Num: 44

Candidate Starts for Kolhan_68:

(7, 56488), (Start: 15 @56563 has 4 MA's), (25, 56641), (27, 56647), (30, 56674), (Start: 33 @56686 has 9 MA's), (35, 56692), (38, 56728), (39, 56731), (Start: 44 @56764 has 23 MA's), (Start: 45 @56773 has 8 MA's), (Start: 48 @56782 has 2 MA's), (51, 56815), (57, 56881), (61, 56929), (68,

56989), (71, 57007), (72, 57028), (74, 57052), (75, 57064), (85, 57118), (86, 57127), (92, 57181),

Gene: Lambano_66 Start: 59069, Stop: 59632, Start Num: 36

Candidate Starts for Lambano_66:

(13, 58925), (Start: 15 @58931 has 4 MA's), (24, 58997), (Start: 33 @59048 has 9 MA's), (Start: 36 @59069 has 7 MA's), (53, 59189), (54, 59198), (62, 59297), (64, 59303), (67, 59321), (71, 59366), (74, 59411), (75, 59423), (95, 59543), (97, 59558),

Gene: Lars_68 Start: 56848, Stop: 57381, Start Num: 44

Candidate Starts for Lars_68:

(7, 56572), (Start: 15 @56647 has 4 MA's), (27, 56731), (30, 56758), (Start: 33 @56770 has 9 MA's), (35, 56776), (38, 56812), (39, 56815), (42, 56827), (Start: 44 @56848 has 23 MA's), (Start: 45 @56857 has 8 MA's), (Start: 48 @56866 has 2 MA's), (51, 56899), (57, 56965), (61, 57013), (68, 57073), (71, 57091), (72, 57112), (74, 57136), (75, 57148), (85, 57202), (86, 57211), (92, 57265),

Gene: Laurie_67 Start: 56525, Stop: 57058, Start Num: 44

Candidate Starts for Laurie_67:

(7, 56249), (Start: 15 @56324 has 4 MA's), (27, 56411), (30, 56438), (32, 56444), (Start: 33 @56447 has 9 MA's), (35, 56453), (38, 56489), (39, 56492), (Start: 44 @56525 has 23 MA's), (Start: 45 @56534 has 8 MA's), (Start: 48 @56543 has 2 MA's), (51, 56576), (57, 56642), (61, 56690), (68, 56750), (71, 56768), (72, 56789), (74, 56813), (75, 56825), (85, 56879), (86, 56888), (92, 56942), (98, 56987),

Gene: Lephleur_67 Start: 56710, Stop: 57243, Start Num: 44

Candidate Starts for Lephleur_67:

(7, 56434), (Start: 15 @56509 has 4 MA's), (27, 56593), (30, 56620), (Start: 33 @56632 has 9 MA's), (35, 56638), (38, 56674), (39, 56677), (Start: 44 @56710 has 23 MA's), (Start: 45 @56719 has 8 MA's), (Start: 48 @56728 has 2 MA's), (51, 56761), (57, 56827), (61, 56875), (68, 56935), (71, 56953), (72, 56974), (74, 56998), (75, 57010), (85, 57064), (86, 57073), (92, 57127),

Gene: LilSmirk_67 Start: 56755, Stop: 57279, Start Num: 45

Candidate Starts for LilSmirk_67:

(7, 56470), (Start: 15 @56545 has 4 MA's), (25, 56623), (27, 56629), (30, 56656), (Start: 33 @56668 has 9 MA's), (35, 56674), (38, 56710), (39, 56713), (Start: 44 @56746 has 23 MA's), (Start: 45 @56755 has 8 MA's), (Start: 48 @56764 has 2 MA's), (51, 56797), (57, 56863), (61, 56911), (68, 56971), (71, 56989), (72, 57010), (74, 57034), (75, 57046), (85, 57100), (86, 57109), (92, 57163),

Gene: LizLemon_67 Start: 56875, Stop: 57408, Start Num: 44

Candidate Starts for LizLemon_67:

(7, 56599), (Start: 15 @56674 has 4 MA's), (27, 56758), (30, 56785), (Start: 33 @56797 has 9 MA's), (35, 56803), (38, 56839), (39, 56842), (42, 56854), (Start: 44 @56875 has 23 MA's), (Start: 45 @56884 has 8 MA's), (Start: 48 @56893 has 2 MA's), (51, 56926), (57, 56992), (61, 57040), (68, 57100), (71, 57118), (72, 57139), (74, 57163), (75, 57175), (85, 57229), (86, 57238), (92, 57292),

Gene: Lolalove_70 Start: 60244, Stop: 60804, Start Num: 36

Candidate Starts for Lolalove_70:

(13, 60100), (Start: 15 @60106 has 4 MA's), (Start: 33 @60223 has 9 MA's), (Start: 36 @60244 has 7 MA's), (53, 60364), (54, 60373), (62, 60472), (64, 60478), (71, 60541), (74, 60586), (75, 60598), (95, 60715), (96, 60727),

Gene: Magpie_66 Start: 59929, Stop: 60492, Start Num: 36

Candidate Starts for Magpie_66:

(13, 59785), (Start: 15 @59791 has 4 MA's), (Start: 33 @59908 has 9 MA's), (Start: 36 @59929 has 7 MA's), (53, 60049), (54, 60058), (62, 60157), (64, 60163), (67, 60181), (70, 60223), (71, 60226), (74, 60271), (75, 60283), (78, 60304), (91, 60382), (95, 60403), (97, 60418),

Gene: MasterPo_68 Start: 56742, Stop: 57275, Start Num: 44

Candidate Starts for MasterPo_68:

(7, 56466), (Start: 15 @56541 has 4 MA's), (27, 56625), (30, 56652), (Start: 33 @56664 has 9 MA's), (35, 56670), (38, 56706), (39, 56709), (Start: 44 @56742 has 23 MA's), (Start: 45 @56751 has 8 MA's), (Start: 48 @56760 has 2 MA's), (51, 56793), (57, 56859), (61, 56907), (68, 56967), (71, 56985), (72, 57006), (74, 57030), (75, 57042), (85, 57096), (86, 57105), (92, 57159),

Gene: Mithril_68 Start: 60339, Stop: 60803, Start Num: 49

Candidate Starts for Mithril_68:

(13, 60099), (Start: 15 @60105 has 4 MA's), (Start: 33 @60222 has 9 MA's), (Start: 49 @60339 has 3 MA's), (53, 60363), (54, 60372), (62, 60471), (64, 60477), (67, 60495), (71, 60540), (74, 60585), (75, 60597), (78, 60618), (87, 60681), (89, 60690), (95, 60714), (96, 60726),

Gene: Mudslide_68 Start: 60243, Stop: 60824, Start Num: 33

Candidate Starts for Mudslide_68:

(13, 60120), (Start: 15 @60126 has 4 MA's), (Start: 33 @60243 has 9 MA's), (53, 60384), (54, 60393), (62, 60492), (64, 60498), (71, 60561), (74, 60606), (75, 60618), (89, 60711), (95, 60735), (96, 60747),

Gene: Nanao_67 Start: 59059, Stop: 59622, Start Num: 36

Candidate Starts for Nanao_67:

(13, 58915), (Start: 15 @58921 has 4 MA's), (24, 58987), (Start: 33 @59038 has 9 MA's), (Start: 36 @59059 has 7 MA's), (53, 59179), (54, 59188), (62, 59287), (64, 59293), (67, 59311), (71, 59356), (74, 59401), (75, 59413), (95, 59533), (97, 59548),

Gene: Nigel_66 Start: 58741, Stop: 59442, Start Num: 15

Candidate Starts for Nigel_66:

(13, 58735), (Start: 15 @58741 has 4 MA's), (16, 58753), (22, 58786), (24, 58807), (Start: 33 @58858 has 9 MA's), (53, 58996), (54, 59005), (62, 59104), (67, 59128), (71, 59173), (74, 59218), (75, 59230), (79, 59254), (85, 59284), (86, 59293), (95, 59353), (97, 59368),

Gene: Opia_68 Start: 56768, Stop: 57301, Start Num: 44

Candidate Starts for Opia_68:

(7, 56492), (Start: 15 @56567 has 4 MA's), (27, 56651), (30, 56678), (Start: 33 @56690 has 9 MA's), (35, 56696), (38, 56732), (39, 56735), (Start: 44 @56768 has 23 MA's), (Start: 45 @56777 has 8 MA's), (Start: 48 @56786 has 2 MA's), (51, 56819), (57, 56885), (61, 56933), (68, 56993), (71, 57011), (72, 57032), (74, 57056), (75, 57068), (85, 57122), (86, 57131), (92, 57185),

Gene: PenguinLover67_69 Start: 59425, Stop: 59871, Start Num: 48

Candidate Starts for PenguinLover67_69:

(4, 59146), (9, 59191), (17, 59266), (20, 59278), (32, 59347), (Start: 43 @59398 has 2 MA's), (Start: 48 @59425 has 2 MA's), (50, 59446), (55, 59494), (56, 59521), (62, 59575), (65, 59587), (67, 59593), (73, 59656), (85, 59737), (98, 59809),

Gene: Phantasmagoria_66 Start: 56757, Stop: 57290, Start Num: 44

Candidate Starts for Phantasmagoria_66:

(7, 56481), (Start: 15 @56556 has 4 MA's), (27, 56640), (30, 56667), (Start: 33 @56679 has 9 MA's), (35, 56685), (38, 56721), (39, 56724), (Start: 44 @56757 has 23 MA's), (Start: 45 @56766 has 8 MA's), (Start: 48 @56775 has 2 MA's), (51, 56808), (57, 56874), (61, 56922), (64, 56934), (68, 56982), (71, 57000), (72, 57021), (74, 57045), (75, 57057), (85, 57111), (86, 57120), (92, 57174),

Gene: Poster_66 Start: 59060, Stop: 59623, Start Num: 36

Candidate Starts for Poster_66:

(13, 58916), (Start: 15 @58922 has 4 MA's), (24, 58988), (Start: 33 @59039 has 9 MA's), (Start: 36 @59060 has 7 MA's), (53, 59180), (54, 59189), (62, 59288), (64, 59294), (67, 59312), (71, 59357), (74, 59402), (75, 59414), (95, 59534), (97, 59549),

Gene: Prince_67 Start: 60270, Stop: 60725, Start Num: 49

Candidate Starts for Prince_67:

(13, 60030), (Start: 15 @60036 has 4 MA's), (Start: 33 @60153 has 9 MA's), (Start: 36 @60174 has 7 MA's), (Start: 49 @60270 has 3 MA's), (53, 60294), (54, 60303), (62, 60402), (64, 60408), (67, 60426), (70, 60468), (71, 60471), (74, 60516), (75, 60528), (95, 60636),

Gene: QueenPie_63 Start: 59162, Stop: 59725, Start Num: 36

Candidate Starts for QueenPie_63:

(13, 59018), (Start: 15 @59024 has 4 MA's), (23, 59078), (24, 59090), (Start: 33 @59141 has 9 MA's), (Start: 36 @59162 has 7 MA's), (53, 59282), (54, 59291), (62, 59390), (64, 59396), (70, 59456), (71, 59459), (74, 59504), (75, 59516), (86, 59579), (95, 59636), (97, 59651),

Gene: Qyrzula_61 Start: 56891, Stop: 57415, Start Num: 45

Candidate Starts for Qyrzula_61:

(7, 56606), (Start: 15 @56681 has 4 MA's), (27, 56765), (30, 56792), (Start: 33 @56804 has 9 MA's), (35, 56810), (38, 56846), (39, 56849), (Start: 44 @56882 has 23 MA's), (Start: 45 @56891 has 8 MA's), (Start: 48 @56900 has 2 MA's), (51, 56933), (57, 56999), (61, 57047), (68, 57107), (71, 57125), (72, 57146), (74, 57170), (75, 57182), (85, 57236), (86, 57245), (90, 57296), (92, 57299),

Gene: RawrgerThat_69 Start: 60046, Stop: 60630, Start Num: 33

Candidate Starts for RawrgerThat_69:

(13, 59923), (Start: 15 @59929 has 4 MA's), (Start: 33 @60046 has 9 MA's), (Start: 49 @60163 has 3 MA's), (53, 60187), (54, 60196), (62, 60295), (64, 60301), (67, 60319), (70, 60361), (71, 60364), (74, 60409), (75, 60421), (78, 60442), (95, 60541), (97, 60556), (102, 60607),

Gene: Rhinoforte_67 Start: 56795, Stop: 57328, Start Num: 44

Candidate Starts for Rhinoforte_67:

(7, 56519), (Start: 15 @56594 has 4 MA's), (25, 56672), (27, 56678), (30, 56705), (Start: 33 @56717 has 9 MA's), (35, 56723), (38, 56759), (39, 56762), (Start: 44 @56795 has 23 MA's), (Start: 45 @56804 has 8 MA's), (Start: 48 @56813 has 2 MA's), (51, 56846), (57, 56912), (61, 56960), (68, 57020), (71, 57038), (72, 57059), (74, 57083), (75, 57095), (85, 57149), (86, 57158), (92, 57212),

Gene: Rosebush_66 Start: 56870, Stop: 57394, Start Num: 45

Candidate Starts for Rosebush_66:

(7, 56585), (Start: 15 @56660 has 4 MA's), (27, 56744), (30, 56771), (Start: 33 @56783 has 9 MA's), (35, 56789), (38, 56825), (39, 56828), (Start: 44 @56861 has 23 MA's), (Start: 45 @56870 has 8 MA's), (Start: 48 @56879 has 2 MA's), (51, 56912), (57, 56978), (61, 57026), (68, 57086), (71, 57104), (72, 57125), (74, 57149), (75, 57161), (85, 57215), (86, 57224), (90, 57275), (92, 57278),

Gene: Sabella_67 Start: 56697, Stop: 57230, Start Num: 44

Candidate Starts for Sabella_67:

(7, 56421), (Start: 15 @56496 has 4 MA's), (27, 56580), (30, 56607), (Start: 33 @56619 has 9 MA's), (35, 56625), (38, 56661), (39, 56664), (Start: 44 @56697 has 23 MA's), (Start: 45 @56706 has 8 MA's), (Start: 48 @56715 has 2 MA's), (51, 56748), (57, 56814), (61, 56862), (68, 56922), (71, 56940), (72, 56961), (74, 56985), (75, 56997), (85, 57051), (86, 57060), (92, 57114),

Gene: Saguaro_67 Start: 58827, Stop: 59270, Start Num: 48

Candidate Starts for Saguaro_67:

(6, 58491), (10, 58551), (11, 58569), (18, 58626), (28, 58695), (29, 58716), (Start: 48 @58827 has 2 MA's), (59, 58938), (60, 58944), (64, 58965), (65, 58977), (66, 58980), (69, 59016), (77, 59088), (81, 59112),

Gene: Stinger_68 Start: 58864, Stop: 59568, Start Num: 15

Candidate Starts for Stinger_68:

(Start: 15 @58864 has 4 MA's), (Start: 33 @58981 has 9 MA's), (53, 59122), (54, 59131), (62, 59230), (64, 59236), (67, 59254), (71, 59299), (74, 59344), (75, 59356), (93, 59473), (95, 59479), (97, 59494),

Gene: TA17A_67 Start: 56700, Stop: 57236, Start Num: 44

Candidate Starts for TA17A_67:

(7, 56424), (Start: 15 @56499 has 4 MA's), (27, 56583), (30, 56610), (Start: 33 @56622 has 9 MA's), (35, 56628), (37, 56661), (38, 56664), (39, 56667), (Start: 44 @56700 has 23 MA's), (Start: 45 @56709 has 8 MA's), (Start: 48 @56721 has 2 MA's), (51, 56754), (57, 56820), (61, 56868), (68, 56928), (71, 56946), (72, 56967), (74, 56991), (75, 57003), (85, 57057), (86, 57066), (92, 57120),

Gene: Tinciduntolum_68 Start: 56873, Stop: 57397, Start Num: 45

Candidate Starts for Tinciduntolum_68:

(7, 56588), (Start: 15 @56663 has 4 MA's), (27, 56747), (30, 56774), (Start: 33 @56786 has 9 MA's), (35, 56792), (38, 56828), (39, 56831), (Start: 44 @56864 has 23 MA's), (Start: 45 @56873 has 8 MA's), (Start: 48 @56882 has 2 MA's), (51, 56915), (57, 56981), (61, 57029), (68, 57089), (71, 57107), (72, 57128), (74, 57152), (75, 57164), (85, 57218), (86, 57227), (92, 57281),

Gene: Tres_67 Start: 56718, Stop: 57251, Start Num: 44

Candidate Starts for Tres_67:

(7, 56442), (Start: 15 @56517 has 4 MA's), (25, 56595), (27, 56601), (30, 56628), (Start: 33 @56640 has 9 MA's), (35, 56646), (38, 56682), (39, 56685), (Start: 44 @56718 has 23 MA's), (Start: 45 @56727 has 8 MA's), (Start: 48 @56736 has 2 MA's), (51, 56769), (57, 56835), (61, 56883), (68, 56943), (71, 56961), (72, 56982), (74, 57006), (75, 57018), (85, 57072), (86, 57081), (92, 57135),

Gene: Vic9_69 Start: 57555, Stop: 58088, Start Num: 44

Candidate Starts for Vic9_69:

(7, 57279), (Start: 15 @57354 has 4 MA's), (27, 57441), (30, 57468), (32, 57474), (Start: 33 @57477 has 9 MA's), (35, 57483), (38, 57519), (39, 57522), (Start: 44 @57555 has 23 MA's), (Start: 45 @57564 has 8 MA's), (Start: 48 @57573 has 2 MA's), (51, 57606), (57, 57672), (61, 57720), (68, 57780), (71, 57798), (72, 57819), (74, 57843), (75, 57855), (85, 57909), (86, 57918), (92, 57972), (98, 58017),

Gene: VioletZ_70 Start: 60156, Stop: 60719, Start Num: 33

Candidate Starts for VioletZ_70:

(13, 60033), (Start: 15 @60039 has 4 MA's), (Start: 33 @60156 has 9 MA's), (53, 60297), (54, 60306), (67, 60429), (71, 60474), (74, 60519), (75, 60531), (80, 60561),

Gene: Waleliano_68 Start: 60045, Stop: 60626, Start Num: 33

Candidate Starts for Waleliano_68:

(13, 59922), (Start: 15 @59928 has 4 MA's), (Start: 33 @60045 has 9 MA's), (Start: 49 @60162 has 3 MA's), (53, 60186), (54, 60195), (62, 60294), (64, 60300), (71, 60363), (74, 60408), (75, 60420), (89, 60513), (95, 60537), (96, 60549),

Gene: West99_67 Start: 56900, Stop: 57427, Start Num: 45

Candidate Starts for West99_67:

(7, 56615), (Start: 15 @56690 has 4 MA's), (27, 56777), (30, 56804), (Start: 33 @56813 has 9 MA's), (35, 56819), (38, 56855), (39, 56858), (Start: 44 @56891 has 23 MA's), (Start: 45 @56900 has 8 MA's), (Start: 48 @56912 has 2 MA's), (51, 56945), (57, 57011), (61, 57059), (68, 57119), (71, 57137), (72, 57158), (74, 57182), (75, 57194), (85, 57248), (86, 57257), (92, 57311),

Gene: Xincheng_68 Start: 61280, Stop: 61840, Start Num: 36

Candidate Starts for Xincheng_68:

(13, 61133), (Start: 15 @61139 has 4 MA's), (24, 61205), (Start: 33 @61256 has 9 MA's), (Start: 36 @61280 has 7 MA's), (53, 61400), (54, 61409), (62, 61508), (64, 61514), (67, 61532), (70, 61574), (71, 61577), (74, 61622), (75, 61634), (78, 61655), (87, 61718), (89, 61727),

Gene: Zemanar_68 Start: 59964, Stop: 60524, Start Num: 36

Candidate Starts for Zemanar_68:

(13, 59820), (Start: 15 @59826 has 4 MA's), (Start: 33 @59943 has 9 MA's), (Start: 36 @59964 has 7 MA's), (53, 60084), (54, 60093), (62, 60192), (64, 60198), (71, 60261), (74, 60306), (75, 60318), (95, 60435), (102, 60501),