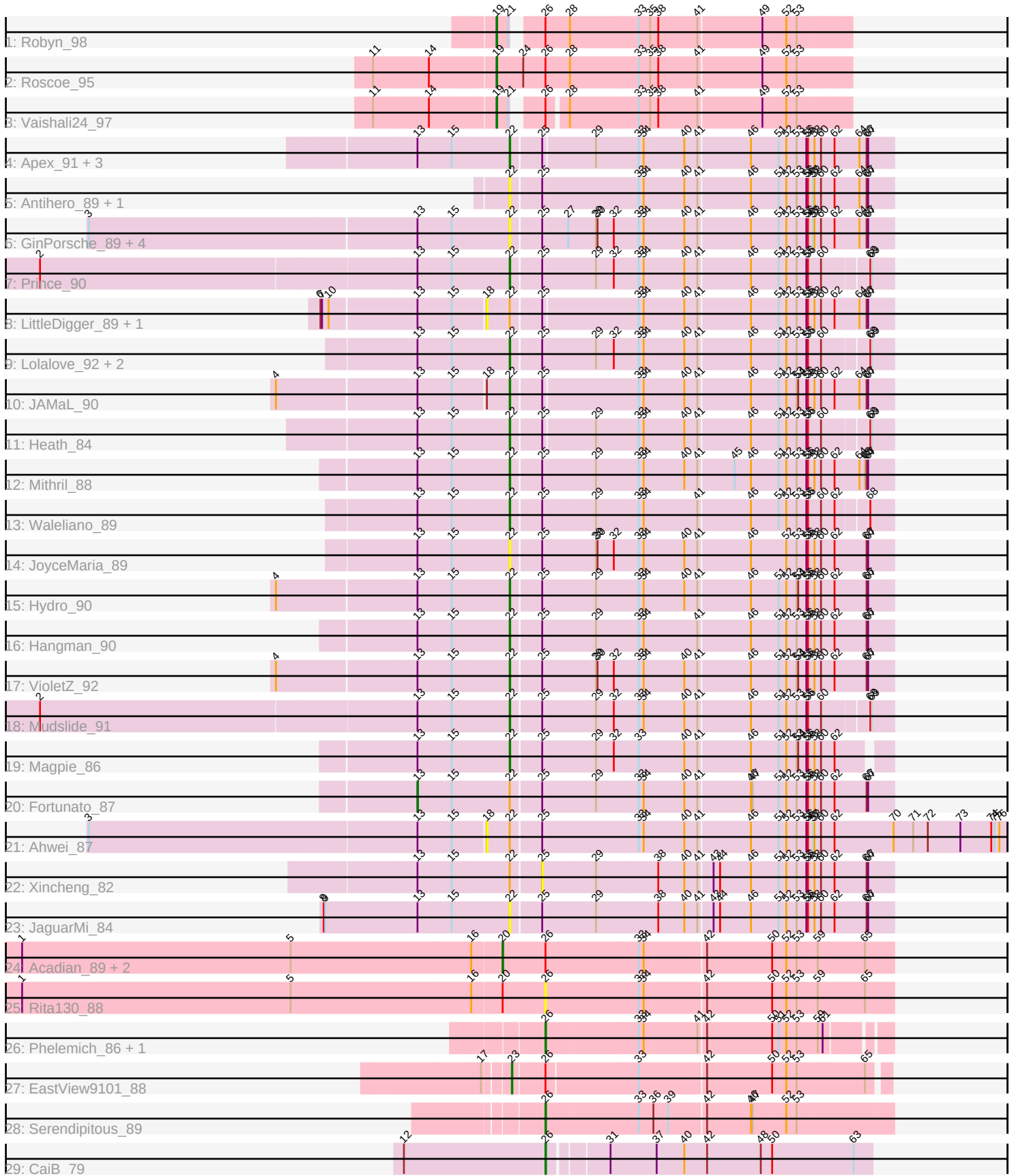


Pham 280596



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 280596 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280596 has 43 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Robyn_98
- Track 2 : Roscoe_95
- Track 3 : Vaishali_24_97
- Track 4 : Apex_91, Frederick_91, BobbyK_90, Zemanar_88
- Track 5 : Antihero_89, Epah_89
- Track 6 : GinPorsche_89, Nanao_89, Poster_88, Lambano_87, Hally898_87
- Track 7 : Prince_90
- Track 8 : LittleDigger_89, Renkei_89
- Track 9 : Lolalove_92, BrownCNA_90, Austelle_90
- Track 10 : JAMaL_90
- Track 11 : Heath_84
- Track 12 : Mithril_88
- Track 13 : Waleliano_89
- Track 14 : JoyceMaria_89
- Track 15 : Hydro_90
- Track 16 : Hangman_90
- Track 17 : VioletZ_92
- Track 18 : Mudslide_91
- Track 19 : Magpie_86
- Track 20 : Fortunato_87
- Track 21 : Ahwei_87
- Track 22 : Xincheng_82
- Track 23 : JaguarMi_84
- Track 24 : Acadian_89, Suigeneris_90, Donny_89
- Track 25 : Rita130_88
- Track 26 : Phelemich_86, Reprobate_88
- Track 27 : EastView9101_88
- Track 28 : Serendipitous_89
- Track 29 : CaiB_79

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

The start number called the most often in the published annotations is 22, it was called in 17 of the 29 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antihero_89, Apex_91, Austelle_90, BobbyK_90, BrownCNA_90, Epah_89, Frederick_91, GinPorsche_89, Hally898_87, Hangman_90, Heath_84, Hydro_90, JAMaL_90, JaguarMi_84, JoyceMaria_89, Lambano_87, Lolalove_92, Magpie_86, Mithril_88, Mudslide_91, Nanao_89, Poster_88, Prince_90, VioletZ_92, Waleliano_89, Zemanar_88,

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

- Ahwei_87, Fortunato_87, LittleDigger_89, Renkei_89, Xincheng_82,

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

- Acadian_89, CaiB_79, Donny_89, EastView9101_88, Phelemich_86, Reprobate_88, Rita130_88, Robyn_98, Roscoe_95, Serendipitous_89, Suigeneris_90, Vaishali24_97,

Summary by start number:

Start 13:

- Found in 29 of 43 (67.4%) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 3.4% of time when present
- Phage (with cluster) where this start called: Fortunato_87 (B4),

Start 18:

- Found in 4 of 43 (9.3%) of genes in pham
- No Manual Annotations of this start.
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Ahwei_87 (B4), LittleDigger_89 (B4), Renkei_89 (B4),

Start 19:

- Found in 3 of 43 (7.0%) of genes in pham
- Manual Annotations of this start: 3 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Robyn_98 (B1), Roscoe_95 (B1), Vaishali24_97 (B1),

Start 20:

- Found in 4 of 43 (9.3%) of genes in pham
- Manual Annotations of this start: 3 of 29
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Acadian_89 (B5), Donny_89 (B5), Suigeneris_90 (B5),

Start 22:

- Found in 31 of 43 (72.1%) of genes in pham
- Manual Annotations of this start: 17 of 29
- Called 83.9% of time when present
- Phage (with cluster) where this start called: Antihero_89 (B4), Apex_91 (B4), Austelle_90 (B4), BobbyK_90 (B4), BrownCNA_90 (B4), Epah_89 (B4), Frederick_91 (B4), GinPorsche_89 (B4), Hally898_87 (B4), Hangman_90 (B4), Heath_84 (B4), Hydro_90 (B4), JAMaL_90 (B4), JaguarMi_84 (B4), JoyceMaria_89 (B4),

Lambano_87 (B4), Lolalove_92 (B4), Magpie_86 (B4), Mithril_88 (B4), Mudslide_91 (B4), Nanao_89 (B4), Poster_88 (B4), Prince_90 (B4), VioletZ_92 (B4), Waleliano_89 (B4), Zemanar_88 (B4),

Start 23:

- Found in 1 of 43 (2.3%) of genes in pham
- Manual Annotations of this start: 1 of 29
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EastView9101_88 (B5),

Start 25:

- Found in 31 of 43 (72.1%) of genes in pham
- No Manual Annotations of this start.
- Called 3.2% of time when present
- Phage (with cluster) where this start called: Xincheng_82 (B4),

Start 26:

- Found in 12 of 43 (27.9%) of genes in pham
- Manual Annotations of this start: 4 of 29
- Called 41.7% of time when present
- Phage (with cluster) where this start called: CaiB_79 (DR), Phelemich_86 (B5), Reprobate_88 (B5), Rita130_88 (B5), Serendipitous_89 (B5),

Summary by clusters:

There are 4 clusters represented in this pham: B4, B5, DR, B1,

Info for manual annotations of cluster B1:

- Start number 19 was manually annotated 3 times for cluster B1.

Info for manual annotations of cluster B4:

- Start number 13 was manually annotated 1 time for cluster B4.
- Start number 22 was manually annotated 17 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 20 was manually annotated 3 times for cluster B5.
- Start number 23 was manually annotated 1 time for cluster B5.
- Start number 26 was manually annotated 3 times for cluster B5.

Info for manual annotations of cluster DR:

- Start number 26 was manually annotated 1 time for cluster DR.

Gene Information:

Gene: Acadian_89 Start: 66018, Stop: 65326, Start Num: 20

Candidate Starts for Acadian_89:

(1, 66897), (5, 66402), (16, 66072), (Start: 20 @66018 has 3 MA's), (Start: 26 @65943 has 4 MA's), (33, 65772), (34, 65763), (42, 65655), (50, 65538), (52, 65514), (53, 65496), (59, 65460), (65, 65379),

Gene: Ahwei_87 Start: 66494, Stop: 65571, Start Num: 18

Candidate Starts for Ahwei_87:

(3, 67208), (Start: 13 @66614 has 1 MA's), (15, 66551), (18, 66494), (Start: 22 @66452 has 17 MA's), (25, 66401), (33, 66230), (34, 66221), (40, 66149), (41, 66125), (46, 66032), (51, 65981), (52, 65969), (53, 65951), (55, 65933), (56, 65930), (57, 65921), (58, 65918), (60, 65906), (62, 65882), (70, 65780), (71, 65744), (72, 65717), (73, 65657), (74, 65600), (75, 65594), (76, 65585),

Gene: Antihero_89 Start: 66371, Stop: 65703, Start Num: 22

Candidate Starts for Antihero_89:

(Start: 22 @66371 has 17 MA's), (25, 66320), (33, 66152), (34, 66143), (40, 66071), (41, 66047), (46, 65954), (51, 65903), (52, 65891), (53, 65873), (55, 65855), (56, 65852), (57, 65843), (58, 65840), (60, 65828), (62, 65804), (64, 65759), (66, 65747), (67, 65744),

Gene: Apex_91 Start: 67472, Stop: 66804, Start Num: 22

Candidate Starts for Apex_91:

(Start: 13 @67640 has 1 MA's), (15, 67577), (Start: 22 @67472 has 17 MA's), (25, 67421), (29, 67331), (33, 67253), (34, 67244), (40, 67172), (41, 67148), (46, 67055), (51, 67004), (52, 66992), (53, 66974), (55, 66956), (56, 66953), (58, 66941), (60, 66929), (62, 66905), (64, 66860), (66, 66848), (67, 66845),

Gene: Austelle_90 Start: 68073, Stop: 67420, Start Num: 22

Candidate Starts for Austelle_90:

(Start: 13 @68241 has 1 MA's), (15, 68178), (Start: 22 @68073 has 17 MA's), (25, 68022), (29, 67929), (32, 67896), (33, 67851), (34, 67842), (40, 67770), (41, 67746), (46, 67653), (51, 67602), (52, 67590), (53, 67572), (55, 67554), (56, 67551), (60, 67527), (68, 67455), (69, 67452),

Gene: BobbyK_90 Start: 66980, Stop: 66312, Start Num: 22

Candidate Starts for BobbyK_90:

(Start: 13 @67148 has 1 MA's), (15, 67085), (Start: 22 @66980 has 17 MA's), (25, 66929), (29, 66839), (33, 66761), (34, 66752), (40, 66680), (41, 66656), (46, 66563), (51, 66512), (52, 66500), (53, 66482), (55, 66464), (56, 66461), (58, 66449), (60, 66437), (62, 66413), (64, 66368), (66, 66356), (67, 66353),

Gene: BrownCNA_90 Start: 67488, Stop: 66835, Start Num: 22

Candidate Starts for BrownCNA_90:

(Start: 13 @67656 has 1 MA's), (15, 67593), (Start: 22 @67488 has 17 MA's), (25, 67437), (29, 67344), (32, 67311), (33, 67266), (34, 67257), (40, 67185), (41, 67161), (46, 67068), (51, 67017), (52, 67005), (53, 66987), (55, 66969), (56, 66966), (60, 66942), (68, 66870), (69, 66867),

Gene: CaiB_79 Start: 58726, Stop: 58160, Start Num: 26

Candidate Starts for CaiB_79:

(12, 58987), (Start: 26 @58726 has 4 MA's), (31, 58627), (37, 58552), (40, 58501), (42, 58459), (48, 58363), (50, 58342), (63, 58192),

Gene: Donny_89 Start: 65845, Stop: 65159, Start Num: 20

Candidate Starts for Donny_89:

(1, 66724), (5, 66229), (16, 65899), (Start: 20 @65845 has 3 MA's), (Start: 26 @65770 has 4 MA's), (33, 65605), (34, 65596), (42, 65488), (50, 65371), (52, 65347), (53, 65329), (59, 65293), (65, 65212),

Gene: EastView9101_88 Start: 65729, Stop: 65082, Start Num: 23

Candidate Starts for EastView9101_88:

(17, 65771), (Start: 23 @65729 has 1 MA's), (Start: 26 @65675 has 4 MA's), (33, 65510), (42, 65393), (50, 65276), (52, 65252), (53, 65234), (65, 65117),

Gene: Epah_89 Start: 66371, Stop: 65703, Start Num: 22

Candidate Starts for Epah_89:

(Start: 22 @66371 has 17 MA's), (25, 66320), (33, 66152), (34, 66143), (40, 66071), (41, 66047), (46, 65954), (51, 65903), (52, 65891), (53, 65873), (55, 65855), (56, 65852), (57, 65843), (58, 65840), (60, 65828), (62, 65804), (64, 65759), (66, 65747), (67, 65744),

Gene: Fortunato_87 Start: 66949, Stop: 66113, Start Num: 13

Candidate Starts for Fortunato_87:

(Start: 13 @66949 has 1 MA's), (15, 66886), (Start: 22 @66781 has 17 MA's), (25, 66730), (29, 66640), (33, 66562), (34, 66553), (40, 66481), (41, 66457), (46, 66364), (47, 66361), (51, 66313), (52, 66301), (53, 66283), (55, 66265), (56, 66262), (58, 66250), (60, 66238), (62, 66214), (66, 66157), (67, 66154),

Gene: Frederick_91 Start: 67286, Stop: 66618, Start Num: 22

Candidate Starts for Frederick_91:

(Start: 13 @67454 has 1 MA's), (15, 67391), (Start: 22 @67286 has 17 MA's), (25, 67235), (29, 67145), (33, 67067), (34, 67058), (40, 66986), (41, 66962), (46, 66869), (51, 66818), (52, 66806), (53, 66788), (55, 66770), (56, 66767), (58, 66755), (60, 66743), (62, 66719), (64, 66674), (66, 66662), (67, 66659),

Gene: GinPorsche_89 Start: 66368, Stop: 65700, Start Num: 22

Candidate Starts for GinPorsche_89:

(3, 67130), (Start: 13 @66536 has 1 MA's), (15, 66473), (Start: 22 @66368 has 17 MA's), (25, 66317), (27, 66278), (29, 66227), (30, 66224), (32, 66194), (33, 66149), (34, 66140), (40, 66068), (41, 66044), (46, 65951), (51, 65900), (52, 65888), (53, 65870), (55, 65852), (56, 65849), (57, 65840), (58, 65837), (60, 65825), (62, 65801), (64, 65756), (66, 65744), (67, 65741),

Gene: Hally898_87 Start: 66208, Stop: 65540, Start Num: 22

Candidate Starts for Hally898_87:

(3, 66970), (Start: 13 @66376 has 1 MA's), (15, 66313), (Start: 22 @66208 has 17 MA's), (25, 66157), (27, 66118), (29, 66067), (30, 66064), (32, 66034), (33, 65989), (34, 65980), (40, 65908), (41, 65884), (46, 65791), (51, 65740), (52, 65728), (53, 65710), (55, 65692), (56, 65689), (57, 65680), (58, 65677), (60, 65665), (62, 65641), (64, 65596), (66, 65584), (67, 65581),

Gene: Hangman_90 Start: 67581, Stop: 66913, Start Num: 22

Candidate Starts for Hangman_90:

(Start: 13 @67749 has 1 MA's), (15, 67686), (Start: 22 @67581 has 17 MA's), (25, 67530), (29, 67440), (33, 67362), (34, 67353), (41, 67257), (46, 67164), (51, 67113), (52, 67101), (53, 67083), (55, 67065), (56, 67062), (58, 67050), (60, 67038), (62, 67014), (66, 66957), (67, 66954),

Gene: Heath_84 Start: 65351, Stop: 64701, Start Num: 22

Candidate Starts for Heath_84:

(Start: 13 @65519 has 1 MA's), (15, 65456), (Start: 22 @65351 has 17 MA's), (25, 65300), (29, 65210), (33, 65132), (34, 65123), (40, 65051), (41, 65027), (46, 64934), (51, 64883), (52, 64871), (53, 64853), (55, 64835), (56, 64832), (60, 64808), (68, 64736), (69, 64733),

Gene: Hydro_90 Start: 67357, Stop: 66692, Start Num: 22

Candidate Starts for Hydro_90:

(4, 67777), (Start: 13 @67525 has 1 MA's), (15, 67462), (Start: 22 @67357 has 17 MA's), (25, 67306), (29, 67216), (33, 67138), (34, 67129), (40, 67057), (41, 67033), (46, 66940), (51, 66889), (52, 66877), (53, 66859), (54, 66856), (55, 66841), (56, 66838), (58, 66826), (60, 66814), (62, 66790), (66, 66736), (67, 66733),

Gene: JAMaL_90 Start: 66895, Stop: 66227, Start Num: 22

Candidate Starts for JAMaL_90:

(4, 67309), (Start: 13 @67057 has 1 MA's), (15, 66994), (18, 66937), (Start: 22 @66895 has 17 MA's), (25, 66844), (33, 66676), (34, 66667), (40, 66595), (41, 66571), (46, 66478), (51, 66427), (52, 66415),

(53, 66397), (54, 66394), (55, 66379), (56, 66376), (58, 66364), (60, 66352), (62, 66328), (64, 66283), (66, 66271), (67, 66268),

Gene: JaguarMi_84 Start: 67336, Stop: 66665, Start Num: 22

Candidate Starts for JaguarMi_84:

(8, 67675), (9, 67672), (Start: 13 @67504 has 1 MA's), (15, 67441), (Start: 22 @67336 has 17 MA's), (25, 67285), (29, 67195), (38, 67081), (40, 67033), (41, 67009), (43, 66985), (44, 66973), (46, 66916), (51, 66865), (52, 66853), (53, 66835), (55, 66817), (56, 66814), (58, 66802), (60, 66790), (62, 66766), (66, 66712), (67, 66709),

Gene: JoyceMaria_89 Start: 67482, Stop: 66805, Start Num: 22

Candidate Starts for JoyceMaria_89:

(Start: 13 @67650 has 1 MA's), (15, 67587), (Start: 22 @67482 has 17 MA's), (25, 67431), (29, 67335), (30, 67332), (32, 67302), (33, 67257), (34, 67248), (40, 67176), (41, 67152), (46, 67059), (52, 66996), (53, 66978), (55, 66960), (56, 66957), (58, 66945), (60, 66933), (62, 66909), (66, 66852), (67, 66849),

Gene: Lambano_87 Start: 66208, Stop: 65540, Start Num: 22

Candidate Starts for Lambano_87:

(3, 66970), (Start: 13 @66376 has 1 MA's), (15, 66313), (Start: 22 @66208 has 17 MA's), (25, 66157), (27, 66118), (29, 66067), (30, 66064), (32, 66034), (33, 65989), (34, 65980), (40, 65908), (41, 65884), (46, 65791), (51, 65740), (52, 65728), (53, 65710), (55, 65692), (56, 65689), (57, 65680), (58, 65677), (60, 65665), (62, 65641), (64, 65596), (66, 65584), (67, 65581),

Gene: LittleDigger_89 Start: 66350, Stop: 65640, Start Num: 18

Candidate Starts for LittleDigger_89:

(6, 66638), (7, 66635), (10, 66623), (Start: 13 @66470 has 1 MA's), (15, 66407), (18, 66350), (Start: 22 @66308 has 17 MA's), (25, 66257), (33, 66089), (34, 66080), (40, 66008), (41, 65984), (46, 65891), (51, 65840), (52, 65828), (53, 65810), (55, 65792), (56, 65789), (58, 65777), (60, 65765), (62, 65741), (64, 65696), (66, 65684), (67, 65681),

Gene: Lolalove_92 Start: 67385, Stop: 66732, Start Num: 22

Candidate Starts for Lolalove_92:

(Start: 13 @67553 has 1 MA's), (15, 67490), (Start: 22 @67385 has 17 MA's), (25, 67334), (29, 67241), (32, 67208), (33, 67163), (34, 67154), (40, 67082), (41, 67058), (46, 66965), (51, 66914), (52, 66902), (53, 66884), (55, 66866), (56, 66863), (60, 66839), (68, 66767), (69, 66764),

Gene: Magpie_86 Start: 67131, Stop: 66481, Start Num: 22

Candidate Starts for Magpie_86:

(Start: 13 @67299 has 1 MA's), (15, 67236), (Start: 22 @67131 has 17 MA's), (25, 67080), (29, 66990), (32, 66957), (33, 66912), (40, 66831), (41, 66807), (46, 66714), (51, 66663), (52, 66651), (53, 66633), (54, 66630), (55, 66615), (56, 66612), (58, 66600), (60, 66588), (62, 66564),

Gene: Mithril_88 Start: 67142, Stop: 66471, Start Num: 22

Candidate Starts for Mithril_88:

(Start: 13 @67310 has 1 MA's), (15, 67247), (Start: 22 @67142 has 17 MA's), (25, 67091), (29, 67001), (33, 66923), (34, 66914), (40, 66842), (41, 66818), (45, 66755), (46, 66725), (51, 66674), (52, 66662), (53, 66644), (55, 66626), (56, 66623), (58, 66611), (60, 66599), (62, 66575), (64, 66530), (65, 66521), (66, 66518), (67, 66515),

Gene: Mudslide_91 Start: 67615, Stop: 66962, Start Num: 22

Candidate Starts for Mudslide_91:

(2, 68467), (Start: 13 @67783 has 1 MA's), (15, 67720), (Start: 22 @67615 has 17 MA's), (25, 67564), (29, 67471), (32, 67438), (33, 67393), (34, 67384), (40, 67312), (41, 67288), (46, 67195), (51, 67144),

(52, 67132), (53, 67114), (55, 67096), (56, 67093), (60, 67069), (68, 66997), (69, 66994),

Gene: Nanao_89 Start: 66221, Stop: 65553, Start Num: 22

Candidate Starts for Nanao_89:

(3, 66983), (Start: 13 @66389 has 1 MA's), (15, 66326), (Start: 22 @66221 has 17 MA's), (25, 66170), (27, 66131), (29, 66080), (30, 66077), (32, 66047), (33, 66002), (34, 65993), (40, 65921), (41, 65897), (46, 65804), (51, 65753), (52, 65741), (53, 65723), (55, 65705), (56, 65702), (57, 65693), (58, 65690), (60, 65678), (62, 65654), (64, 65609), (66, 65597), (67, 65594),

Gene: Phelemich_86 Start: 65786, Stop: 65199, Start Num: 26

Candidate Starts for Phelemich_86:

(Start: 26 @65786 has 4 MA's), (33, 65621), (34, 65612), (41, 65516), (42, 65504), (50, 65387), (51, 65375), (52, 65363), (53, 65345), (59, 65306), (61, 65297),

Gene: Poster_88 Start: 66222, Stop: 65554, Start Num: 22

Candidate Starts for Poster_88:

(3, 66984), (Start: 13 @66390 has 1 MA's), (15, 66327), (Start: 22 @66222 has 17 MA's), (25, 66171), (27, 66132), (29, 66081), (30, 66078), (32, 66048), (33, 66003), (34, 65994), (40, 65922), (41, 65898), (46, 65805), (51, 65754), (52, 65742), (53, 65724), (55, 65706), (56, 65703), (57, 65694), (58, 65691), (60, 65679), (62, 65655), (64, 65610), (66, 65598), (67, 65595),

Gene: Prince_90 Start: 67482, Stop: 66829, Start Num: 22

Candidate Starts for Prince_90:

(2, 68334), (Start: 13 @67650 has 1 MA's), (15, 67587), (Start: 22 @67482 has 17 MA's), (25, 67431), (29, 67338), (32, 67305), (33, 67260), (34, 67251), (40, 67179), (41, 67155), (46, 67062), (51, 67011), (52, 66999), (53, 66981), (55, 66963), (56, 66960), (60, 66936), (68, 66864), (69, 66861),

Gene: Renkei_89 Start: 66344, Stop: 65634, Start Num: 18

Candidate Starts for Renkei_89:

(6, 66632), (7, 66629), (10, 66617), (Start: 13 @66464 has 1 MA's), (15, 66401), (18, 66344), (Start: 22 @66302 has 17 MA's), (25, 66251), (33, 66083), (34, 66074), (40, 66002), (41, 65978), (46, 65885), (51, 65834), (52, 65822), (53, 65804), (55, 65786), (56, 65783), (58, 65771), (60, 65759), (62, 65735), (64, 65690), (66, 65678), (67, 65675),

Gene: Reprobate_88 Start: 65791, Stop: 65204, Start Num: 26

Candidate Starts for Reprobate_88:

(Start: 26 @65791 has 4 MA's), (33, 65626), (34, 65617), (41, 65521), (42, 65509), (50, 65392), (51, 65380), (52, 65368), (53, 65350), (59, 65311), (61, 65302),

Gene: Rita130_88 Start: 65916, Stop: 65299, Start Num: 26

Candidate Starts for Rita130_88:

(1, 66870), (5, 66375), (16, 66045), (Start: 20 @65991 has 3 MA's), (Start: 26 @65916 has 4 MA's), (33, 65745), (34, 65736), (42, 65628), (50, 65511), (52, 65487), (53, 65469), (59, 65433), (65, 65352),

Gene: Robyn_98 Start: 67147, Stop: 66548, Start Num: 19

Candidate Starts for Robyn_98:

(Start: 19 @67147 has 3 MA's), (21, 67126), (Start: 26 @67087 has 4 MA's), (28, 67045), (33, 66919), (35, 66898), (38, 66886), (41, 66814), (49, 66700), (52, 66661), (53, 66643),

Gene: Roscoe_95 Start: 67027, Stop: 66401, Start Num: 19

Candidate Starts for Roscoe_95:

(11, 67246), (14, 67144), (Start: 19 @67027 has 3 MA's), (24, 66979), (Start: 26 @66940 has 4 MA's), (28, 66898), (33, 66772), (35, 66751), (38, 66739), (41, 66667), (49, 66553), (52, 66514), (53, 66496),

Gene: Serendipitous_89 Start: 65633, Stop: 65031, Start Num: 26

Candidate Starts for Serendipitous_89:

(Start: 26 @65633 has 4 MA's), (33, 65468), (36, 65444), (39, 65420), (42, 65354), (46, 65273), (47, 65270), (52, 65213), (53, 65195),

Gene: Suigeneris_90 Start: 66233, Stop: 65547, Start Num: 20

Candidate Starts for Suigeneris_90:

(1, 67112), (5, 66617), (16, 66287), (Start: 20 @66233 has 3 MA's), (Start: 26 @66158 has 4 MA's), (33, 65993), (34, 65984), (42, 65876), (50, 65759), (52, 65735), (53, 65717), (59, 65681), (65, 65600),

Gene: Vaishali24_97 Start: 66820, Stop: 66230, Start Num: 19

Candidate Starts for Vaishali24_97:

(11, 67039), (14, 66937), (Start: 19 @66820 has 3 MA's), (21, 66799), (Start: 26 @66760 has 4 MA's), (28, 66727), (33, 66601), (35, 66580), (38, 66568), (41, 66496), (49, 66382), (52, 66343), (53, 66325),

Gene: VioletZ_92 Start: 67510, Stop: 66836, Start Num: 22

Candidate Starts for VioletZ_92:

(4, 67930), (Start: 13 @67678 has 1 MA's), (15, 67615), (Start: 22 @67510 has 17 MA's), (25, 67459), (29, 67363), (30, 67360), (32, 67330), (33, 67285), (34, 67276), (40, 67204), (41, 67180), (46, 67087), (51, 67036), (52, 67024), (53, 67006), (54, 67003), (55, 66988), (56, 66985), (58, 66973), (60, 66961), (62, 66937), (66, 66880), (67, 66877),

Gene: Waleliano_89 Start: 67237, Stop: 66587, Start Num: 22

Candidate Starts for Waleliano_89:

(Start: 13 @67405 has 1 MA's), (15, 67342), (Start: 22 @67237 has 17 MA's), (25, 67186), (29, 67096), (33, 67018), (34, 67009), (41, 66913), (46, 66820), (51, 66769), (52, 66757), (53, 66739), (55, 66721), (56, 66718), (60, 66694), (62, 66670), (68, 66622),

Gene: Xincheng_82 Start: 67236, Stop: 66616, Start Num: 25

Candidate Starts for Xincheng_82:

(Start: 13 @67455 has 1 MA's), (15, 67392), (Start: 22 @67287 has 17 MA's), (25, 67236), (29, 67146), (38, 67032), (40, 66984), (41, 66960), (43, 66936), (44, 66924), (46, 66867), (51, 66816), (52, 66804), (53, 66786), (55, 66768), (56, 66765), (58, 66753), (60, 66741), (62, 66717), (66, 66663), (67, 66660),

Gene: Zemanar_88 Start: 67185, Stop: 66517, Start Num: 22

Candidate Starts for Zemanar_88:

(Start: 13 @67353 has 1 MA's), (15, 67290), (Start: 22 @67185 has 17 MA's), (25, 67134), (29, 67044), (33, 66966), (34, 66957), (40, 66885), (41, 66861), (46, 66768), (51, 66717), (52, 66705), (53, 66687), (55, 66669), (56, 66666), (58, 66654), (60, 66642), (62, 66618), (64, 66573), (66, 66561), (67, 66558),