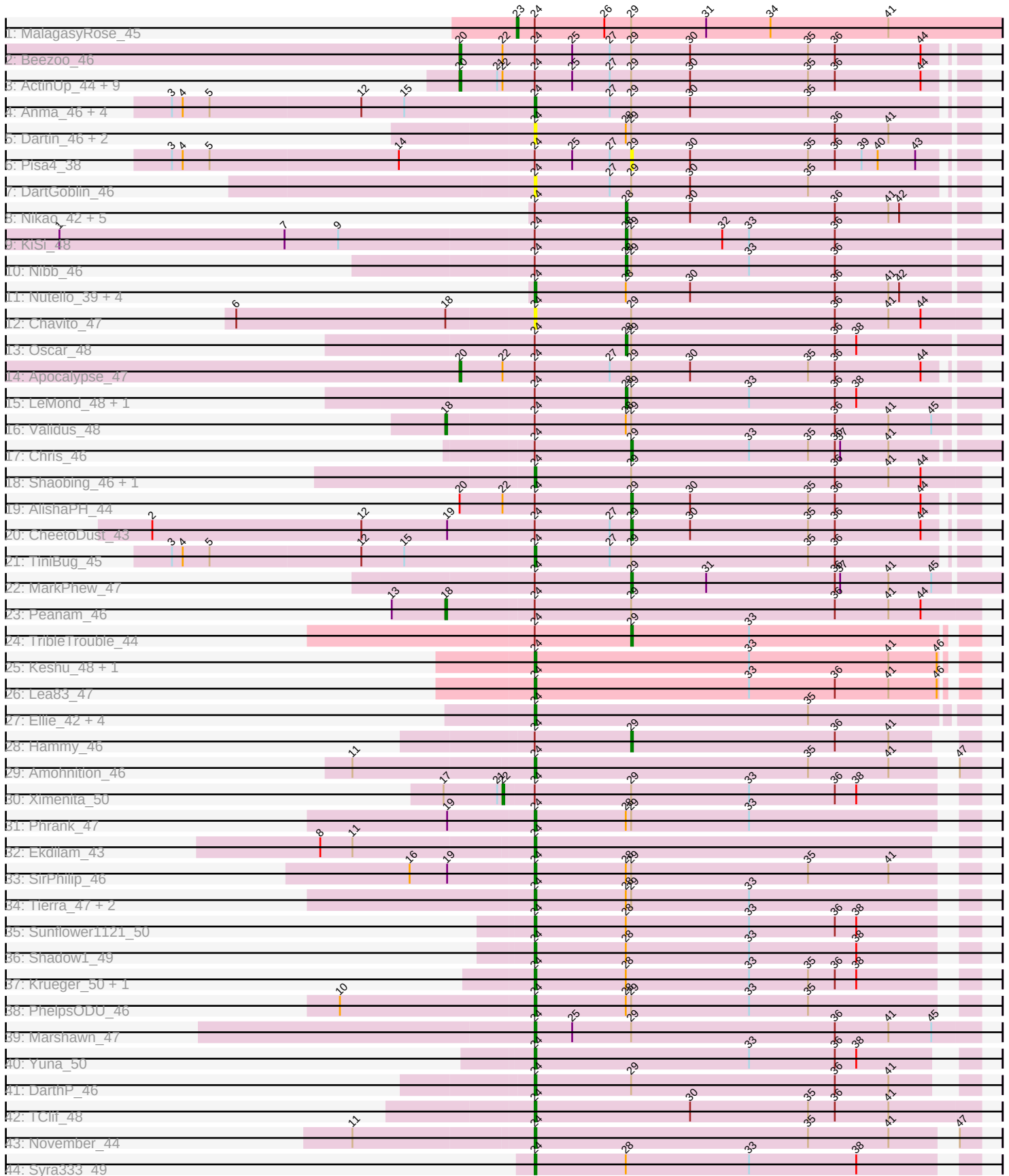


Pham 280368



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 280368 Report

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

Pham number 280368 has 78 members, 11 are drafts.

Phages represented in each track:

- Track 1 : MalagasyRose_45
- Track 2 : Beezoo_46
- Track 3 : ActinUp_44, Durfee_44, Piatt_44, Ramen_44, Blizzard_44, CaseJules_45, Joy99_44, Hyperbowlee_44, Atiba_44, Zabiza_39
- Track 4 : Anma_46, Urkel_45, Bella96_45, SamuelLPlaqson_45, DrHayes_45
- Track 5 : Dartin_46, Richo_46, McMater_46
- Track 6 : Pisa4_38
- Track 7 : DartGoblin_46
- Track 8 : Nikao_42, Torres_42, Teejan_42, SgtBeansprout_39, Trice_40, Enkosi_42
- Track 9 : KiSi_48
- Track 10 : Nibb_46
- Track 11 : Nutello_39, Amelie_39, LilPharaoh_39, Mdavu_40, Binglebops_39
- Track 12 : Chavito_47
- Track 13 : Oscar_48
- Track 14 : Apocalypse_47
- Track 15 : LeMond_48, Scarlett_48
- Track 16 : Validus_48
- Track 17 : Chris_46
- Track 18 : Shaobing_46, Niklas_46
- Track 19 : AlishaPH_44
- Track 20 : CheetoDust_43
- Track 21 : TiniBug_45
- Track 22 : MarkPhew_47
- Track 23 : Peanam_46
- Track 24 : TribbleTrouble_44
- Track 25 : Keshu_48, Hurricane_47
- Track 26 : Lea83_47
- Track 27 : Ellie_42, Amgine_44, Applecrisp_43, Fefferhead_44, Lavahound_45
- Track 28 : Hammy_46
- Track 29 : Amohnition_46
- Track 30 : Ximenita_50
- Track 31 : Phrank_47
- Track 32 : Ekdilam_43
- Track 33 : SirPhilip_46
- Track 34 : Tierra_47, Cain_47, Bryler_47
- Track 35 : Sunflower1121_50
- Track 36 : Shadow1_49

- Track 37 : Krueger_50, Tigress9_50
- Track 38 : PhelpsODU_46
- Track 39 : Marshawn_47
- Track 40 : Yuna_50
- Track 41 : DarthP_46
- Track 42 : TClif_48
- Track 43 : November_44
- Track 44 : Syra333_49

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

The start number called the most often in the published annotations is 24, it was called in 36 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amelie_39, Amgine_44, Amohnition_46, Anma_46, Applecrisp_43, Bella96_45, Biglebops_39, Bryler_47, Cain_47, Chavito_47, DartGoblin_46, DarthP_46, Dartin_46, DrHayes_45, Ekdilam_43, Ellie_42, Fefferhead_44, Hurricane_47, Keshu_48, Krueger_50, Lavahound_45, Lea83_47, LilPharaoh_39, Marshawn_47, McMater_46, Mdavu_40, Niklas_46, November_44, Nutello_39, PhelpsODU_46, Phrank_47, Richo_46, SamuelLPlagson_45, Shadow1_49, Shaobing_46, SirPhilip_46, Sunflower1121_50, Syra333_49, TClif_48, Tierra_47, Tigress9_50, TiniBug_45, Urkel_45, Yuna_50,

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

- ActinUp_44, AlishaPH_44, Apocalypse_47, Atiba_44, Beezoo_46, Blizzard_44, CaseJules_45, CheetoDust_43, Chris_46, Durfee_44, Enkosi_42, Hammy_46, Hyperbowlee_44, Joy99_44, KiSi_48, LeMond_48, MalagasyRose_45, MarkPhew_47, Nibb_46, Nikao_42, Oscar_48, Peanam_46, Piatt_44, Pisa4_38, Ramen_44, Scarlett_48, SgtBeansprout_39, Teejan_42, Torres_42, TribbleTrouble_44, Trice_40, Validus_48, Ximenita_50, Zabiza_39,

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

•

Summary by start number:

Start 18:

- Found in 3 of 78 (3.8%) of genes in pham
- Manual Annotations of this start: 2 of 67
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Peanam_46 (K1), Validus_48 (K1),

Start 20:

- Found in 13 of 78 (16.7%) of genes in pham
- Manual Annotations of this start: 12 of 67
- Called 92.3% of time when present
- Phage (with cluster) where this start called: ActinUp_44 (K1), Apocalypse_47 (K1), Atiba_44 (K1), Beezoo_46 (K1), Blizzard_44 (K1), CaseJules_45 (K1), Durfee_44 (K1), Hyperbowlee_44 (K1), Joy99_44 (K1), Piatt_44 (K1), Ramen_44 (K1),

Zabiza_39 (K1),

Start 22:

- Found in 14 of 78 (17.9%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Ximenita_50 (K6),

Start 23:

- Found in 1 of 78 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MalagasyRose_45 (AG),

Start 24:

- Found in 78 of 78 (100.0%) of genes in pham
- Manual Annotations of this start: 36 of 67
- Called 56.4% of time when present
- Phage (with cluster) where this start called: Amelie_39 (K1), Amgine_44 (K6), Amohnition_46 (K6), Anma_46 (K1), Applecrisp_43 (K6), Bella96_45 (K1), Binglebops_39 (K1), Bryler_47 (K6), Cain_47 (K6), Chavito_47 (K1), DartGoblin_46 (K1), DarthP_46 (K6), Dartin_46 (K1), DrHayes_45 (K1), Ekdilam_43 (K6), Ellie_42 (K6), Fefferhead_44 (K6), Hurricane_47 (K3), Keshu_48 (K3), Krueger_50 (K6), Lavahound_45 (K6), Lea83_47 (K3), LilPharaoh_39 (K1), Marshawn_47 (K6), McMater_46 (K1), Mdavu_40 (K1), Niklas_46 (K1), November_44 (K6), Nutello_39 (K1), PhelpsODU_46 (K6), Phrank_47 (K6), Richo_46 (K1), SamuelLPlaqson_45 (K1), Shadow1_49 (K6), Shaobing_46 (K1), SirPhilip_46 (K6), Sunflower1121_50 (K6), Syra333_49 (K6), TClif_48 (K6), Tierra_47 (K6), Tigress9_50 (K6), TiniBug_45 (K1), Urkel_45 (K1), Yuna_50 (K6),

Start 28:

- Found in 31 of 78 (39.7%) of genes in pham
- Manual Annotations of this start: 9 of 67
- Called 35.5% of time when present
- Phage (with cluster) where this start called: Enkosi_42 (K1), KiSi_48 (K1), LeMond_48 (K1), Nibb_46 (K1), Nikao_42 (K1), Oscar_48 (K1), Scarlett_48 (K1), SgtBeansprout_39 (K1), Teejan_42 (K1), Torres_42 (K1), Trice_40 (K1),

Start 29:

- Found in 49 of 78 (62.8%) of genes in pham
- Manual Annotations of this start: 6 of 67
- Called 14.3% of time when present
- Phage (with cluster) where this start called: AlishaPH_44 (K1), CheetoDust_43 (K1), Chris_46 (K1), Hammy_46 (K6), MarkPhew_47 (K1), Pisa4_38 (K1), TribbleTrouble_44 (K3),

Summary by clusters:

There are 4 clusters represented in this pham: K3, K1, K6, AG,

Info for manual annotations of cluster AG:

- Start number 23 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K1:

- Start number 18 was manually annotated 2 times for cluster K1.
- Start number 20 was manually annotated 12 times for cluster K1.
- Start number 24 was manually annotated 12 times for cluster K1.
- Start number 28 was manually annotated 9 times for cluster K1.
- Start number 29 was manually annotated 4 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 24 was manually annotated 3 times for cluster K3.
- Start number 29 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K6:

- Start number 22 was manually annotated 1 time for cluster K6.
- Start number 24 was manually annotated 21 times for cluster K6.
- Start number 29 was manually annotated 1 time for cluster K6.

Gene Information:

Gene: ActinUp_44 Start: 35120, Stop: 35401, Start Num: 20

Candidate Starts for ActinUp_44:

(Start: 20 @35120 has 12 MA's), (21, 35141), (Start: 22 @35144 has 1 MA's), (Start: 24 @35162 has 36 MA's), (25, 35183), (27, 35204), (Start: 29 @35216 has 6 MA's), (30, 35249), (35, 35315), (36, 35330), (44, 35378),

Gene: AlishaPH_44 Start: 35486, Stop: 35671, Start Num: 29

Candidate Starts for AlishaPH_44:

(Start: 20 @35390 has 12 MA's), (Start: 22 @35414 has 1 MA's), (Start: 24 @35432 has 36 MA's), (Start: 29 @35486 has 6 MA's), (30, 35519), (35, 35585), (36, 35600), (44, 35648),

Gene: Amelie_39 Start: 34739, Stop: 34984, Start Num: 24

Candidate Starts for Amelie_39:

(Start: 24 @34739 has 36 MA's), (Start: 28 @34790 has 9 MA's), (30, 34826), (36, 34907), (41, 34937), (42, 34943),

Gene: Amgine_44 Start: 36236, Stop: 36478, Start Num: 24

Candidate Starts for Amgine_44:

(Start: 24 @36236 has 36 MA's), (35, 36389),

Gene: Amohnition_46 Start: 36255, Stop: 36491, Start Num: 24

Candidate Starts for Amohnition_46:

(11, 36156), (Start: 24 @36255 has 36 MA's), (35, 36408), (41, 36453), (47, 36480),

Gene: Anma_46 Start: 36056, Stop: 36295, Start Num: 24

Candidate Starts for Anma_46:

(3, 35855), (4, 35861), (5, 35876), (12, 35960), (15, 35984), (Start: 24 @36056 has 36 MA's), (27, 36098), (Start: 29 @36110 has 6 MA's), (30, 36143), (35, 36209),

Gene: Apocalypse_47 Start: 36132, Stop: 36413, Start Num: 20

Candidate Starts for Apocalypse_47:

(Start: 20 @36132 has 12 MA's), (Start: 22 @36156 has 1 MA's), (Start: 24 @36174 has 36 MA's), (27, 36216), (Start: 29 @36228 has 6 MA's), (30, 36261), (35, 36327), (36, 36342), (44, 36390),

Gene: Applecrisp_43 Start: 35732, Stop: 35974, Start Num: 24

Candidate Starts for Applecrisp_43:

(Start: 24 @35732 has 36 MA's), (35, 35885),

Gene: Atiba_44 Start: 35080, Stop: 35361, Start Num: 20

Candidate Starts for Atiba_44:

(Start: 20 @35080 has 12 MA's), (21, 35101), (Start: 22 @35104 has 1 MA's), (Start: 24 @35122 has 36 MA's), (25, 35143), (27, 35164), (Start: 29 @35176 has 6 MA's), (30, 35209), (35, 35275), (36, 35290), (44, 35338),

Gene: Beezoo_46 Start: 36078, Stop: 36359, Start Num: 20

Candidate Starts for Beezoo_46:

(Start: 20 @36078 has 12 MA's), (Start: 22 @36102 has 1 MA's), (Start: 24 @36120 has 36 MA's), (25, 36141), (27, 36162), (Start: 29 @36174 has 6 MA's), (30, 36207), (35, 36273), (36, 36288), (44, 36336),

Gene: Bella96_45 Start: 36011, Stop: 36250, Start Num: 24

Candidate Starts for Bella96_45:

(3, 35810), (4, 35816), (5, 35831), (12, 35915), (15, 35939), (Start: 24 @36011 has 36 MA's), (27, 36053), (Start: 29 @36065 has 6 MA's), (30, 36098), (35, 36164),

Gene: Biglebops_39 Start: 34739, Stop: 34984, Start Num: 24

Candidate Starts for Biglebops_39:

(Start: 24 @34739 has 36 MA's), (Start: 28 @34790 has 9 MA's), (30, 34826), (36, 34907), (41, 34937), (42, 34943),

Gene: Blizzard_44 Start: 35432, Stop: 35713, Start Num: 20

Candidate Starts for Blizzard_44:

(Start: 20 @35432 has 12 MA's), (21, 35453), (Start: 22 @35456 has 1 MA's), (Start: 24 @35474 has 36 MA's), (25, 35495), (27, 35516), (Start: 29 @35528 has 6 MA's), (30, 35561), (35, 35627), (36, 35642), (44, 35690),

Gene: Bryler_47 Start: 35116, Stop: 35352, Start Num: 24

Candidate Starts for Bryler_47:

(Start: 24 @35116 has 36 MA's), (Start: 28 @35167 has 9 MA's), (Start: 29 @35170 has 6 MA's), (33, 35236),

Gene: Cain_47 Start: 35104, Stop: 35340, Start Num: 24

Candidate Starts for Cain_47:

(Start: 24 @35104 has 36 MA's), (Start: 28 @35155 has 9 MA's), (Start: 29 @35158 has 6 MA's), (33, 35224),

Gene: CaseJules_45 Start: 35432, Stop: 35713, Start Num: 20

Candidate Starts for CaseJules_45:

(Start: 20 @35432 has 12 MA's), (21, 35453), (Start: 22 @35456 has 1 MA's), (Start: 24 @35474 has 36 MA's), (25, 35495), (27, 35516), (Start: 29 @35528 has 6 MA's), (30, 35561), (35, 35627), (36, 35642), (44, 35690),

Gene: Chavito_47 Start: 36519, Stop: 36767, Start Num: 24

Candidate Starts for Chavito_47:

(6, 36354), (Start: 18 @36471 has 2 MA's), (Start: 24 @36519 has 36 MA's), (Start: 29 @36573 has 6 MA's), (36, 36687), (41, 36717), (44, 36735),

Gene: CheetoDust_43 Start: 34700, Stop: 34885, Start Num: 29

Candidate Starts for CheetoDust_43:

(2, 34433), (12, 34550), (19, 34598), (Start: 24 @34646 has 36 MA's), (27, 34688), (Start: 29 @34700 has 6 MA's), (30, 34733), (35, 34799), (36, 34814), (44, 34862),

Gene: Chris_46 Start: 35995, Stop: 36195, Start Num: 29

Candidate Starts for Chris_46:

(Start: 24 @35941 has 36 MA's), (Start: 29 @35995 has 6 MA's), (33, 36061), (35, 36094), (36, 36109), (37, 36112), (41, 36139),

Gene: DartGoblin_46 Start: 36004, Stop: 36243, Start Num: 24

Candidate Starts for DartGoblin_46:

(Start: 24 @36004 has 36 MA's), (27, 36046), (Start: 29 @36058 has 6 MA's), (30, 36091), (35, 36157),

Gene: DarthP_46 Start: 36145, Stop: 36378, Start Num: 24

Candidate Starts for DarthP_46:

(Start: 24 @36145 has 36 MA's), (Start: 29 @36199 has 6 MA's), (36, 36313), (41, 36343),

Gene: Dartin_46 Start: 35860, Stop: 36105, Start Num: 24

Candidate Starts for Dartin_46:

(Start: 24 @35860 has 36 MA's), (Start: 28 @35911 has 9 MA's), (Start: 29 @35914 has 6 MA's), (36, 36028), (41, 36058),

Gene: DrHayes_45 Start: 36056, Stop: 36295, Start Num: 24

Candidate Starts for DrHayes_45:

(3, 35855), (4, 35861), (5, 35876), (12, 35960), (15, 35984), (Start: 24 @36056 has 36 MA's), (27, 36098), (Start: 29 @36110 has 6 MA's), (30, 36143), (35, 36209),

Gene: Durfee_44 Start: 35432, Stop: 35713, Start Num: 20

Candidate Starts for Durfee_44:

(Start: 20 @35432 has 12 MA's), (21, 35453), (Start: 22 @35456 has 1 MA's), (Start: 24 @35474 has 36 MA's), (25, 35495), (27, 35516), (Start: 29 @35528 has 6 MA's), (30, 35561), (35, 35627), (36, 35642), (44, 35690),

Gene: Ekdilam_43 Start: 35707, Stop: 35940, Start Num: 24

Candidate Starts for Ekdilam_43:

(8, 35590), (11, 35608), (Start: 24 @35707 has 36 MA's),

Gene: Ellie_42 Start: 35424, Stop: 35666, Start Num: 24

Candidate Starts for Ellie_42:

(Start: 24 @35424 has 36 MA's), (35, 35577),

Gene: Enkosi_42 Start: 37403, Stop: 37597, Start Num: 28

Candidate Starts for Enkosi_42:

(Start: 24 @37352 has 36 MA's), (Start: 28 @37403 has 9 MA's), (30, 37439), (36, 37520), (41, 37550), (42, 37556),

Gene: Fefferhead_44 Start: 35375, Stop: 35617, Start Num: 24

Candidate Starts for Fefferhead_44:

(Start: 24 @35375 has 36 MA's), (35, 35528),

Gene: Hammy_46 Start: 36187, Stop: 36366, Start Num: 29

Candidate Starts for Hammy_46:

(Start: 24 @36133 has 36 MA's), (Start: 29 @36187 has 6 MA's), (36, 36301), (41, 36331),

Gene: Hurricane_47 Start: 35860, Stop: 36099, Start Num: 24

Candidate Starts for Hurricane_47:

(Start: 24 @35860 has 36 MA's), (33, 35980), (41, 36058), (46, 36085),

Gene: Hyperbowlee_44 Start: 35432, Stop: 35713, Start Num: 20

Candidate Starts for Hyperbowlee_44:

(Start: 20 @35432 has 12 MA's), (21, 35453), (Start: 22 @35456 has 1 MA's), (Start: 24 @35474 has 36 MA's), (25, 35495), (27, 35516), (Start: 29 @35528 has 6 MA's), (30, 35561), (35, 35627), (36, 35642), (44, 35690),

Gene: Joy99_44 Start: 35164, Stop: 35445, Start Num: 20

Candidate Starts for Joy99_44:

(Start: 20 @35164 has 12 MA's), (21, 35185), (Start: 22 @35188 has 1 MA's), (Start: 24 @35206 has 36 MA's), (25, 35227), (27, 35248), (Start: 29 @35260 has 6 MA's), (30, 35293), (35, 35359), (36, 35374), (44, 35422),

Gene: Keshu_48 Start: 35918, Stop: 36157, Start Num: 24

Candidate Starts for Keshu_48:

(Start: 24 @35918 has 36 MA's), (33, 36038), (41, 36116), (46, 36143),

Gene: KiSi_48 Start: 36394, Stop: 36600, Start Num: 28

Candidate Starts for KiSi_48:

(1, 36079), (7, 36205), (9, 36235), (Start: 24 @36343 has 36 MA's), (Start: 28 @36394 has 9 MA's), (Start: 29 @36397 has 6 MA's), (32, 36448), (33, 36463), (36, 36511),

Gene: Krueger_50 Start: 36110, Stop: 36346, Start Num: 24

Candidate Starts for Krueger_50:

(Start: 24 @36110 has 36 MA's), (Start: 28 @36161 has 9 MA's), (33, 36230), (35, 36263), (36, 36278), (38, 36290),

Gene: Lavahound_45 Start: 36357, Stop: 36599, Start Num: 24

Candidate Starts for Lavahound_45:

(Start: 24 @36357 has 36 MA's), (35, 36510),

Gene: LeMond_48 Start: 36378, Stop: 36584, Start Num: 28

Candidate Starts for LeMond_48:

(Start: 24 @36327 has 36 MA's), (Start: 28 @36378 has 9 MA's), (Start: 29 @36381 has 6 MA's), (33, 36447), (36, 36495), (38, 36507),

Gene: Lea83_47 Start: 35892, Stop: 36131, Start Num: 24

Candidate Starts for Lea83_47:

(Start: 24 @35892 has 36 MA's), (33, 36012), (36, 36060), (41, 36090), (46, 36117),

Gene: LilPharaoh_39 Start: 34467, Stop: 34712, Start Num: 24

Candidate Starts for LilPharaoh_39:

(Start: 24 @34467 has 36 MA's), (Start: 28 @34518 has 9 MA's), (30, 34554), (36, 34635), (41, 34665), (42, 34671),

Gene: MalagasyRose_45 Start: 33899, Stop: 34168, Start Num: 23

Candidate Starts for MalagasyRose_45:

(Start: 23 @33899 has 1 MA's), (Start: 24 @33908 has 36 MA's), (26, 33947), (Start: 29 @33962 has 6 MA's), (31, 34004), (34, 34040), (41, 34106),

Gene: MarkPhew_47 Start: 35823, Stop: 36026, Start Num: 29

Candidate Starts for MarkPhew_47:

(Start: 24 @35769 has 36 MA's), (Start: 29 @35823 has 6 MA's), (31, 35865), (36, 35937), (37, 35940), (41, 35967), (45, 35991),

Gene: Marshawn_47 Start: 36184, Stop: 36432, Start Num: 24

Candidate Starts for Marshawn_47:

(Start: 24 @36184 has 36 MA's), (25, 36205), (Start: 29 @36238 has 6 MA's), (36, 36352), (41, 36382), (45, 36406),

Gene: McMater_46 Start: 35860, Stop: 36105, Start Num: 24

Candidate Starts for McMater_46:

(Start: 24 @35860 has 36 MA's), (Start: 28 @35911 has 9 MA's), (Start: 29 @35914 has 6 MA's), (36, 36028), (41, 36058),

Gene: Mdavu_40 Start: 34728, Stop: 34973, Start Num: 24

Candidate Starts for Mdavu_40:

(Start: 24 @34728 has 36 MA's), (Start: 28 @34779 has 9 MA's), (30, 34815), (36, 34896), (41, 34926), (42, 34932),

Gene: Nibb_46 Start: 35544, Stop: 35738, Start Num: 28

Candidate Starts for Nibb_46:

(Start: 24 @35493 has 36 MA's), (Start: 28 @35544 has 9 MA's), (Start: 29 @35547 has 6 MA's), (33, 35613), (36, 35661),

Gene: Nikao_42 Start: 37403, Stop: 37597, Start Num: 28

Candidate Starts for Nikao_42:

(Start: 24 @37352 has 36 MA's), (Start: 28 @37403 has 9 MA's), (30, 37439), (36, 37520), (41, 37550), (42, 37556),

Gene: Niklas_46 Start: 35918, Stop: 36166, Start Num: 24

Candidate Starts for Niklas_46:

(Start: 24 @35918 has 36 MA's), (Start: 29 @35972 has 6 MA's), (36, 36086), (41, 36116), (44, 36134),

Gene: November_44 Start: 35863, Stop: 36099, Start Num: 24

Candidate Starts for November_44:

(11, 35764), (Start: 24 @35863 has 36 MA's), (35, 36016), (41, 36061), (47, 36088),

Gene: Nutello_39 Start: 34739, Stop: 34984, Start Num: 24

Candidate Starts for Nutello_39:

(Start: 24 @34739 has 36 MA's), (Start: 28 @34790 has 9 MA's), (30, 34826), (36, 34907), (41, 34937), (42, 34943),

Gene: Oscar_48 Start: 36280, Stop: 36486, Start Num: 28

Candidate Starts for Oscar_48:

(Start: 24 @36229 has 36 MA's), (Start: 28 @36280 has 9 MA's), (Start: 29 @36283 has 6 MA's), (36, 36397), (38, 36409),

Gene: Peanam_46 Start: 35828, Stop: 36124, Start Num: 18

Candidate Starts for Peanam_46:

(13, 35798), (Start: 18 @35828 has 2 MA's), (Start: 24 @35876 has 36 MA's), (Start: 29 @35930 has 6 MA's), (36, 36044), (41, 36074), (44, 36092),

Gene: PhelpsODU_46 Start: 35137, Stop: 35373, Start Num: 24

Candidate Starts for PhelpsODU_46:

(10, 35029), (Start: 24 @35137 has 36 MA's), (Start: 28 @35188 has 9 MA's), (Start: 29 @35191 has 6 MA's), (33, 35257), (35, 35290),

Gene: Phrank_47 Start: 35094, Stop: 35330, Start Num: 24

Candidate Starts for Phrank_47:

(19, 35046), (Start: 24 @35094 has 36 MA's), (Start: 28 @35145 has 9 MA's), (Start: 29 @35148 has 6 MA's), (33, 35214),

Gene: Piatt_44 Start: 35432, Stop: 35713, Start Num: 20

Candidate Starts for Piatt_44:

(Start: 20 @35432 has 12 MA's), (21, 35453), (Start: 22 @35456 has 1 MA's), (Start: 24 @35474 has 36 MA's), (25, 35495), (27, 35516), (Start: 29 @35528 has 6 MA's), (30, 35561), (35, 35627), (36, 35642), (44, 35690),

Gene: Pisa4_38 Start: 31870, Stop: 32055, Start Num: 29

Candidate Starts for Pisa4_38:

(3, 31615), (4, 31621), (5, 31636), (14, 31741), (Start: 24 @31816 has 36 MA's), (25, 31837), (27, 31858), (Start: 29 @31870 has 6 MA's), (30, 31903), (35, 31969), (36, 31984), (39, 31999), (40, 32008), (43, 32029),

Gene: Ramen_44 Start: 35122, Stop: 35403, Start Num: 20

Candidate Starts for Ramen_44:

(Start: 20 @35122 has 12 MA's), (21, 35143), (Start: 22 @35146 has 1 MA's), (Start: 24 @35164 has 36 MA's), (25, 35185), (27, 35206), (Start: 29 @35218 has 6 MA's), (30, 35251), (35, 35317), (36, 35332), (44, 35380),

Gene: Richo_46 Start: 35860, Stop: 36105, Start Num: 24

Candidate Starts for Richo_46:

(Start: 24 @35860 has 36 MA's), (Start: 28 @35911 has 9 MA's), (Start: 29 @35914 has 6 MA's), (36, 36028), (41, 36058),

Gene: SamuelLPlaqson_45 Start: 36056, Stop: 36295, Start Num: 24

Candidate Starts for SamuelLPlaqson_45:

(3, 35855), (4, 35861), (5, 35876), (12, 35960), (15, 35984), (Start: 24 @36056 has 36 MA's), (27, 36098), (Start: 29 @36110 has 6 MA's), (30, 36143), (35, 36209),

Gene: Scarlett_48 Start: 36272, Stop: 36478, Start Num: 28

Candidate Starts for Scarlett_48:

(Start: 24 @36221 has 36 MA's), (Start: 28 @36272 has 9 MA's), (Start: 29 @36275 has 6 MA's), (33, 36341), (36, 36389), (38, 36401),

Gene: SgtBeansprout_39 Start: 34790, Stop: 34984, Start Num: 28

Candidate Starts for SgtBeansprout_39:

(Start: 24 @34739 has 36 MA's), (Start: 28 @34790 has 9 MA's), (30, 34826), (36, 34907), (41, 34937), (42, 34943),

Gene: Shadow1_49 Start: 36255, Stop: 36491, Start Num: 24

Candidate Starts for Shadow1_49:

(Start: 24 @36255 has 36 MA's), (Start: 28 @36306 has 9 MA's), (33, 36375), (38, 36435),

Gene: Shaobing_46 Start: 35893, Stop: 36141, Start Num: 24

Candidate Starts for Shaobing_46:

(Start: 24 @35893 has 36 MA's), (Start: 29 @35947 has 6 MA's), (36, 36061), (41, 36091), (44, 36109),

Gene: SirPhilip_46 Start: 36474, Stop: 36710, Start Num: 24

Candidate Starts for SirPhilip_46:

(16, 36405), (19, 36426), (Start: 24 @36474 has 36 MA's), (Start: 28 @36525 has 9 MA's), (Start: 29 @36528 has 6 MA's), (35, 36627), (41, 36672),

Gene: Sunflower1121_50 Start: 36356, Stop: 36592, Start Num: 24

Candidate Starts for Sunflower1121_50:

(Start: 24 @36356 has 36 MA's), (Start: 28 @36407 has 9 MA's), (33, 36476), (36, 36524), (38, 36536),

Gene: Syra333_49 Start: 36023, Stop: 36259, Start Num: 24

Candidate Starts for Syra333_49:

(Start: 24 @36023 has 36 MA's), (Start: 28 @36074 has 9 MA's), (33, 36143), (38, 36203),

Gene: TClif_48 Start: 36322, Stop: 36570, Start Num: 24

Candidate Starts for TClif_48:

(Start: 24 @36322 has 36 MA's), (30, 36409), (35, 36475), (36, 36490), (41, 36520),

Gene: Teejan_42 Start: 37403, Stop: 37597, Start Num: 28

Candidate Starts for Teejan_42:

(Start: 24 @37352 has 36 MA's), (Start: 28 @37403 has 9 MA's), (30, 37439), (36, 37520), (41, 37550), (42, 37556),

Gene: Tierra_47 Start: 35905, Stop: 36141, Start Num: 24

Candidate Starts for Tierra_47:

(Start: 24 @35905 has 36 MA's), (Start: 28 @35956 has 9 MA's), (Start: 29 @35959 has 6 MA's), (33, 36025),

Gene: Tigress9_50 Start: 36110, Stop: 36346, Start Num: 24

Candidate Starts for Tigress9_50:

(Start: 24 @36110 has 36 MA's), (Start: 28 @36161 has 9 MA's), (33, 36230), (35, 36263), (36, 36278), (38, 36290),

Gene: TiniBug_45 Start: 36052, Stop: 36291, Start Num: 24

Candidate Starts for TiniBug_45:

(3, 35851), (4, 35857), (5, 35872), (12, 35956), (15, 35980), (Start: 24 @36052 has 36 MA's), (27, 36094), (Start: 29 @36106 has 6 MA's), (35, 36205), (36, 36220),

Gene: Torres_42 Start: 37404, Stop: 37598, Start Num: 28

Candidate Starts for Torres_42:

(Start: 24 @37353 has 36 MA's), (Start: 28 @37404 has 9 MA's), (30, 37440), (36, 37521), (41, 37551), (42, 37557),

Gene: TribelTrouble_44 Start: 35315, Stop: 35500, Start Num: 29

Candidate Starts for TribelTrouble_44:

(Start: 24 @35261 has 36 MA's), (Start: 29 @35315 has 6 MA's), (33, 35381),

Gene: Trice_40 Start: 34791, Stop: 34985, Start Num: 28

Candidate Starts for Trice_40:

(Start: 24 @34740 has 36 MA's), (Start: 28 @34791 has 9 MA's), (30, 34827), (36, 34908), (41, 34938), (42, 34944),

Gene: Urkel_45 Start: 36056, Stop: 36295, Start Num: 24

Candidate Starts for Urkel_45:

(3, 35855), (4, 35861), (5, 35876), (12, 35960), (15, 35984), (Start: 24 @36056 has 36 MA's), (27, 36098), (Start: 29 @36110 has 6 MA's), (30, 36143), (35, 36209),

Gene: Validus_48 Start: 35897, Stop: 36190, Start Num: 18

Candidate Starts for Validus_48:

(Start: 18 @35897 has 2 MA's), (Start: 24 @35945 has 36 MA's), (Start: 28 @35996 has 9 MA's), (Start: 29 @35999 has 6 MA's), (36, 36113), (41, 36143), (45, 36167),

Gene: Ximenita_50 Start: 36194, Stop: 36445, Start Num: 22

Candidate Starts for Ximenita_50:

(17, 36161), (21, 36191), (Start: 22 @36194 has 1 MA's), (Start: 24 @36209 has 36 MA's), (Start: 29 @36263 has 6 MA's), (33, 36329), (36, 36377), (38, 36389),

Gene: Yuna_50 Start: 36971, Stop: 37204, Start Num: 24

Candidate Starts for Yuna_50:

(Start: 24 @36971 has 36 MA's), (33, 37091), (36, 37139), (38, 37151),

Gene: Zabiza_39 Start: 31425, Stop: 31706, Start Num: 20

Candidate Starts for Zabiza_39:

(Start: 20 @31425 has 12 MA's), (21, 31446), (Start: 22 @31449 has 1 MA's), (Start: 24 @31467 has 36 MA's), (25, 31488), (27, 31509), (Start: 29 @31521 has 6 MA's), (30, 31554), (35, 31620), (36, 31635), (44, 31683),