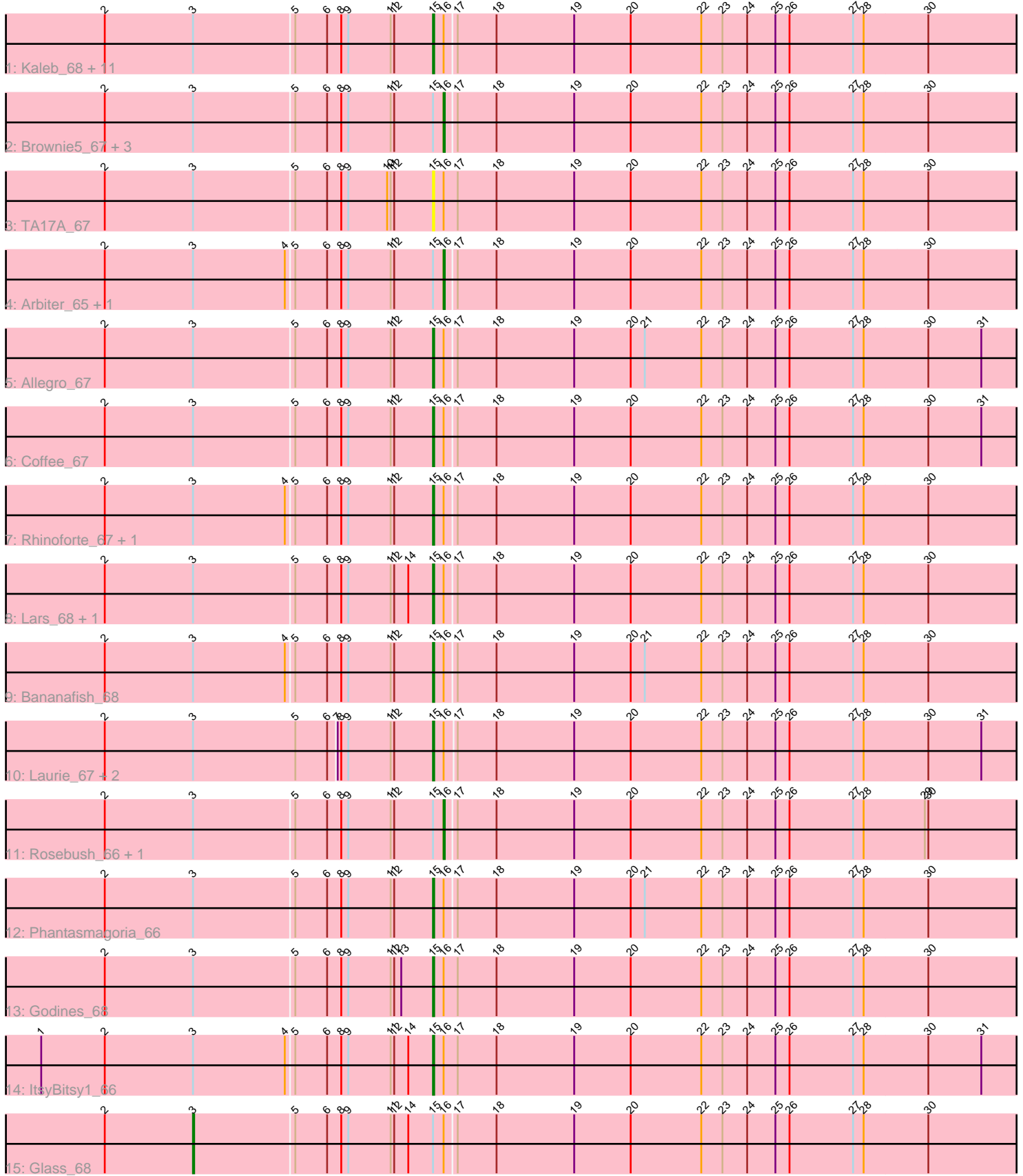


Pham 179281



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 179281 Report

This analysis was run 11/02/24 on database version 579.

Pham number 179281 has 35 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Kaleb_68, Calamitous_68, MasterPo_68, Eaglehorse_67, Boyle_67, Kheth_67, Sabella_67, Lephleur_67, Opia_68, FrenchFry_68, Holeinone_67, Blocker23_67
- Track 2 : Brownie5_67, West99_67, Faze9_66, Tinciduntolum_68
- Track 3 : TA17A_67
- Track 4 : Arbiter_65, Ares_67
- Track 5 : Allegro_67
- Track 6 : Coffee_67
- Track 7 : Rhinoforte_67, Tres_67
- Track 8 : Lars_68, LizLemon_67
- Track 9 : Bananafish_68
- Track 10 : Laurie_67, Hedgerow_67, Vic9_69
- Track 11 : Rosebush_66, Qyrzula_61
- Track 12 : Phantasmagoria_66
- Track 13 : Godines_68
- Track 14 : ItsyBitsy1_66
- Track 15 : Glass_68

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

The start number called the most often in the published annotations is 15, it was called in 23 of the 32 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, 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, Qyrzula_61, Rosebush_66, Tinciduntolum_68, West99_67,

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

-

Summary by start number:

Start 3:

- Found in 35 of 35 (100.0%) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Glass_68 (B2),

Start 15:

- Found in 35 of 35 (100.0%) of genes in pham
- Manual Annotations of this start: 23 of 32
- Called 74.3% 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), 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 16:

- Found in 35 of 35 (100.0%) of genes in pham
- Manual Annotations of this start: 8 of 32
- Called 22.9% of time when present
- Phage (with cluster) where this start called: Arbiter_65 (B2), Ares_67 (B2), Brownie5_67 (B2), Faze9_66 (B2), Qyrzula_61 (B2), Rosebush_66 (B2), Tinciduntolum_68 (B2), West99_67 (B2),

Summary by clusters:

There is one cluster represented in this pham: B2

Info for manual annotations of cluster B2:

- Start number 3 was manually annotated 1 time for cluster B2.
- Start number 15 was manually annotated 23 times for cluster B2.
- Start number 16 was manually annotated 8 times for cluster B2.

Gene Information:

Gene: Allegro_67 Start: 56819, Stop: 57352, Start Num: 15

Candidate Starts for Allegro_67:

(2, 56543), (Start: 3 @56618 has 1 MA's), (5, 56702), (6, 56729), (8, 56741), (9, 56747), (11, 56783), (12, 56786), (Start: 15 @56819 has 23 MA's), (Start: 16 @56828 has 8 MA's), (17, 56837), (18, 56870), (19, 56936), (20, 56984), (21, 56996), (22, 57044), (23, 57062), (24, 57083), (25, 57107), (26, 57119), (27, 57173), (28, 57182), (30, 57236), (31, 57281),

Gene: Arbiter_65 Start: 56863, Stop: 57387, Start Num: 16

Candidate Starts for Arbiter_65:

(2, 56578), (Start: 3 @56653 has 1 MA's), (4, 56731), (5, 56737), (6, 56764), (8, 56776), (9, 56782), (11, 56818), (12, 56821), (Start: 15 @56854 has 23 MA's), (Start: 16 @56863 has 8 MA's), (17, 56872), (18, 56905), (19, 56971), (20, 57019), (22, 57079), (23, 57097), (24, 57118), (25, 57142), (26, 57154), (27, 57208), (28, 57217), (30, 57271),

Gene: Ares_67 Start: 56834, Stop: 57358, Start Num: 16

Candidate Starts for Ares_67:

(2, 56549), (Start: 3 @56624 has 1 MA's), (4, 56702), (5, 56708), (6, 56735), (8, 56747), (9, 56753), (11, 56789), (12, 56792), (Start: 15 @56825 has 23 MA's), (Start: 16 @56834 has 8 MA's), (17, 56843), (18, 56876), (19, 56942), (20, 56990), (22, 57050), (23, 57068), (24, 57089), (25, 57113), (26, 57125), (27, 57179), (28, 57188), (30, 57242),

Gene: Bananafish_68 Start: 56755, Stop: 57288, Start Num: 15

Candidate Starts for Bananafish_68:

(2, 56479), (Start: 3 @56554 has 1 MA's), (4, 56632), (5, 56638), (6, 56665), (8, 56677), (9, 56683), (11, 56719), (12, 56722), (Start: 15 @56755 has 23 MA's), (Start: 16 @56764 has 8 MA's), (17, 56773), (18, 56806), (19, 56872), (20, 56920), (21, 56932), (22, 56980), (23, 56998), (24, 57019), (25, 57043), (26, 57055), (27, 57109), (28, 57118), (30, 57172),

Gene: Blocker23_67 Start: 56819, Stop: 57352, Start Num: 15

Candidate Starts for Blocker23_67:

(2, 56543), (Start: 3 @56618 has 1 MA's), (5, 56702), (6, 56729), (8, 56741), (9, 56747), (11, 56783), (12, 56786), (Start: 15 @56819 has 23 MA's), (Start: 16 @56828 has 8 MA's), (17, 56837), (18, 56870), (19, 56936), (20, 56984), (22, 57044), (23, 57062), (24, 57083), (25, 57107), (26, 57119), (27, 57173), (28, 57182), (30, 57236),

Gene: Boyle_67 Start: 56863, Stop: 57396, Start Num: 15

Candidate Starts for Boyle_67:

(2, 56587), (Start: 3 @56662 has 1 MA's), (5, 56746), (6, 56773), (8, 56785), (9, 56791), (11, 56827), (12, 56830), (Start: 15 @56863 has 23 MA's), (Start: 16 @56872 has 8 MA's), (17, 56881), (18, 56914), (19, 56980), (20, 57028), (22, 57088), (23, 57106), (24, 57127), (25, 57151), (26, 57163), (27, 57217), (28, 57226), (30, 57280),

Gene: Brownie5_67 Start: 56874, Stop: 57398, Start Num: 16

Candidate Starts for Brownie5_67:

(2, 56589), (Start: 3 @56664 has 1 MA's), (5, 56748), (6, 56775), (8, 56787), (9, 56793), (11, 56829), (12, 56832), (Start: 15 @56865 has 23 MA's), (Start: 16 @56874 has 8 MA's), (17, 56883), (18, 56916), (19, 56982), (20, 57030), (22, 57090), (23, 57108), (24, 57129), (25, 57153), (26, 57165), (27, 57219), (28, 57228), (30, 57282),

Gene: Calamitous_68 Start: 56753, Stop: 57286, Start Num: 15

Candidate Starts for Calamitous_68:

(2, 56477), (Start: 3 @56552 has 1 MA's), (5, 56636), (6, 56663), (8, 56675), (9, 56681), (11, 56717), (12, 56720), (Start: 15 @56753 has 23 MA's), (Start: 16 @56762 has 8 MA's), (17, 56771), (18, 56804), (19, 56870), (20, 56918), (22, 56978), (23, 56996), (24, 57017), (25, 57041), (26, 57053), (27, 57107), (28, 57116), (30, 57170),

Gene: Coffee_67 Start: 56857, Stop: 57390, Start Num: 15

Candidate Starts for Coffee_67:

(2, 56581), (Start: 3 @56656 has 1 MA's), (5, 56740), (6, 56767), (8, 56779), (9, 56785), (11, 56821), (12, 56824), (Start: 15 @56857 has 23 MA's), (Start: 16 @56866 has 8 MA's), (17, 56875), (18, 56908), (19, 56974), (20, 57022), (22, 57082), (23, 57100), (24, 57121), (25, 57145), (26, 57157), (27, 57211), (28, 57220), (30, 57274), (31, 57319),

Gene: Eaglehorse_67 Start: 56743, Stop: 57276, Start Num: 15

Candidate Starts for Eaglehorse_67:

(2, 56467), (Start: 3 @56542 has 1 MA's), (5, 56626), (6, 56653), (8, 56665), (9, 56671), (11, 56707), (12, 56710), (Start: 15 @56743 has 23 MA's), (Start: 16 @56752 has 8 MA's), (17, 56761), (18, 56794), (19, 56860), (20, 56908), (22, 56968), (23, 56986), (24, 57007), (25, 57031), (26, 57043), (27, 57097), (28, 57106), (30, 57160),

Gene: Faze9_66 Start: 56891, Stop: 57415, Start Num: 16

Candidate Starts for Faze9_66:

(2, 56606), (Start: 3 @56681 has 1 MA's), (5, 56765), (6, 56792), (8, 56804), (9, 56810), (11, 56846), (12, 56849), (Start: 15 @56882 has 23 MA's), (Start: 16 @56891 has 8 MA's), (17, 56900), (18, 56933), (19, 56999), (20, 57047), (22, 57107), (23, 57125), (24, 57146), (25, 57170), (26, 57182), (27, 57236), (28, 57245), (30, 57299),

Gene: FrenchFry_68 Start: 56868, Stop: 57401, Start Num: 15

Candidate Starts for FrenchFry_68:

(2, 56592), (Start: 3 @56667 has 1 MA's), (5, 56751), (6, 56778), (8, 56790), (9, 56796), (11, 56832), (12, 56835), (Start: 15 @56868 has 23 MA's), (Start: 16 @56877 has 8 MA's), (17, 56886), (18, 56919), (19, 56985), (20, 57033), (22, 57093), (23, 57111), (24, 57132), (25, 57156), (26, 57168), (27, 57222), (28, 57231), (30, 57285),

Gene: Glass_68 Start: 56669, Stop: 57403, Start Num: 3

Candidate Starts for Glass_68:

(2, 56594), (Start: 3 @56669 has 1 MA's), (5, 56753), (6, 56780), (8, 56792), (9, 56798), (11, 56834), (12, 56837), (14, 56849), (Start: 15 @56870 has 23 MA's), (Start: 16 @56879 has 8 MA's), (17, 56888), (18, 56921), (19, 56987), (20, 57035), (22, 57095), (23, 57113), (24, 57134), (25, 57158), (26, 57170), (27, 57224), (28, 57233), (30, 57287),

Gene: Godines_68 Start: 57120, Stop: 57656, Start Num: 15

Candidate Starts for Godines_68:

(2, 56844), (Start: 3 @56919 has 1 MA's), (5, 57003), (6, 57030), (8, 57042), (9, 57048), (11, 57084), (12, 57087), (13, 57093), (Start: 15 @57120 has 23 MA's), (Start: 16 @57129 has 8 MA's), (17, 57141), (18, 57174), (19, 57240), (20, 57288), (22, 57348), (23, 57366), (24, 57387), (25, 57411), (26, 57423), (27, 57477), (28, 57486), (30, 57540),

Gene: Hedgerow_67 Start: 56820, Stop: 57353, Start Num: 15

Candidate Starts for Hedgerow_67:

(2, 56544), (Start: 3 @56619 has 1 MA's), (5, 56706), (6, 56733), (7, 56739), (8, 56742), (9, 56748), (11, 56784), (12, 56787), (Start: 15 @56820 has 23 MA's), (Start: 16 @56829 has 8 MA's), (17, 56838), (18, 56871), (19, 56937), (20, 56985), (22, 57045), (23, 57063), (24, 57084), (25, 57108), (26, 57120), (27, 57174), (28, 57183), (30, 57237), (31, 57282),

Gene: Holeinone_67 Start: 56725, Stop: 57258, Start Num: 15

Candidate Starts for Holeinone_67:

(2, 56449), (Start: 3 @56524 has 1 MA's), (5, 56608), (6, 56635), (8, 56647), (9, 56653), (11, 56689), (12, 56692), (Start: 15 @56725 has 23 MA's), (Start: 16 @56734 has 8 MA's), (17, 56743), (18, 56776), (19, 56842), (20, 56890), (22, 56950), (23, 56968), (24, 56989), (25, 57013), (26, 57025), (27, 57079), (28, 57088), (30, 57142),

Gene: ItsyBitsy1_66 Start: 56958, Stop: 57494, Start Num: 15

Candidate Starts for ItsyBitsy1_66:

(1, 56628), (2, 56682), (Start: 3 @56757 has 1 MA's), (4, 56835), (5, 56841), (6, 56868), (8, 56880), (9, 56886), (11, 56922), (12, 56925), (14, 56937), (Start: 15 @56958 has 23 MA's), (Start: 16 @56967 has 8 MA's), (17, 56979), (18, 57012), (19, 57078), (20, 57126), (22, 57186), (23, 57204), (24, 57225), (25, 57249), (26, 57261), (27, 57315), (28, 57324), (30, 57378), (31, 57423),

Gene: Kaleb_68 Start: 56875, Stop: 57408, Start Num: 15

Candidate Starts for Kaleb_68:

(2, 56599), (Start: 3 @56674 has 1 MA's), (5, 56758), (6, 56785), (8, 56797), (9, 56803), (11, 56839), (12, 56842), (Start: 15 @56875 has 23 MA's), (Start: 16 @56884 has 8 MA's), (17, 56893), (18, 56926), (19, 56992), (20, 57040), (22, 57100), (23, 57118), (24, 57139), (25, 57163), (26, 57175), (27, 57229), (28, 57238), (30, 57292),

Gene: Kheth_67 Start: 56787, Stop: 57320, Start Num: 15

Candidate Starts for Kheth_67:

(2, 56511), (Start: 3 @56586 has 1 MA's), (5, 56670), (6, 56697), (8, 56709), (9, 56715), (11, 56751), (12, 56754), (Start: 15 @56787 has 23 MA's), (Start: 16 @56796 has 8 MA's), (17, 56805), (18, 56838), (19, 56904), (20, 56952), (22, 57012), (23, 57030), (24, 57051), (25, 57075), (26, 57087), (27, 57141), (28, 57150), (30, 57204),

Gene: Lars_68 Start: 56848, Stop: 57381, Start Num: 15

Candidate Starts for Lars_68:

(2, 56572), (Start: 3 @56647 has 1 MA's), (5, 56731), (6, 56758), (8, 56770), (9, 56776), (11, 56812), (12, 56815), (14, 56827), (Start: 15 @56848 has 23 MA's), (Start: 16 @56857 has 8 MA's), (17, 56866), (18, 56899), (19, 56965), (20, 57013), (22, 57073), (23, 57091), (24, 57112), (25, 57136), (26, 57148), (27, 57202), (28, 57211), (30, 57265),

Gene: Laurie_67 Start: 56525, Stop: 57058, Start Num: 15

Candidate Starts for Laurie_67:

(2, 56249), (Start: 3 @56324 has 1 MA's), (5, 56411), (6, 56438), (7, 56444), (8, 56447), (9, 56453), (11, 56489), (12, 56492), (Start: 15 @56525 has 23 MA's), (Start: 16 @56534 has 8 MA's), (17, 56543), (18, 56576), (19, 56642), (20, 56690), (22, 56750), (23, 56768), (24, 56789), (25, 56813), (26, 56825), (27, 56879), (28, 56888), (30, 56942), (31, 56987),

Gene: Lephleur_67 Start: 56710, Stop: 57243, Start Num: 15

Candidate Starts for Lephleur_67:

(2, 56434), (Start: 3 @56509 has 1 MA's), (5, 56593), (6, 56620), (8, 56632), (9, 56638), (11, 56674), (12, 56677), (Start: 15 @56710 has 23 MA's), (Start: 16 @56719 has 8 MA's), (17, 56728), (18, 56761), (19, 56827), (20, 56875), (22, 56935), (23, 56953), (24, 56974), (25, 56998), (26, 57010), (27, 57064), (28, 57073), (30, 57127),

Gene: LizLemon_67 Start: 56875, Stop: 57408, Start Num: 15

Candidate Starts for LizLemon_67:

(2, 56599), (Start: 3 @56674 has 1 MA's), (5, 56758), (6, 56785), (8, 56797), (9, 56803), (11, 56839), (12, 56842), (14, 56854), (Start: 15 @56875 has 23 MA's), (Start: 16 @56884 has 8 MA's), (17, 56893), (18, 56926), (19, 56992), (20, 57040), (22, 57100), (23, 57118), (24, 57139), (25, 57163), (26, 57175), (27, 57229), (28, 57238), (30, 57292),

Gene: MasterPo_68 Start: 56742, Stop: 57275, Start Num: 15

Candidate Starts for MasterPo_68:

(2, 56466), (Start: 3 @56541 has 1 MA's), (5, 56625), (6, 56652), (8, 56664), (9, 56670), (11, 56706), (12, 56709), (Start: 15 @56742 has 23 MA's), (Start: 16 @56751 has 8 MA's), (17, 56760), (18, 56793), (19, 56859), (20, 56907), (22, 56967), (23, 56985), (24, 57006), (25, 57030), (26, 57042), (27, 57096), (28, 57105), (30, 57159),

Gene: Opia_68 Start: 56768, Stop: 57301, Start Num: 15

Candidate Starts for Opia_68:

(2, 56492), (Start: 3 @56567 has 1 MA's), (5, 56651), (6, 56678), (8, 56690), (9, 56696), (11, 56732), (12, 56735), (Start: 15 @56768 has 23 MA's), (Start: 16 @56777 has 8 MA's), (17, 56786), (18, 56819), (19, 56885), (20, 56933), (22, 56993), (23, 57011), (24, 57032), (25, 57056), (26, 57068), (27, 57122), (28, 57131), (30, 57185),

Gene: Phantasmagoria_66 Start: 56757, Stop: 57290, Start Num: 15

Candidate Starts for Phantasmagoria_66:

(2, 56481), (Start: 3 @56556 has 1 MA's), (5, 56640), (6, 56667), (8, 56679), (9, 56685), (11, 56721), (12, 56724), (Start: 15 @56757 has 23 MA's), (Start: 16 @56766 has 8 MA's), (17, 56775), (18, 56808), (19, 56874), (20, 56922), (21, 56934), (22, 56982), (23, 57000), (24, 57021), (25, 57045), (26, 57057), (27, 57111), (28, 57120), (30, 57174),

Gene: Qyrzula_61 Start: 56891, Stop: 57415, Start Num: 16

Candidate Starts for Qyrzula_61:

(2, 56606), (Start: 3 @56681 has 1 MA's), (5, 56765), (6, 56792), (8, 56804), (9, 56810), (11, 56846), (12, 56849), (Start: 15 @56882 has 23 MA's), (Start: 16 @56891 has 8 MA's), (17, 56900), (18, 56933), (19, 56999), (20, 57047), (22, 57107), (23, 57125), (24, 57146), (25, 57170), (26, 57182), (27, 57236), (28, 57245), (29, 57296), (30, 57299),

Gene: Rhinoforte_67 Start: 56795, Stop: 57328, Start Num: 15

Candidate Starts for Rhinoforte_67:

(2, 56519), (Start: 3 @56594 has 1 MA's), (4, 56672), (5, 56678), (6, 56705), (8, 56717), (9, 56723), (11, 56759), (12, 56762), (Start: 15 @56795 has 23 MA's), (Start: 16 @56804 has 8 MA's), (17, 56813), (18, 56846), (19, 56912), (20, 56960), (22, 57020), (23, 57038), (24, 57059), (25, 57083), (26, 57095), (27, 57149), (28, 57158), (30, 57212),

Gene: Rosebush_66 Start: 56870, Stop: 57394, Start Num: 16

Candidate Starts for Rosebush_66:

(2, 56585), (Start: 3 @56660 has 1 MA's), (5, 56744), (6, 56771), (8, 56783), (9, 56789), (11, 56825), (12, 56828), (Start: 15 @56861 has 23 MA's), (Start: 16 @56870 has 8 MA's), (17, 56879), (18, 56912), (19, 56978), (20, 57026), (22, 57086), (23, 57104), (24, 57125), (25, 57149), (26, 57161), (27, 57215), (28, 57224), (29, 57275), (30, 57278),

Gene: Sabella_67 Start: 56697, Stop: 57230, Start Num: 15

Candidate Starts for Sabella_67:

(2, 56421), (Start: 3 @56496 has 1 MA's), (5, 56580), (6, 56607), (8, 56619), (9, 56625), (11, 56661), (12, 56664), (Start: 15 @56697 has 23 MA's), (Start: 16 @56706 has 8 MA's), (17, 56715), (18, 56748), (19, 56814), (20, 56862), (22, 56922), (23, 56940), (24, 56961), (25, 56985), (26, 56997), (27, 57051), (28, 57060), (30, 57114),

Gene: TA17A_67 Start: 56700, Stop: 57236, Start Num: 15

Candidate Starts for TA17A_67:

(2, 56424), (Start: 3 @56499 has 1 MA's), (5, 56583), (6, 56610), (8, 56622), (9, 56628), (10, 56661), (11, 56664), (12, 56667), (Start: 15 @56700 has 23 MA's), (Start: 16 @56709 has 8 MA's), (17, 56721), (18, 56754), (19, 56820), (20, 56868), (22, 56928), (23, 56946), (24, 56967), (25, 56991), (26, 57003), (27, 57057), (28, 57066), (30, 57120),

Gene: Tinciduntolum_68 Start: 56873, Stop: 57397, Start Num: 16

Candidate Starts for Tinciduntolum_68:

(2, 56588), (Start: 3 @56663 has 1 MA's), (5, 56747), (6, 56774), (8, 56786), (9, 56792), (11, 56828), (12, 56831), (Start: 15 @56864 has 23 MA's), (Start: 16 @56873 has 8 MA's), (17, 56882), (18, 56915), (19, 56981), (20, 57029), (22, 57089), (23, 57107), (24, 57128), (25, 57152), (26, 57164), (27, 57218), (28, 57227), (30, 57281),

Gene: Tres_67 Start: 56718, Stop: 57251, Start Num: 15

Candidate Starts for Tres_67:

(2, 56442), (Start: 3 @56517 has 1 MA's), (4, 56595), (5, 56601), (6, 56628), (8, 56640), (9, 56646), (11, 56682), (12, 56685), (Start: 15 @56718 has 23 MA's), (Start: 16 @56727 has 8 MA's), (17, 56736), (18, 56769), (19, 56835), (20, 56883), (22, 56943), (23, 56961), (24, 56982), (25, 57006), (26, 57018), (27, 57072), (28, 57081), (30, 57135),

Gene: Vic9_69 Start: 57555, Stop: 58088, Start Num: 15

Candidate Starts for Vic9_69:

(2, 57279), (Start: 3 @57354 has 1 MA's), (5, 57441), (6, 57468), (7, 57474), (8, 57477), (9, 57483), (11, 57519), (12, 57522), (Start: 15 @57555 has 23 MA's), (Start: 16 @57564 has 8 MA's), (17, 57573), (18, 57606), (19, 57672), (20, 57720), (22, 57780), (23, 57798), (24, 57819), (25, 57843), (26, 57855), (27, 57909), (28, 57918), (30, 57972), (31, 58017),

Gene: West99_67 Start: 56900, Stop: 57427, Start Num: 16

Candidate Starts for West99_67:

(2, 56615), (Start: 3 @56690 has 1 MA's), (5, 56777), (6, 56804), (8, 56813), (9, 56819), (11, 56855), (12, 56858), (Start: 15 @56891 has 23 MA's), (Start: 16 @56900 has 8 MA's), (17, 56912), (18, 56945), (19, 57011), (20, 57059), (22, 57119), (23, 57137), (24, 57158), (25, 57182), (26, 57194), (27, 57248), (28, 57257), (30, 57311),