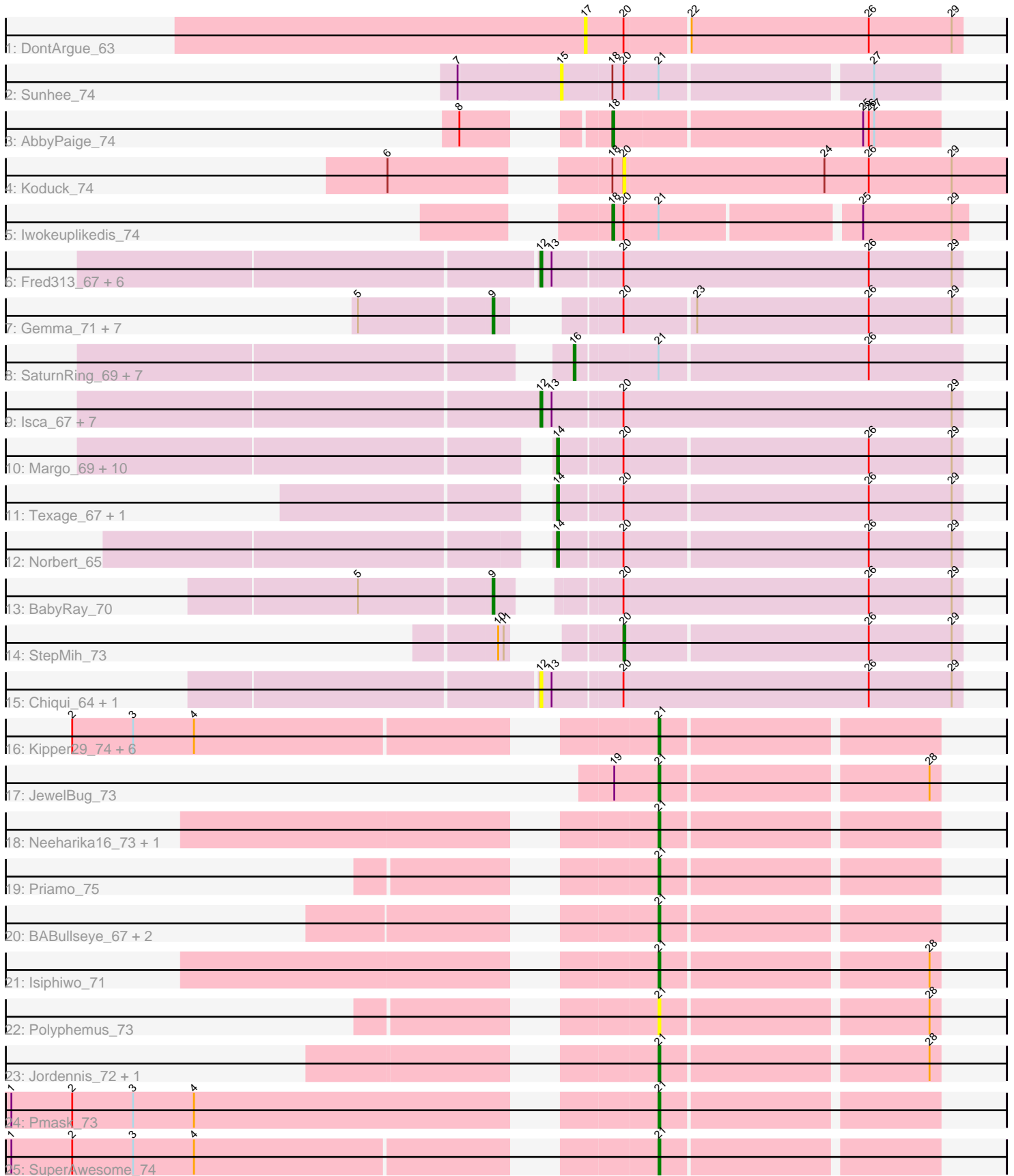


Pham 224539



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 224539 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224539 has 74 members, 15 are drafts.

Phages represented in each track:

- Track 1 : DontArgue_63
- Track 2 : Sunhee_74
- Track 3 : AbbyPaige_74
- Track 4 : Koduck_74
- Track 5 : Iwokeuplikedis_74
- Track 6 : Fred313_67, HelDan_69, Kachowdy_67, DropBear_67, Heathen_69, Scout_68, Marchesa_67
- Track 7 : Gemma_71, HaveUMetTed_74, PhishRPhriends_70, Calvinny_71, PurpleHaze_73, OlanP_72, Heliosoles_71, Manu_73
- Track 8 : SaturnRing_69, BlueBird_72, Bugatti_69, Idleandcovert_70, TNguyen7_70, Puppy_70, Pistachio_69, Giroux_68
- Track 9 : Isca_67, JF4_67, B1_61, Phantastic_71, MK4_69, Rockstar_68, JF2_67, MA5_69
- Track 10 : Margo_69, Hookmount_69, Caviar_69, Pocahontas_68, Lambert1_69, Panamaxus_67, QuinnKiro_68, Veracruz_66, Popcicle_69, ResDef_67, Todacoro_69
- Track 11 : Texage_67, Noella_69
- Track 12 : Norbert_65
- Track 13 : BabyRay_70
- Track 14 : StepMih_73
- Track 15 : Chiqui_64, BabyJohn_64
- Track 16 : Kipper29_74, VohminGhazi_74, Hoot_69, EricB_73, Candra_72, DaVinci_72, Chartreuse_71
- 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 : Polyphemus_73
- Track 23 : Jordennis_72, Newrala_73
- Track 24 : Pmask_73
- Track 25 : SuperAwesome_74

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

The start number called the most often in the published annotations is 21, it was called in 17 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BABullseye_67, Candra_72, Chartreuse_71, DaVinci_72, Dorothea_74, EricB_73, Hoot_69, Isiphiwo_71, JewelBug_73, Jordennis_72, Kipper29_74, McFly_75, Neeharika16_73, Newrala_73, Pmask_73, Polyphemus_73, Priamo_75, SuperAwesome_74, SuperCallie99_71, VohminGhazi_74,

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

- BlueBird_72, Bugatti_69, Giroux_68, Idleandcovert_70, Iwokeuplikedis_74, Pistachio_69, Puppy_70, SaturnRing_69, Sunhee_74, TNguyen7_70,

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

- AbbyPaige_74, B1_61, BabyJohn_64, BabyRay_70, Calvinny_71, Caviar_69, Chiqui_64, DontArgue_63, DropBear_67, Fred313_67, Gemma_71, HaveUMetTed_74, Heathen_69, HelDan_69, Heliosoles_71, Hookmount_69, Isca_67, JF2_67, JF4_67, Kachowdy_67, Koduck_74, Lambert1_69, MA5_69, MK4_69, Manu_73, Marchesa_67, Margo_69, Noella_69, Norbert_65, OlanP_72, Panamaxus_67, Phantastic_71, PhishRPhriends_70, Pocahontas_68, Popcicle_69, PurpleHaze_73, QuinnKiro_68, ResDef_67, Rockstar_68, Scout_68, StepMih_73, Texage_67, Todacoro_69, Veracruz_66,

Summary by start number:

Start 9:

- Found in 9 of 74 (12.2%) of genes in pham
- Manual Annotations of this start: 8 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BabyRay_70 (A3), Calvinny_71 (A3), Gemma_71 (A3), HaveUMetTed_74 (A3), Heliosoles_71 (A3), Manu_73 (A3), OlanP_72 (A3), PhishRPhriends_70 (A3), PurpleHaze_73 (A3),

Start 12:

- Found in 17 of 74 (23.0%) of genes in pham
- Manual Annotations of this start: 12 of 59
- 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), Scout_68 (A3),

Start 14:

- Found in 14 of 74 (18.9%) of genes in pham
- Manual Annotations of this start: 14 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Caviar_69 (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 1 of 74 (1.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sunhee_74 (A14),

Start 16:

- Found in 8 of 74 (10.8%) of genes in pham
- Manual Annotations of this start: 5 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueBird_72 (A3), Bugatti_69 (A3), Giroux_68 (A3), Idleandcovert_70 (A3), Pistachio_69 (A3), Puppy_70 (A3), SaturnRing_69 (A3), TNguyen7_70 (A3),

Start 17:

- Found in 1 of 74 (1.4%) 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 18:

- Found in 4 of 74 (5.4%) of genes in pham
- Manual Annotations of this start: 2 of 59
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AbbyPaige_74 (A2), Iwokeuplikedis_74 (A2),

Start 20:

- Found in 45 of 74 (60.8%) of genes in pham
- Manual Annotations of this start: 1 of 59
- Called 4.4% of time when present
- Phage (with cluster) where this start called: Koduck_74 (A2), StepMih_73 (A3),

Start 21:

- Found in 30 of 74 (40.5%) of genes in pham
- Manual Annotations of this start: 17 of 59
- Called 66.7% of time when present
- Phage (with cluster) where this start called: BABullseye_67 (A6), Candra_72 (A6), Chartreuse_71 (A6), DaVinci_72 (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), Polyphemos_73 (A6), Priamo_75 (A6), SuperAwesome_74 (A6), SuperCallie99_71 (A6), VohminGhazi_74 (A6),

Summary by clusters:

There are 5 clusters represented in this pham: A14, A3, A2, A10, A6,

Info for manual annotations of cluster A2:

- Start number 18 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A3:

- Start number 9 was manually annotated 8 times for cluster A3.
- Start number 12 was manually annotated 12 times for cluster A3.
- Start number 14 was manually annotated 14 times for cluster A3.
- Start number 16 was manually annotated 5 times for cluster A3.
- Start number 20 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A6:

- Start number 21 was manually annotated 17 times for cluster A6.

Gene Information:

Gene: AbbyPaige_74 Start: 43716, Stop: 43543, Start Num: 18

Candidate Starts for AbbyPaige_74:

(8, 43767), (Start: 18 @43716 has 2 MA's), (25, 43584), (26, 43581), (27, 43578),

Gene: B1_61 Start: 40764, Stop: 40540, Start Num: 12

Candidate Starts for B1_61:

(Start: 12 @40764 has 12 MA's), (13, 40758), (Start: 20 @40722 has 1 MA's), (29, 40545),

Gene: BABullseye_67 Start: 40157, Stop: 40014, Start Num: 21

Candidate Starts for BABullseye_67:

(Start: 21 @40157 has 17 MA's),

Gene: BabyJohn_64 Start: 42591, Stop: 42367, Start Num: 12

Candidate Starts for BabyJohn_64:

(Start: 12 @42591 has 12 MA's), (13, 42585), (Start: 20 @42549 has 1 MA's), (26, 42417), (29, 42372),

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

Candidate Starts for BabyRay_70:

(5, 42641), (Start: 9 @42572 has 8 MA's), (Start: 20 @42527 has 1 MA's), (26, 42395), (29, 42350),

Gene: BlueBird_72 Start: 42595, Stop: 42392, Start Num: 16

Candidate Starts for BlueBird_72:

(Start: 16 @42595 has 5 MA's), (Start: 21 @42553 has 17 MA's), (26, 42442),

Gene: Bugatti_69 Start: 42595, Stop: 42392, Start Num: 16

Candidate Starts for Bugatti_69:

(Start: 16 @42595 has 5 MA's), (Start: 21 @42553 has 17 MA's), (26, 42442),

Gene: Calvinny_71 Start: 42664, Stop: 42446, Start Num: 9

Candidate Starts for Calvinny_71:

(5, 42733), (Start: 9 @42664 has 8 MA's), (Start: 20 @42625 has 1 MA's), (23, 42589), (26, 42496), (29, 42451),

Gene: Candra_72 Start: 41853, Stop: 41710, Start Num: 21

Candidate Starts for Candra_72:

(2, 42138), (3, 42105), (4, 42072), (Start: 21 @41853 has 17 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: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

Gene: Chartreuse_71 Start: 41164, Stop: 41021, Start Num: 21
Candidate Starts for Chartreuse_71:
(2, 41449), (3, 41416), (4, 41383), (Start: 21 @41164 has 17 MA's),

Gene: Chiqui_64 Start: 42600, Stop: 42376, Start Num: 12
Candidate Starts for Chiqui_64:
(Start: 12 @42600 has 12 MA's), (13, 42594), (Start: 20 @42558 has 1 MA's), (26, 42426), (29, 42381),

Gene: DaVinci_72 Start: 41218, Stop: 41075, Start Num: 21
Candidate Starts for DaVinci_72:
(2, 41503), (3, 41470), (4, 41437), (Start: 21 @41218 has 17 MA's),

Gene: DontArgue_63 Start: 40833, Stop: 40633, Start Num: 17
Candidate Starts for DontArgue_63:
(17, 40833), (Start: 20 @40812 has 1 MA's), (22, 40779), (26, 40683), (29, 40638),

Gene: Dorothea_74 Start: 42463, Stop: 42320, Start Num: 21
Candidate Starts for Dorothea_74:
(Start: 21 @42463 has 17 MA's),

Gene: DropBear_67 Start: 42515, Stop: 42291, Start Num: 12
Candidate Starts for DropBear_67:
(Start: 12 @42515 has 12 MA's), (13, 42509), (Start: 20 @42473 has 1 MA's), (26, 42341), (29, 42296),

Gene: EricB_73 Start: 41810, Stop: 41667, Start Num: 21
Candidate Starts for EricB_73:
(2, 42095), (3, 42062), (4, 42029), (Start: 21 @41810 has 17 MA's),

Gene: Fred313_67 Start: 42209, Stop: 41985, Start Num: 12
Candidate Starts for Fred313_67:
(Start: 12 @42209 has 12 MA's), (13, 42203), (Start: 20 @42167 has 1 MA's), (26, 42035), (29, 41990),

Gene: Gemma_71 Start: 42660, Stop: 42442, Start Num: 9
Candidate Starts for Gemma_71:
(5, 42729), (Start: 9 @42660 has 8 MA's), (Start: 20 @42621 has 1 MA's), (23, 42585), (26, 42492),
(29, 42447),

Gene: Giroux_68 Start: 42594, Stop: 42391, Start Num: 16
Candidate Starts for Giroux_68:
(Start: 16 @42594 has 5 MA's), (Start: 21 @42552 has 17 MA's), (26, 42441),

Gene: HaveUMetTed_74 Start: 42649, Stop: 42431, Start Num: 9
Candidate Starts for HaveUMetTed_74:
(5, 42718), (Start: 9 @42649 has 8 MA's), (Start: 20 @42610 has 1 MA's), (23, 42574), (26, 42481),
(29, 42436),

Gene: Heathen_69 Start: 42304, Stop: 42080, Start Num: 12
Candidate Starts for Heathen_69:
(Start: 12 @42304 has 12 MA's), (13, 42298), (Start: 20 @42262 has 1 MA's), (26, 42130), (29, 42085),

Gene: HelDan_69 Start: 42520, Stop: 42296, Start Num: 12
Candidate Starts for HelDan_69:

(Start: 12 @42520 has 12 MA's), (13, 42514), (Start: 20 @42478 has 1 MA's), (26, 42346), (29, 42301),

Gene: Heliosoles_71 Start: 42667, Stop: 42449, Start Num: 9

Candidate Starts for Heliosoles_71:

(5, 42736), (Start: 9 @42667 has 8 MA's), (Start: 20 @42628 has 1 MA's), (23, 42592), (26, 42499), (29, 42454),

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

Candidate Starts for Hookmount_69:

(Start: 14 @42561 has 14 MA's), (Start: 20 @42528 has 1 MA's), (26, 42399), (29, 42354),

Gene: Hoot_69 Start: 39668, Stop: 39525, Start Num: 21

Candidate Starts for Hoot_69:

(2, 39953), (3, 39920), (4, 39887), (Start: 21 @39668 has 17 MA's),

Gene: Idleandcovert_70 Start: 42595, Stop: 42392, Start Num: 16

Candidate Starts for Idleandcovert_70:

(Start: 16 @42595 has 5 MA's), (Start: 21 @42553 has 17 MA's), (26, 42442),

Gene: Isca_67 Start: 42069, Stop: 41845, Start Num: 12

Candidate Starts for Isca_67:

(Start: 12 @42069 has 12 MA's), (13, 42063), (Start: 20 @42027 has 1 MA's), (29, 41850),

Gene: Isiphiwo_71 Start: 41832, Stop: 41689, Start Num: 21

Candidate Starts for Isiphiwo_71:

(Start: 21 @41832 has 17 MA's), (28, 41694),

Gene: Iwokeuplikedis_74 Start: 43821, Stop: 43639, Start Num: 18

Candidate Starts for Iwokeuplikedis_74:

(Start: 18 @43821 has 2 MA's), (Start: 20 @43815 has 1 MA's), (Start: 21 @43797 has 17 MA's), (25, 43695), (29, 43647),

Gene: JF2_67 Start: 40764, Stop: 40540, Start Num: 12

Candidate Starts for JF2_67:

(Start: 12 @40764 has 12 MA's), (13, 40758), (Start: 20 @40722 has 1 MA's), (29, 40545),

Gene: JF4_67 Start: 40764, Stop: 40540, Start Num: 12

Candidate Starts for JF4_67:

(Start: 12 @40764 has 12 MA's), (13, 40758), (Start: 20 @40722 has 1 MA's), (29, 40545),

Gene: JewelBug_73 Start: 42554, Stop: 42411, Start Num: 21

Candidate Starts for JewelBug_73:

(19, 42578), (Start: 21 @42554 has 17 MA's), (28, 42416),

Gene: Jordennis_72 Start: 42048, Stop: 41905, Start Num: 21

Candidate Starts for Jordennis_72:

(Start: 21 @42048 has 17 MA's), (28, 41910),

Gene: Kachowdy_67 Start: 42556, Stop: 42332, Start Num: 12

Candidate Starts for Kachowdy_67:

(Start: 12 @42556 has 12 MA's), (13, 42550), (Start: 20 @42514 has 1 MA's), (26, 42382), (29, 42337),

Gene: Kipper29_74 Start: 41836, Stop: 41693, Start Num: 21

Candidate Starts for Kipper29_74:

(2, 42121), (3, 42088), (4, 42055), (Start: 21 @41836 has 17 MA's),

Gene: Koduck_74 Start: 42710, Stop: 42504, Start Num: 20

Candidate Starts for Koduck_74:

(6, 42809), (Start: 18 @42716 has 2 MA's), (Start: 20 @42710 has 1 MA's), (24, 42602), (26, 42578), (29, 42533),

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

Candidate Starts for Lambert1_69:

(Start: 14 @42560 has 14 MA's), (Start: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

Gene: MA5_69 Start: 41973, Stop: 41749, Start Num: 12

Candidate Starts for MA5_69:

(Start: 12 @41973 has 12 MA's), (13, 41967), (Start: 20 @41931 has 1 MA's), (29, 41754),

Gene: MK4_69 Start: 42048, Stop: 41824, Start Num: 12

Candidate Starts for MK4_69:

(Start: 12 @42048 has 12 MA's), (13, 42042), (Start: 20 @42006 has 1 MA's), (29, 41829),

Gene: Manu_73 Start: 42664, Stop: 42446, Start Num: 9

Candidate Starts for Manu_73:

(5, 42733), (Start: 9 @42664 has 8 MA's), (Start: 20 @42625 has 1 MA's), (23, 42589), (26, 42496), (29, 42451),

Gene: Marchesa_67 Start: 42506, Stop: 42282, Start Num: 12

Candidate Starts for Marchesa_67:

(Start: 12 @42506 has 12 MA's), (13, 42500), (Start: 20 @42464 has 1 MA's), (26, 42332), (29, 42287),

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

Candidate Starts for Margo_69:

(Start: 14 @42586 has 14 MA's), (Start: 20 @42553 has 1 MA's), (26, 42424), (29, 42379),

Gene: McFly_75 Start: 42451, Stop: 42308, Start Num: 21

Candidate Starts for McFly_75:

(Start: 21 @42451 has 17 MA's),

Gene: Neeharika16_73 Start: 41917, Stop: 41774, Start Num: 21

Candidate Starts for Neeharika16_73:

(Start: 21 @41917 has 17 MA's),

Gene: Newrala_73 Start: 42257, Stop: 42114, Start Num: 21

Candidate Starts for Newrala_73:

(Start: 21 @42257 has 17 MA's), (28, 42119),

Gene: Noella_69 Start: 42561, Stop: 42349, Start Num: 14

Candidate Starts for Noella_69:

(Start: 14 @42561 has 14 MA's), (Start: 20 @42528 has 1 MA's), (26, 42399), (29, 42354),

Gene: Norbert_65 Start: 42560, Stop: 42348, Start Num: 14

Candidate Starts for Norbert_65:

(Start: 14 @42560 has 14 MA's), (Start: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

Gene: OlanP_72 Start: 42837, Stop: 42619, Start Num: 9

Candidate Starts for OlanP_72:

(5, 42906), (Start: 9 @42837 has 8 MA's), (Start: 20 @42798 has 1 MA's), (23, 42762), (26, 42669), (29, 42624),

Gene: Panamaxus_67 Start: 42560, Stop: 42348, Start Num: 14

Candidate Starts for Panamaxus_67:

(Start: 14 @42560 has 14 MA's), (Start: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

Gene: Phantastic_71 Start: 42234, Stop: 42010, Start Num: 12

Candidate Starts for Phantastic_71:

(Start: 12 @42234 has 12 MA's), (13, 42228), (Start: 20 @42192 has 1 MA's), (29, 42015),

Gene: PhishRPhriends_70 Start: 41845, Stop: 41627, Start Num: 9

Candidate Starts for PhishRPhriends_70:

(5, 41914), (Start: 9 @41845 has 8 MA's), (Start: 20 @41806 has 1 MA's), (23, 41770), (26, 41677), (29, 41632),

Gene: Pistachio_69 Start: 42142, Stop: 41939, Start Num: 16

Candidate Starts for Pistachio_69:

(Start: 16 @42142 has 5 MA's), (Start: 21 @42100 has 17 MA's), (26, 41989),

Gene: Pmask_73 Start: 42453, Stop: 42310, Start Num: 21

Candidate Starts for Pmask_73:

(1, 42774), (2, 42741), (3, 42708), (4, 42675), (Start: 21 @42453 has 17 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: 20 @42524 has 1 MA's), (26, 42395), (29, 42350),

Gene: Polyphemus_73 Start: 42640, Stop: 42497, Start Num: 21

Candidate Starts for Polyphemus_73:

(Start: 21 @42640 has 17 MA's), (28, 42502),

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

Candidate Starts for Popcicle_69:

(Start: 14 @42557 has 14 MA's), (Start: 20 @42524 has 1 MA's), (26, 42395), (29, 42350),

Gene: Priamo_75 Start: 42118, Stop: 41975, Start Num: 21

Candidate Starts for Priamo_75:

(Start: 21 @42118 has 17 MA's),

Gene: Puppy_70 Start: 42214, Stop: 42011, Start Num: 16

Candidate Starts for Puppy_70:

(Start: 16 @42214 has 5 MA's), (Start: 21 @42172 has 17 MA's), (26, 42061),

Gene: PurpleHaze_73 Start: 42663, Stop: 42445, Start Num: 9

Candidate Starts for PurpleHaze_73:

(5, 42732), (Start: 9 @42663 has 8 MA's), (Start: 20 @42624 has 1 MA's), (23, 42588), (26, 42495), (29, 42450),

Gene: QuinnKiro_68 Start: 42560, Stop: 42348, Start Num: 14

Candidate Starts for QuinnKiro_68:

(Start: 14 @42560 has 14 MA's), (Start: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

Gene: ResDef_67 Start: 42560, Stop: 42348, Start Num: 14

Candidate Starts for ResDef_67:

(Start: 14 @42560 has 14 MA's), (Start: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

Gene: Rockstar_68 Start: 42057, Stop: 41833, Start Num: 12

Candidate Starts for Rockstar_68:

(Start: 12 @42057 has 12 MA's), (13, 42051), (Start: 20 @42015 has 1 MA's), (29, 41838),

Gene: SaturnRing_69 Start: 42595, Stop: 42392, Start Num: 16

Candidate Starts for SaturnRing_69:

(Start: 16 @42595 has 5 MA's), (Start: 21 @42553 has 17 MA's), (26, 42442),

Gene: Scout_68 Start: 41767, Stop: 41543, Start Num: 12

Candidate Starts for Scout_68:

(Start: 12 @41767 has 12 MA's), (13, 41761), (Start: 20 @41725 has 1 MA's), (26, 41593), (29, 41548),

Gene: StepMih_73 Start: 42802, Stop: 42623, Start Num: 20

Candidate Starts for StepMih_73:

(10, 42838), (11, 42835), (Start: 20 @42802 has 1 MA's), (26, 42673), (29, 42628),

Gene: Sunhee_74 Start: 42052, Stop: 41858, Start Num: 15

Candidate Starts for Sunhee_74:

(7, 42079), (15, 42052), (Start: 18 @42025 has 2 MA's), (Start: 20 @42019 has 1 MA's), (Start: 21 @42001 has 17 MA's), (27, 41893),

Gene: SuperAwesome_74 Start: 42495, Stop: 42352, Start Num: 21

Candidate Starts for SuperAwesome_74:

(1, 42813), (2, 42780), (3, 42747), (4, 42714), (Start: 21 @42495 has 17 MA's),

Gene: SuperCallie99_71 Start: 42337, Stop: 42194, Start Num: 21

Candidate Starts for SuperCallie99_71:

(Start: 21 @42337 has 17 MA's),

Gene: TNguyen7_70 Start: 42555, Stop: 42352, Start Num: 16

Candidate Starts for TNguyen7_70:

(Start: 16 @42555 has 5 MA's), (Start: 21 @42513 has 17 MA's), (26, 42402),

Gene: Texage_67 Start: 42561, Stop: 42349, Start Num: 14

Candidate Starts for Texage_67:

(Start: 14 @42561 has 14 MA's), (Start: 20 @42528 has 1 MA's), (26, 42399), (29, 42354),

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

Candidate Starts for Todacoro_69:

(Start: 14 @42560 has 14 MA's), (Start: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

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

Candidate Starts for Veracruz_66:

(Start: 14 @42560 has 14 MA's), (Start: 20 @42527 has 1 MA's), (26, 42398), (29, 42353),

Gene: VohminGhazi_74 Start: 41818, Stop: 41675, Start Num: 21

Candidate Starts for VohminGhazi_74:

(2, 42103), (3, 42070), (4, 42037), (Start: 21 @41818 has 17 MA's),