

Pham 291102



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 291102 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291102 has 77 members, 15 are drafts.

Phages represented in each track:

- Track 1 : DontArgue_63
- Track 2 : DeerParkTS_69
- Track 3 : AbbyPaige_74
- Track 4 : Koduck_74
- Track 5 : Iwokeuplikedis_74
- Track 6 : Heathen_69, Kachowdy_67, DropBear_67, Scout_68, HelDan_69, Roimos_67, Zarafa_67, Marchesa_67, Fred313_67
- Track 7 : Isca_67, MA5_69, B1_61, JF4_67, Phantastic_71, MK4_69, Rockstar_68, JF2_67
- Track 8 : SaturnRing_69, BlueBird_72, Bugatti_69, Idleandcovert_70, TNguyen7_70, Puppy_70, Clammy_69, Giroux_72, Pistachio_69
- Track 9 : Kalnoky_74, Marius_74, JeppNRM_74, ACFishhook_71, Pawn_72
- Track 10 : Margo_69, Hookmount_69, Caviar_69, Pocahontas_68, Lambert1_69, Panamaxus_67, EtoileNova_67, QuinnKiro_68, Popcicle_69, ResDef_67, Todacoro_69, Veracruz_66
- Track 11 : Texage_67, Noella_69
- Track 12 : Chiqui_64, BabyJohn_64
- Track 13 : StepMih_73
- Track 14 : Norbert_65
- Track 15 : BabyRay_70
- Track 16 : Groupthink_74
- Track 17 : JewelBug_73
- Track 18 : Neeharika16_73, SuperCallie99_71
- Track 19 : Priamo_75
- Track 20 : BABullseye_67, McFly_75, Dorothea_74
- Track 21 : Isiphiwo_71
- Track 22 : Newrala_73, Jordennis_72
- Track 23 : Hoot_69, Kipper29_74, EricB_73, Candra_72, VohminGhazi_74, Chartreuse_73, DaVinci_72
- Track 24 : DelvinSonDorr_70, SuperAwesome_74
- Track 25 : Polyphemus_75
- Track 26 : Pmask_73

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 19 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BABullseye_67, Candra_72, Chartreuse_73, DaVinci_72, DelvinSonDorr_70, Dorothea_74, EricB_73, Hoot_69, Isiphiwo_71, JewelBug_73, Jordennis_72, Kipper29_74, McFly_75, Neeharika16_73, Newrala_73, Pmask_73, Polyphemus_75, Priamo_75, SuperAwesome_74, SuperCallie99_71, VohminGhazi_74,

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

- BlueBird_72, Bugatti_69, Clammy_69, Giroux_72, Idleandcovert_70, Iwokeuplikedis_74, Pistachio_69, Puppy_70, SaturnRing_69, TNguyen7_70,

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

- ACFishhook_71, AbbyPaige_74, B1_61, BabyJohn_64, BabyRay_70, Caviar_69, Chiqui_64, DeerParkTS_69, DontArgue_63, DropBear_67, EtoileNova_67, Fred313_67, Groupthink_74, Heathen_69, HelDan_69, Hookmount_69, Isca_67, JF2_67, JF4_67, JeppNRM_74, Kachowdy_67, Kalnoky_74, Koduck_74, Lambert1_69, MA5_69, MK4_69, Marchesa_67, Margo_69, Marius_74, Noella_69, Norbert_65, Panamaxus_67, Pawn_72, Phantastic_71, Pocahontas_68, Popcicle_69, QuinnKiro_68, ResDef_67, Rockstar_68, Roimos_67, Scout_68, StepMih_73, Texage_67, Todacoro_69, Veracruz_66, Zarafa_67,

Summary by start number:

Start 9:

- Found in 1 of 77 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BabyRay_70 (A3),

Start 10:

- Found in 6 of 77 (7.8%) of genes in pham
- Manual Annotations of this start: 6 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ACFishhook_71 (A3), Groupthink_74 (A3), JeppNRM_74 (A3), Kalnoky_74 (A3), Marius_74 (A3), Pawn_72 (A3),

Start 12:

- Found in 1 of 77 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DeerParkTS_69 (A2),

Start 14:

- Found in 15 of 77 (19.5%) of genes in pham
- Manual Annotations of this start: 14 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Caviar_69 (A3), EtoileNova_67 (A3), Hookmount_69 (A3), Lambert1_69 (A3), Margo_69 (A3), Noella_69 (A3), Norbert_65 (A3), Panamaxus_67 (A3), Pocahontas_68 (A3), Popcicle_69 (A3), QuinnKiro_68 (A3), ResDef_67 (A3), Texage_67 (A3), Todacoro_69 (A3), Veracruz_66 (A3),

Start 15:

- Found in 19 of 77 (24.7%) of genes in pham
- Manual Annotations of this start: 12 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B1_61 (A3), BabyJohn_64 (A3), Chiqui_64 (A3), DropBear_67 (A3), Fred313_67 (A3), Heathen_69 (A3), HelDan_69 (A3), Isca_67 (A3), JF2_67 (A3), JF4_67 (A3), Kachowdy_67 (A3), MA5_69 (A3), MK4_69 (A3), Marchesa_67 (A3), Phantastic_71 (A3), Rockstar_68 (A3), Roimos_67 (A3), Scout_68 (A3), Zarafa_67 (A3),

Start 17:

- Found in 9 of 77 (11.7%) of genes in pham
- Manual Annotations of this start: 6 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueBird_72 (A3), Bugatti_69 (A3), Clammy_69 (A3), Giroux_72 (A3), Idleandcovert_70 (A3), Pistachio_69 (A3), Puppy_70 (A3), SaturnRing_69 (A3), TNguyen7_70 (A3),

Start 18:

- Found in 1 of 77 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DontArgue_63 (A10),

Start 19:

- Found in 4 of 77 (5.2%) of genes in pham
- Manual Annotations of this start: 2 of 62
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AbbyPaige_74 (A2), Iwokeuplikedis_74 (A2),

Start 21:

- Found in 45 of 77 (58.4%) of genes in pham
- Manual Annotations of this start: 2 of 62
- Called 4.4% of time when present
- Phage (with cluster) where this start called: Koduck_74 (A2), StepMih_73 (A3),

Start 22:

- Found in 31 of 77 (40.3%) of genes in pham
- Manual Annotations of this start: 19 of 62
- Called 67.7% of time when present
- Phage (with cluster) where this start called: BABullseye_67 (A6), Candra_72 (A6), Chartreuse_73 (A6), DaVinci_72 (A6), DelvinSonDorr_70 (A6), Dorothea_74 (A6), EricB_73 (A6), Hoot_69 (A6), Isiphiwo_71 (A6), JewelBug_73 (A6), Jordennis_72 (A6), Kipper29_74 (A6), McFly_75 (A6), Neeharika16_73 (A6), Newrala_73 (A6), Pmask_73 (A6), Polyphemus_75 (A6), Priamo_75 (A6), SuperAwesome_74 (A6), SuperCallie99_71 (A6), VohminGhazi_74 (A6),

Summary by clusters:

There are 4 clusters represented in this pham: A3, A2, A10, A6,

Info for manual annotations of cluster A2:

- Start number 19 was manually annotated 2 times for cluster A2.
- Start number 21 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A3:

- Start number 9 was manually annotated 1 time for cluster A3.
- Start number 10 was manually annotated 6 times for cluster A3.
- Start number 14 was manually annotated 14 times for cluster A3.
- Start number 15 was manually annotated 12 times for cluster A3.
- Start number 17 was manually annotated 6 times for cluster A3.
- Start number 21 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A6:

- Start number 22 was manually annotated 19 times for cluster A6.

Gene Information:

Gene: ACFishhook_71 Start: 42736, Stop: 42518, Start Num: 10

Candidate Starts for ACFishhook_71:

(5, 42805), (Start: 10 @42736 has 6 MA's), (Start: 21 @42697 has 2 MA's), (24, 42661), (25, 42628), (28, 42568), (31, 42523),

Gene: AbbyPaige_74 Start: 43716, Stop: 43543, Start Num: 19

Candidate Starts for AbbyPaige_74:

(8, 43767), (Start: 19 @43716 has 2 MA's), (27, 43584), (28, 43581), (29, 43578),

Gene: B1_61 Start: 40764, Stop: 40540, Start Num: 15

Candidate Starts for B1_61:

(Start: 15 @40764 has 12 MA's), (16, 40758), (Start: 21 @40722 has 2 MA's), (31, 40545),

Gene: BABullseye_67 Start: 40157, Stop: 40014, Start Num: 22

Candidate Starts for BABullseye_67:

(Start: 22 @40157 has 19 MA's),

Gene: BabyJohn_64 Start: 42591, Stop: 42367, Start Num: 15

Candidate Starts for BabyJohn_64:

(Start: 15 @42591 has 12 MA's), (16, 42585), (Start: 21 @42549 has 2 MA's), (28, 42417), (31, 42372),

Gene: BabyRay_70 Start: 42572, Stop: 42345, Start Num: 9

Candidate Starts for BabyRay_70:

(5, 42641), (Start: 9 @42572 has 1 MA's), (Start: 21 @42527 has 2 MA's), (28, 42395), (31, 42350),

Gene: BlueBird_72 Start: 42595, Stop: 42392, Start Num: 17

Candidate Starts for BlueBird_72:

(Start: 17 @42595 has 6 MA's), (Start: 22 @42553 has 19 MA's), (28, 42442),

Gene: Bugatti_69 Start: 42595, Stop: 42392, Start Num: 17

Candidate Starts for Bugatti_69:

(Start: 17 @42595 has 6 MA's), (Start: 22 @42553 has 19 MA's), (28, 42442),

Gene: Candra_72 Start: 41853, Stop: 41710, Start Num: 22
Candidate Starts for Candra_72:
(2, 42138), (3, 42105), (4, 42072), (Start: 22 @41853 has 19 MA's),

Gene: Caviar_69 Start: 42560, Stop: 42348, Start Num: 14
Candidate Starts for Caviar_69:
(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: Chartreuse_73 Start: 41164, Stop: 41021, Start Num: 22
Candidate Starts for Chartreuse_73:
(2, 41449), (3, 41416), (4, 41383), (Start: 22 @41164 has 19 MA's),

Gene: Chiqui_64 Start: 42600, Stop: 42376, Start Num: 15
Candidate Starts for Chiqui_64:
(Start: 15 @42600 has 12 MA's), (16, 42594), (Start: 21 @42558 has 2 MA's), (28, 42426), (31, 42381),

Gene: Clammy_69 Start: 42595, Stop: 42392, Start Num: 17
Candidate Starts for Clammy_69:
(Start: 17 @42595 has 6 MA's), (Start: 22 @42553 has 19 MA's), (28, 42442),

Gene: DaVinci_72 Start: 41218, Stop: 41075, Start Num: 22
Candidate Starts for DaVinci_72:
(2, 41503), (3, 41470), (4, 41437), (Start: 22 @41218 has 19 MA's),

Gene: DeerParkTS_69 Start: 42438, Stop: 42238, Start Num: 12
Candidate Starts for DeerParkTS_69:
(7, 42462), (12, 42438), (Start: 19 @42411 has 2 MA's), (29, 42273),

Gene: DelvinSonDorr_70 Start: 41873, Stop: 41730, Start Num: 22
Candidate Starts for DelvinSonDorr_70:
(1, 42191), (2, 42158), (3, 42125), (4, 42092), (Start: 22 @41873 has 19 MA's),

Gene: DontArgue_63 Start: 40833, Stop: 40633, Start Num: 18
Candidate Starts for DontArgue_63:
(18, 40833), (Start: 21 @40812 has 2 MA's), (23, 40779), (28, 40683), (31, 40638),

Gene: Dorothea_74 Start: 42463, Stop: 42320, Start Num: 22
Candidate Starts for Dorothea_74:
(Start: 22 @42463 has 19 MA's),

Gene: DropBear_67 Start: 42515, Stop: 42291, Start Num: 15
Candidate Starts for DropBear_67:
(Start: 15 @42515 has 12 MA's), (16, 42509), (Start: 21 @42473 has 2 MA's), (28, 42341), (31, 42296),

Gene: EricB_73 Start: 41810, Stop: 41667, Start Num: 22
Candidate Starts for EricB_73:
(2, 42095), (3, 42062), (4, 42029), (Start: 22 @41810 has 19 MA's),

Gene: EtoileNova_67 Start: 42564, Stop: 42352, Start Num: 14
Candidate Starts for EtoileNova_67:
(Start: 14 @42564 has 14 MA's), (Start: 21 @42531 has 2 MA's), (28, 42402), (31, 42357),

Gene: Fred313_67 Start: 42209, Stop: 41985, Start Num: 15

Candidate Starts for Fred313_67:

(Start: 15 @42209 has 12 MA's), (16, 42203), (Start: 21 @42167 has 2 MA's), (28, 42035), (31, 41990),

Gene: Giroux_72 Start: 42594, Stop: 42391, Start Num: 17

Candidate Starts for Giroux_72:

(Start: 17 @42594 has 6 MA's), (Start: 22 @42552 has 19 MA's), (28, 42441),

Gene: Groupthink_74 Start: 42664, Stop: 42446, Start Num: 10

Candidate Starts for Groupthink_74:

(5, 42733), (Start: 10 @42664 has 6 MA's), (Start: 21 @42625 has 2 MA's), (24, 42589), (28, 42496), (31, 42451),

Gene: Heathen_69 Start: 42304, Stop: 42080, Start Num: 15

Candidate Starts for Heathen_69:

(Start: 15 @42304 has 12 MA's), (16, 42298), (Start: 21 @42262 has 2 MA's), (28, 42130), (31, 42085),

Gene: HelDan_69 Start: 42520, Stop: 42296, Start Num: 15

Candidate Starts for HelDan_69:

(Start: 15 @42520 has 12 MA's), (16, 42514), (Start: 21 @42478 has 2 MA's), (28, 42346), (31, 42301),

Gene: Hookmount_69 Start: 42561, Stop: 42349, Start Num: 14

Candidate Starts for Hookmount_69:

(Start: 14 @42561 has 14 MA's), (Start: 21 @42528 has 2 MA's), (28, 42399), (31, 42354),

Gene: Hoot_69 Start: 39668, Stop: 39525, Start Num: 22

Candidate Starts for Hoot_69:

(2, 39953), (3, 39920), (4, 39887), (Start: 22 @39668 has 19 MA's),

Gene: Idleandcovert_70 Start: 42595, Stop: 42392, Start Num: 17

Candidate Starts for Idleandcovert_70:

(Start: 17 @42595 has 6 MA's), (Start: 22 @42553 has 19 MA's), (28, 42442),

Gene: Isca_67 Start: 42069, Stop: 41845, Start Num: 15

Candidate Starts for Isca_67:

(Start: 15 @42069 has 12 MA's), (16, 42063), (Start: 21 @42027 has 2 MA's), (31, 41850),

Gene: Isiphiwo_71 Start: 41832, Stop: 41689, Start Num: 22

Candidate Starts for Isiphiwo_71:

(Start: 22 @41832 has 19 MA's), (30, 41694),

Gene: Iwokeuplikedis_74 Start: 43821, Stop: 43639, Start Num: 19

Candidate Starts for Iwokeuplikedis_74:

(Start: 19 @43821 has 2 MA's), (Start: 21 @43815 has 2 MA's), (Start: 22 @43797 has 19 MA's), (27, 43695), (31, 43647),

Gene: JF2_67 Start: 40764, Stop: 40540, Start Num: 15

Candidate Starts for JF2_67:

(Start: 15 @40764 has 12 MA's), (16, 40758), (Start: 21 @40722 has 2 MA's), (31, 40545),

Gene: JF4_67 Start: 40764, Stop: 40540, Start Num: 15

Candidate Starts for JF4_67:

(Start: 15 @40764 has 12 MA's), (16, 40758), (Start: 21 @40722 has 2 MA's), (31, 40545),

Gene: JeppNRM_74 Start: 42665, Stop: 42447, Start Num: 10

Candidate Starts for JeppNRM_74:

(5, 42734), (Start: 10 @42665 has 6 MA's), (Start: 21 @42626 has 2 MA's), (24, 42590), (25, 42557), (28, 42497), (31, 42452),

Gene: JewelBug_73 Start: 42554, Stop: 42411, Start Num: 22

Candidate Starts for JewelBug_73:

(20, 42578), (Start: 22 @42554 has 19 MA's), (30, 42416),

Gene: Jordennis_72 Start: 42048, Stop: 41905, Start Num: 22

Candidate Starts for Jordennis_72:

(Start: 22 @42048 has 19 MA's), (30, 41910),

Gene: Kachowdy_67 Start: 42556, Stop: 42332, Start Num: 15

Candidate Starts for Kachowdy_67:

(Start: 15 @42556 has 12 MA's), (16, 42550), (Start: 21 @42514 has 2 MA's), (28, 42382), (31, 42337),

Gene: Kalnoky_74 Start: 42661, Stop: 42443, Start Num: 10

Candidate Starts for Kalnoky_74:

(5, 42730), (Start: 10 @42661 has 6 MA's), (Start: 21 @42622 has 2 MA's), (24, 42586), (25, 42553), (28, 42493), (31, 42448),

Gene: Kipper29_74 Start: 41836, Stop: 41693, Start Num: 22

Candidate Starts for Kipper29_74:

(2, 42121), (3, 42088), (4, 42055), (Start: 22 @41836 has 19 MA's),

Gene: Koduck_74 Start: 42710, Stop: 42504, Start Num: 21

Candidate Starts for Koduck_74:

(6, 42809), (Start: 19 @42716 has 2 MA's), (Start: 21 @42710 has 2 MA's), (26, 42602), (28, 42578), (31, 42533),

Gene: Lambert1_69 Start: 42560, Stop: 42348, Start Num: 14

Candidate Starts for Lambert1_69:

(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: MA5_69 Start: 41973, Stop: 41749, Start Num: 15

Candidate Starts for MA5_69:

(Start: 15 @41973 has 12 MA's), (16, 41967), (Start: 21 @41931 has 2 MA's), (31, 41754),

Gene: MK4_69 Start: 42048, Stop: 41824, Start Num: 15

Candidate Starts for MK4_69:

(Start: 15 @42048 has 12 MA's), (16, 42042), (Start: 21 @42006 has 2 MA's), (31, 41829),

Gene: Marchesa_67 Start: 42506, Stop: 42282, Start Num: 15

Candidate Starts for Marchesa_67:

(Start: 15 @42506 has 12 MA's), (16, 42500), (Start: 21 @42464 has 2 MA's), (28, 42332), (31, 42287),

Gene: Margo_69 Start: 42586, Stop: 42374, Start Num: 14

Candidate Starts for Margo_69:

(Start: 14 @42586 has 14 MA's), (Start: 21 @42553 has 2 MA's), (28, 42424), (31, 42379),

Gene: Marius_74 Start: 42661, Stop: 42443, Start Num: 10

Candidate Starts for Marius_74:

(5, 42730), (Start: 10 @42661 has 6 MA's), (Start: 21 @42622 has 2 MA's), (24, 42586), (25, 42553), (28, 42493), (31, 42448),

Gene: McFly_75 Start: 42451, Stop: 42308, Start Num: 22
Candidate Starts for McFly_75:
(Start: 22 @42451 has 19 MA's),

Gene: Neeharika16_73 Start: 41917, Stop: 41774, Start Num: 22
Candidate Starts for Neeharika16_73:
(Start: 22 @41917 has 19 MA's),

Gene: Newrala_73 Start: 42257, Stop: 42114, Start Num: 22
Candidate Starts for Newrala_73:
(Start: 22 @42257 has 19 MA's), (30, 42119),

Gene: Noella_69 Start: 42561, Stop: 42349, Start Num: 14
Candidate Starts for Noella_69:
(Start: 14 @42561 has 14 MA's), (Start: 21 @42528 has 2 MA's), (28, 42399), (31, 42354),

Gene: Norbert_65 Start: 42560, Stop: 42348, Start Num: 14
Candidate Starts for Norbert_65:
(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: Panamaxus_67 Start: 42560, Stop: 42348, Start Num: 14
Candidate Starts for Panamaxus_67:
(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: Pawn_72 Start: 42668, Stop: 42450, Start Num: 10
Candidate Starts for Pawn_72:
(5, 42737), (Start: 10 @42668 has 6 MA's), (Start: 21 @42629 has 2 MA's), (24, 42593), (25, 42560), (28, 42500), (31, 42455),

Gene: Phantastic_71 Start: 42234, Stop: 42010, Start Num: 15
Candidate Starts for Phantastic_71:
(Start: 15 @42234 has 12 MA's), (16, 42228), (Start: 21 @42192 has 2 MA's), (31, 42015),

Gene: Pistachio_69 Start: 42142, Stop: 41939, Start Num: 17
Candidate Starts for Pistachio_69:
(Start: 17 @42142 has 6 MA's), (Start: 22 @42100 has 19 MA's), (28, 41989),

Gene: Pmask_73 Start: 42453, Stop: 42310, Start Num: 22
Candidate Starts for Pmask_73:
(1, 42774), (2, 42741), (3, 42708), (4, 42675), (Start: 22 @42453 has 19 MA's),

Gene: Pocahontas_68 Start: 42557, Stop: 42345, Start Num: 14
Candidate Starts for Pocahontas_68:
(Start: 14 @42557 has 14 MA's), (Start: 21 @42524 has 2 MA's), (28, 42395), (31, 42350),

Gene: Polyphemus_75 Start: 42640, Stop: 42497, Start Num: 22
Candidate Starts for Polyphemus_75:
(Start: 22 @42640 has 19 MA's), (30, 42502),

Gene: Popcicle_69 Start: 42557, Stop: 42345, Start Num: 14

Candidate Starts for Popcicle_69:
(Start: 14 @42557 has 14 MA's), (Start: 21 @42524 has 2 MA's), (28, 42395), (31, 42350),

Gene: Priamo_75 Start: 42118, Stop: 41975, Start Num: 22
Candidate Starts for Priamo_75:
(Start: 22 @42118 has 19 MA's),

Gene: Puppy_70 Start: 42214, Stop: 42011, Start Num: 17
Candidate Starts for Puppy_70:
(Start: 17 @42214 has 6 MA's), (Start: 22 @42172 has 19 MA's), (28, 42061),

Gene: QuinnKiro_68 Start: 42560, Stop: 42348, Start Num: 14
Candidate Starts for QuinnKiro_68:
(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: ResDef_67 Start: 42560, Stop: 42348, Start Num: 14
Candidate Starts for ResDef_67:
(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: Rockstar_68 Start: 42057, Stop: 41833, Start Num: 15
Candidate Starts for Rockstar_68:
(Start: 15 @42057 has 12 MA's), (16, 42051), (Start: 21 @42015 has 2 MA's), (31, 41838),

Gene: Roimos_67 Start: 42436, Stop: 42212, Start Num: 15
Candidate Starts for Roimos_67:
(Start: 15 @42436 has 12 MA's), (16, 42430), (Start: 21 @42394 has 2 MA's), (28, 42262), (31, 42217),

Gene: SaturnRing_69 Start: 42595, Stop: 42392, Start Num: 17
Candidate Starts for SaturnRing_69:
(Start: 17 @42595 has 6 MA's), (Start: 22 @42553 has 19 MA's), (28, 42442),

Gene: Scout_68 Start: 41767, Stop: 41543, Start Num: 15
Candidate Starts for Scout_68:
(Start: 15 @41767 has 12 MA's), (16, 41761), (Start: 21 @41725 has 2 MA's), (28, 41593), (31, 41548),

Gene: StepMih_73 Start: 42802, Stop: 42623, Start Num: 21
Candidate Starts for StepMih_73:
(11, 42838), (13, 42835), (Start: 21 @42802 has 2 MA's), (28, 42673), (31, 42628),

Gene: SuperAwesome_74 Start: 42495, Stop: 42352, Start Num: 22
Candidate Starts for SuperAwesome_74:
(1, 42813), (2, 42780), (3, 42747), (4, 42714), (Start: 22 @42495 has 19 MA's),

Gene: SuperCallie99_71 Start: 42337, Stop: 42194, Start Num: 22
Candidate Starts for SuperCallie99_71:
(Start: 22 @42337 has 19 MA's),

Gene: TNguyen7_70 Start: 42555, Stop: 42352, Start Num: 17
Candidate Starts for TNguyen7_70:
(Start: 17 @42555 has 6 MA's), (Start: 22 @42513 has 19 MA's), (28, 42402),

Gene: Texage_67 Start: 42561, Stop: 42349, Start Num: 14
Candidate Starts for Texage_67:

(Start: 14 @42561 has 14 MA's), (Start: 21 @42528 has 2 MA's), (28, 42399), (31, 42354),

Gene: Todacoro_69 Start: 42560, Stop: 42348, Start Num: 14

Candidate Starts for Todacoro_69:

(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: Veracruz_66 Start: 42560, Stop: 42348, Start Num: 14

Candidate Starts for Veracruz_66:

(Start: 14 @42560 has 14 MA's), (Start: 21 @42527 has 2 MA's), (28, 42398), (31, 42353),

Gene: VohminGhazi_74 Start: 41818, Stop: 41675, Start Num: 22

Candidate Starts for VohminGhazi_74:

(2, 42103), (3, 42070), (4, 42037), (Start: 22 @41818 has 19 MA's),

Gene: Zarafa_67 Start: 42529, Stop: 42305, Start Num: 15

Candidate Starts for Zarafa_67:

(Start: 15 @42529 has 12 MA's), (16, 42523), (Start: 21 @42487 has 2 MA's), (28, 42355), (31, 42310),