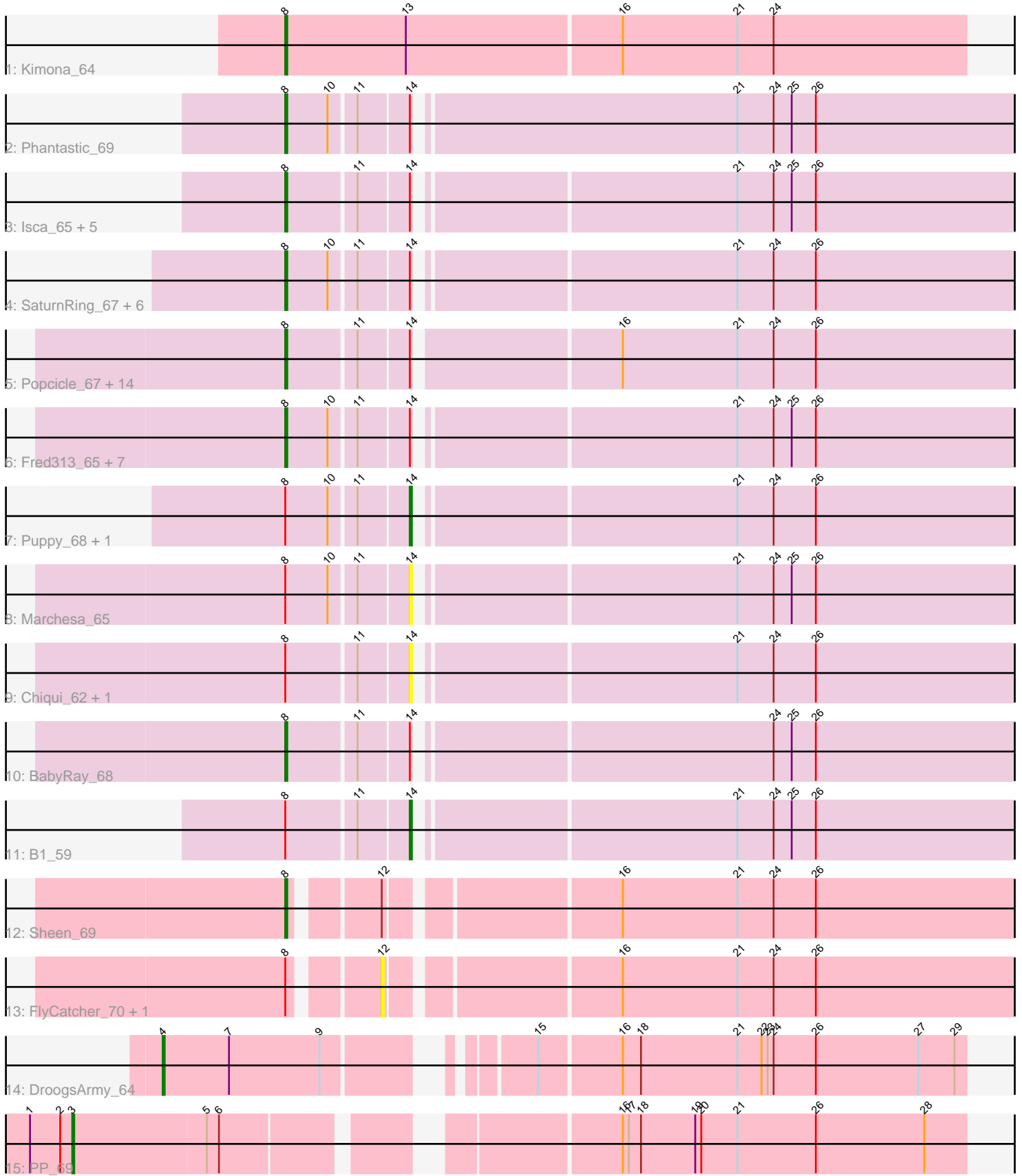


# Pham 305086



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 305086 Report

This analysis was run 06/08/26 on database version 649.

Pham number 305086 has 50 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Kimona\_64
- Track 2 : Phantastic\_69
- Track 3 : Isca\_65, MA5\_67, JF4\_65, MK4\_67, Rockstar\_66, JF2\_65
- Track 4 : SaturnRing\_67, Bugatti\_67, Idleandcovert\_68, BlueBird\_70, Clammy\_67, Pistachio\_67, Giroux\_70
- Track 5 : Popcicle\_67, Texage\_65, Margo\_67, Hookmount\_67, Pocahontas\_66, Caviar\_67, Veracruz\_64, Lambert1\_67, Panamaxus\_65, Todacoro\_67, Norbert\_63, Noella\_67, EtoileNova\_65, ResDef\_65, QuinnKiro\_66
- Track 6 : Fred313\_65, DropBear\_65, Scout\_66, HelDan\_67, Roimos\_65, Kachowdy\_65, Zarafa\_65, Heathen\_67
- Track 7 : Puppy\_68, TNguyen7\_68
- Track 8 : Marchesa\_65
- Track 9 : Chiqui\_62, BabyJohn\_62
- Track 10 : BabyRay\_68
- Track 11 : B1\_59
- Track 12 : Sheen\_69
- Track 13 : FlyCatcher\_70, Toro\_68
- Track 14 : DroogsArmy\_64
- Track 15 : PP\_69

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

The start number called the most often in the published annotations is 8, it was called in 32 of the 37 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BabyRay\_68, BlueBird\_70, Bugatti\_67, Caviar\_67, Clammy\_67, DropBear\_65, EtoileNova\_65, Fred313\_65, Giroux\_70, Heathen\_67, HelDan\_67, Hookmount\_67, Idleandcovert\_68, Isca\_65, JF2\_65, JF4\_65, Kachowdy\_65, Kimona\_64, Lambert1\_67, MA5\_67, MK4\_67, Margo\_67, Noella\_67, Norbert\_63, Panamaxus\_65, Phantastic\_69, Pistachio\_67, Pocahontas\_66, Popcicle\_67, QuinnKiro\_66, ResDef\_65, Rockstar\_66, Roimos\_65, SaturnRing\_67, Scout\_66, Sheen\_69, Texage\_65, Todacoro\_67, Veracruz\_64, Zarafa\_65,

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

- B1\_59, BabyJohn\_62, Chiqui\_62, FlyCatcher\_70, Marchesa\_65, Puppy\_68, TNguyen7\_68, Toro\_68,

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

- DroogsArmy\_64, PP\_69,

### Summary by start number:

Start 3:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PP\_69 (A7),

Start 4:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DroogsArmy\_64 (A7),

Start 8:

- Found in 48 of 50 ( 96.0% ) of genes in pham
- Manual Annotations of this start: 32 of 37
- Called 83.3% of time when present
- Phage (with cluster) where this start called: BabyRay\_68 (A3), BlueBird\_70 (A3), Bugatti\_67 (A3), Caviar\_67 (A3), Clammy\_67 (A3), DropBear\_65 (A3), EtoileNova\_65 (A3), Fred313\_65 (A3), Giroux\_70 (A3), Heathen\_67 (A3), HelDan\_67 (A3), Hookmount\_67 (A3), Idleandcovert\_68 (A3), Isca\_65 (A3), JF2\_65 (A3), JF4\_65 (A3), Kachowdy\_65 (A3), Kimona\_64 (A19), Lambert1\_67 (A3), MA5\_67 (A3), MK4\_67 (A3), Margo\_67 (A3), Noella\_67 (A3), Norbert\_63 (A3), Panamaxus\_65 (A3), Phantastic\_69 (A3), Pistachio\_67 (A3), Pocahontas\_66 (A3), Popcicle\_67 (A3), QuinnKiro\_66 (A3), ResDef\_65 (A3), Rockstar\_66 (A3), Roimos\_65 (A3), SaturnRing\_67 (A3), Scout\_66 (A3), Sheen\_69 (A7), Texage\_65 (A3), Todacoro\_67 (A3), Veracruz\_64 (A3), Zarafa\_65 (A3),

Start 12:

- Found in 3 of 50 ( 6.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: FlyCatcher\_70 (A7), Toro\_68 (A7),

Start 14:

- Found in 44 of 50 ( 88.0% ) of genes in pham
- Manual Annotations of this start: 3 of 37
- Called 13.6% of time when present
- Phage (with cluster) where this start called: B1\_59 (A3), BabyJohn\_62 (A3), Chiqui\_62 (A3), Marchesa\_65 (A3), Puppy\_68 (A3), TNguyen7\_68 (A3),

### Summary by clusters:

There are 3 clusters represented in this pham: A3, A19, A7,

Info for manual annotations of cluster A19:

- Start number 8 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A3:

- Start number 8 was manually annotated 30 times for cluster A3.
- Start number 14 was manually annotated 3 times for cluster A3.

Info for manual annotations of cluster A7:

- Start number 3 was manually annotated 1 time for cluster A7.
- Start number 4 was manually annotated 1 time for cluster A7.
- Start number 8 was manually annotated 1 time for cluster A7.

### ***Gene Information:***

Gene: B1\_59 Start: 40295, Stop: 39984, Start Num: 14

Candidate Starts for B1\_59:

(Start: 8 @40352 has 32 MA's), (11, 40319), (Start: 14 @40295 has 3 MA's), (21, 40145), (24, 40127), (25, 40118), (26, 40106),

Gene: BabyJohn\_62 Start: 42122, Stop: 41811, Start Num: 14

Candidate Starts for BabyJohn\_62:

(Start: 8 @42179 has 32 MA's), (11, 42146), (Start: 14 @42122 has 3 MA's), (21, 41972), (24, 41954), (26, 41933),

Gene: BabyRay\_68 Start: 42157, Stop: 41789, Start Num: 8

Candidate Starts for BabyRay\_68:

(Start: 8 @42157 has 32 MA's), (11, 42124), (Start: 14 @42100 has 3 MA's), (24, 41932), (25, 41923), (26, 41911),

Gene: BlueBird\_70 Start: 42204, Stop: 41836, Start Num: 8

Candidate Starts for BlueBird\_70:

(Start: 8 @42204 has 32 MA's), (10, 42183), (11, 42171), (Start: 14 @42147 has 3 MA's), (21, 41997), (24, 41979), (26, 41958),

Gene: Bugatti\_67 Start: 42204, Stop: 41836, Start Num: 8

Candidate Starts for Bugatti\_67:

(Start: 8 @42204 has 32 MA's), (10, 42183), (11, 42171), (Start: 14 @42147 has 3 MA's), (21, 41997), (24, 41979), (26, 41958),

Gene: Caviar\_67 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for Caviar\_67:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: Chiqui\_62 Start: 42131, Stop: 41820, Start Num: 14

Candidate Starts for Chiqui\_62:

(Start: 8 @42188 has 32 MA's), (11, 42155), (Start: 14 @42131 has 3 MA's), (21, 41981), (24, 41963), (26, 41942),

Gene: Clammy\_67 Start: 42204, Stop: 41836, Start Num: 8

Candidate Starts for Clammy\_67:

(Start: 8 @42204 has 32 MA's), (10, 42183), (11, 42171), (Start: 14 @42147 has 3 MA's), (21, 41997), (24, 41979), (26, 41958),

Gene: DroogsArmy\_64 Start: 45309, Stop: 44944, Start Num: 4

Candidate Starts for DroogsArmy\_64:

(Start: 4 @45309 has 1 MA's), (7, 45276), (9, 45231), (15, 45153), (16, 45114), (18, 45105), (21, 45057), (22, 45045), (23, 45042), (24, 45039), (26, 45018), (27, 44967), (29, 44949),

Gene: DropBear\_65 Start: 42103, Stop: 41738, Start Num: 8

Candidate Starts for DropBear\_65:

(Start: 8 @42103 has 32 MA's), (10, 42082), (11, 42070), (Start: 14 @42046 has 3 MA's), (21, 41896), (24, 41878), (25, 41869), (26, 41857),

Gene: EtoileNova\_65 Start: 42164, Stop: 41793, Start Num: 8

Candidate Starts for EtoileNova\_65:

(Start: 8 @42164 has 32 MA's), (11, 42131), (Start: 14 @42107 has 3 MA's), (16, 42011), (21, 41954), (24, 41936), (26, 41915),

Gene: FlyCatcher\_70 Start: 45930, Stop: 45607, Start Num: 12

Candidate Starts for FlyCatcher\_70:

(Start: 8 @45966 has 32 MA's), (12, 45930), (16, 45825), (21, 45768), (24, 45750), (26, 45729),

Gene: Fred313\_65 Start: 41797, Stop: 41432, Start Num: 8

Candidate Starts for Fred313\_65:

(Start: 8 @41797 has 32 MA's), (10, 41776), (11, 41764), (Start: 14 @41740 has 3 MA's), (21, 41590), (24, 41572), (25, 41563), (26, 41551),

Gene: Giroux\_70 Start: 42203, Stop: 41835, Start Num: 8

Candidate Starts for Giroux\_70:

(Start: 8 @42203 has 32 MA's), (10, 42182), (11, 42170), (Start: 14 @42146 has 3 MA's), (21, 41996), (24, 41978), (26, 41957),

Gene: Heathen\_67 Start: 41892, Stop: 41527, Start Num: 8

Candidate Starts for Heathen\_67:

(Start: 8 @41892 has 32 MA's), (10, 41871), (11, 41859), (Start: 14 @41835 has 3 MA's), (21, 41685), (24, 41667), (25, 41658), (26, 41646),

Gene: HelDan\_67 Start: 42108, Stop: 41743, Start Num: 8

Candidate Starts for HelDan\_67:

(Start: 8 @42108 has 32 MA's), (10, 42087), (11, 42075), (Start: 14 @42051 has 3 MA's), (21, 41901), (24, 41883), (25, 41874), (26, 41862),

Gene: Hookmount\_67 Start: 42161, Stop: 41790, Start Num: 8

Candidate Starts for Hookmount\_67:

(Start: 8 @42161 has 32 MA's), (11, 42128), (Start: 14 @42104 has 3 MA's), (16, 42008), (21, 41951), (24, 41933), (26, 41912),

Gene: Idleandcovert\_68 Start: 42204, Stop: 41836, Start Num: 8

Candidate Starts for Idleandcovert\_68:

(Start: 8 @42204 has 32 MA's), (10, 42183), (11, 42171), (Start: 14 @42147 has 3 MA's), (21, 41997), (24, 41979), (26, 41958),

Gene: Isca\_65 Start: 41657, Stop: 41289, Start Num: 8

Candidate Starts for Isca\_65:

(Start: 8 @41657 has 32 MA's), (11, 41624), (Start: 14 @41600 has 3 MA's), (21, 41450), (24, 41432), (25, 41423), (26, 41411),

Gene: JF2\_65 Start: 40352, Stop: 39984, Start Num: 8

Candidate Starts for JF2\_65:

(Start: 8 @40352 has 32 MA's), (11, 40319), (Start: 14 @40295 has 3 MA's), (21, 40145), (24, 40127), (25, 40118), (26, 40106),

Gene: JF4\_65 Start: 40352, Stop: 39984, Start Num: 8

Candidate Starts for JF4\_65:

(Start: 8 @40352 has 32 MA's), (11, 40319), (Start: 14 @40295 has 3 MA's), (21, 40145), (24, 40127), (25, 40118), (26, 40106),

Gene: Kachowdy\_65 Start: 42144, Stop: 41779, Start Num: 8

Candidate Starts for Kachowdy\_65:

(Start: 8 @42144 has 32 MA's), (10, 42123), (11, 42111), (Start: 14 @42087 has 3 MA's), (21, 41937), (24, 41919), (25, 41910), (26, 41898),

Gene: Kimona\_64 Start: 41048, Stop: 40713, Start Num: 8

Candidate Starts for Kimona\_64:

(Start: 8 @41048 has 32 MA's), (13, 40988), (16, 40883), (21, 40826), (24, 40808),

Gene: Lambert1\_67 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for Lambert1\_67:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: MA5\_67 Start: 41561, Stop: 41193, Start Num: 8

Candidate Starts for MA5\_67:

(Start: 8 @41561 has 32 MA's), (11, 41528), (Start: 14 @41504 has 3 MA's), (21, 41354), (24, 41336), (25, 41327), (26, 41315),

Gene: MK4\_67 Start: 41636, Stop: 41268, Start Num: 8

Candidate Starts for MK4\_67:

(Start: 8 @41636 has 32 MA's), (11, 41603), (Start: 14 @41579 has 3 MA's), (21, 41429), (24, 41411), (25, 41402), (26, 41390),

Gene: Marchesa\_65 Start: 42037, Stop: 41729, Start Num: 14

Candidate Starts for Marchesa\_65:

(Start: 8 @42094 has 32 MA's), (10, 42073), (11, 42061), (Start: 14 @42037 has 3 MA's), (21, 41887), (24, 41869), (25, 41860), (26, 41848),

Gene: Margo\_67 Start: 42186, Stop: 41815, Start Num: 8

Candidate Starts for Margo\_67:

(Start: 8 @42186 has 32 MA's), (11, 42153), (Start: 14 @42129 has 3 MA's), (16, 42033), (21, 41976), (24, 41958), (26, 41937),

Gene: Noella\_67 Start: 42161, Stop: 41790, Start Num: 8

Candidate Starts for Noella\_67:

(Start: 8 @42161 has 32 MA's), (11, 42128), (Start: 14 @42104 has 3 MA's), (16, 42008), (21, 41951), (24, 41933), (26, 41912),

Gene: Norbert\_63 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for Norbert\_63:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: PP\_69 Start: 46873, Stop: 46463, Start Num: 3

Candidate Starts for PP\_69:

(1, 46894), (2, 46879), (Start: 3 @46873 has 1 MA's), (5, 46807), (6, 46801), (16, 46633), (17, 46630), (18, 46624), (19, 46597), (20, 46594), (21, 46576), (26, 46537), (28, 46483),

Gene: Panamaxus\_65 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for Panamaxus\_65:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: Phantastic\_69 Start: 41822, Stop: 41451, Start Num: 8

Candidate Starts for Phantastic\_69:

(Start: 8 @41822 has 32 MA's), (10, 41801), (11, 41789), (Start: 14 @41765 has 3 MA's), (21, 41612), (24, 41594), (25, 41585), (26, 41573),

Gene: Pistachio\_67 Start: 41751, Stop: 41383, Start Num: 8

Candidate Starts for Pistachio\_67:

(Start: 8 @41751 has 32 MA's), (10, 41730), (11, 41718), (Start: 14 @41694 has 3 MA's), (21, 41544), (24, 41526), (26, 41505),

Gene: Pocahontas\_66 Start: 42157, Stop: 41786, Start Num: 8

Candidate Starts for Pocahontas\_66:

(Start: 8 @42157 has 32 MA's), (11, 42124), (Start: 14 @42100 has 3 MA's), (16, 42004), (21, 41947), (24, 41929), (26, 41908),

Gene: Popcicle\_67 Start: 42157, Stop: 41786, Start Num: 8

Candidate Starts for Popcicle\_67:

(Start: 8 @42157 has 32 MA's), (11, 42124), (Start: 14 @42100 has 3 MA's), (16, 42004), (21, 41947), (24, 41929), (26, 41908),

Gene: Puppy\_68 Start: 41766, Stop: 41455, Start Num: 14

Candidate Starts for Puppy\_68:

(Start: 8 @41823 has 32 MA's), (10, 41802), (11, 41790), (Start: 14 @41766 has 3 MA's), (21, 41616), (24, 41598), (26, 41577),

Gene: QuinnKiro\_66 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for QuinnKiro\_66:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: ResDef\_65 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for ResDef\_65:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: Rockstar\_66 Start: 41645, Stop: 41277, Start Num: 8

Candidate Starts for Rockstar\_66:

(Start: 8 @41645 has 32 MA's), (11, 41612), (Start: 14 @41588 has 3 MA's), (21, 41438), (24, 41420), (25, 41411), (26, 41399),

Gene: Roimos\_65 Start: 42024, Stop: 41659, Start Num: 8

Candidate Starts for Roimos\_65:

(Start: 8 @42024 has 32 MA's), (10, 42003), (11, 41991), (Start: 14 @41967 has 3 MA's), (21, 41817), (24, 41799), (25, 41790), (26, 41778),

Gene: SaturnRing\_67 Start: 42204, Stop: 41836, Start Num: 8

Candidate Starts for SaturnRing\_67:

(Start: 8 @42204 has 32 MA's), (10, 42183), (11, 42171), (Start: 14 @42147 has 3 MA's), (21, 41997), (24, 41979), (26, 41958),

Gene: Scout\_66 Start: 41355, Stop: 40990, Start Num: 8

Candidate Starts for Scout\_66:

(Start: 8 @41355 has 32 MA's), (10, 41334), (11, 41322), (Start: 14 @41298 has 3 MA's), (21, 41148), (24, 41130), (25, 41121), (26, 41109),

Gene: Sheen\_69 Start: 45854, Stop: 45495, Start Num: 8

Candidate Starts for Sheen\_69:

(Start: 8 @45854 has 32 MA's), (12, 45818), (16, 45713), (21, 45656), (24, 45638), (26, 45617),

Gene: TNguyen7\_68 Start: 42107, Stop: 41796, Start Num: 14

Candidate Starts for TNguyen7\_68:

(Start: 8 @42164 has 32 MA's), (10, 42143), (11, 42131), (Start: 14 @42107 has 3 MA's), (21, 41957), (24, 41939), (26, 41918),

Gene: Texage\_65 Start: 42161, Stop: 41790, Start Num: 8

Candidate Starts for Texage\_65:

(Start: 8 @42161 has 32 MA's), (11, 42128), (Start: 14 @42104 has 3 MA's), (16, 42008), (21, 41951), (24, 41933), (26, 41912),

Gene: Todacoro\_67 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for Todacoro\_67:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: Toro\_68 Start: 45930, Stop: 45607, Start Num: 12

Candidate Starts for Toro\_68:

(Start: 8 @45966 has 32 MA's), (12, 45930), (16, 45825), (21, 45768), (24, 45750), (26, 45729),

Gene: Veracruz\_64 Start: 42160, Stop: 41789, Start Num: 8

Candidate Starts for Veracruz\_64:

(Start: 8 @42160 has 32 MA's), (11, 42127), (Start: 14 @42103 has 3 MA's), (16, 42007), (21, 41950), (24, 41932), (26, 41911),

Gene: Zarafa\_65 Start: 42117, Stop: 41752, Start Num: 8

Candidate Starts for Zarafa\_65:

(Start: 8 @42117 has 32 MA's), (10, 42096), (11, 42084), (Start: 14 @42060 has 3 MA's), (21, 41910), (24, 41892), (25, 41883), (26, 41871),