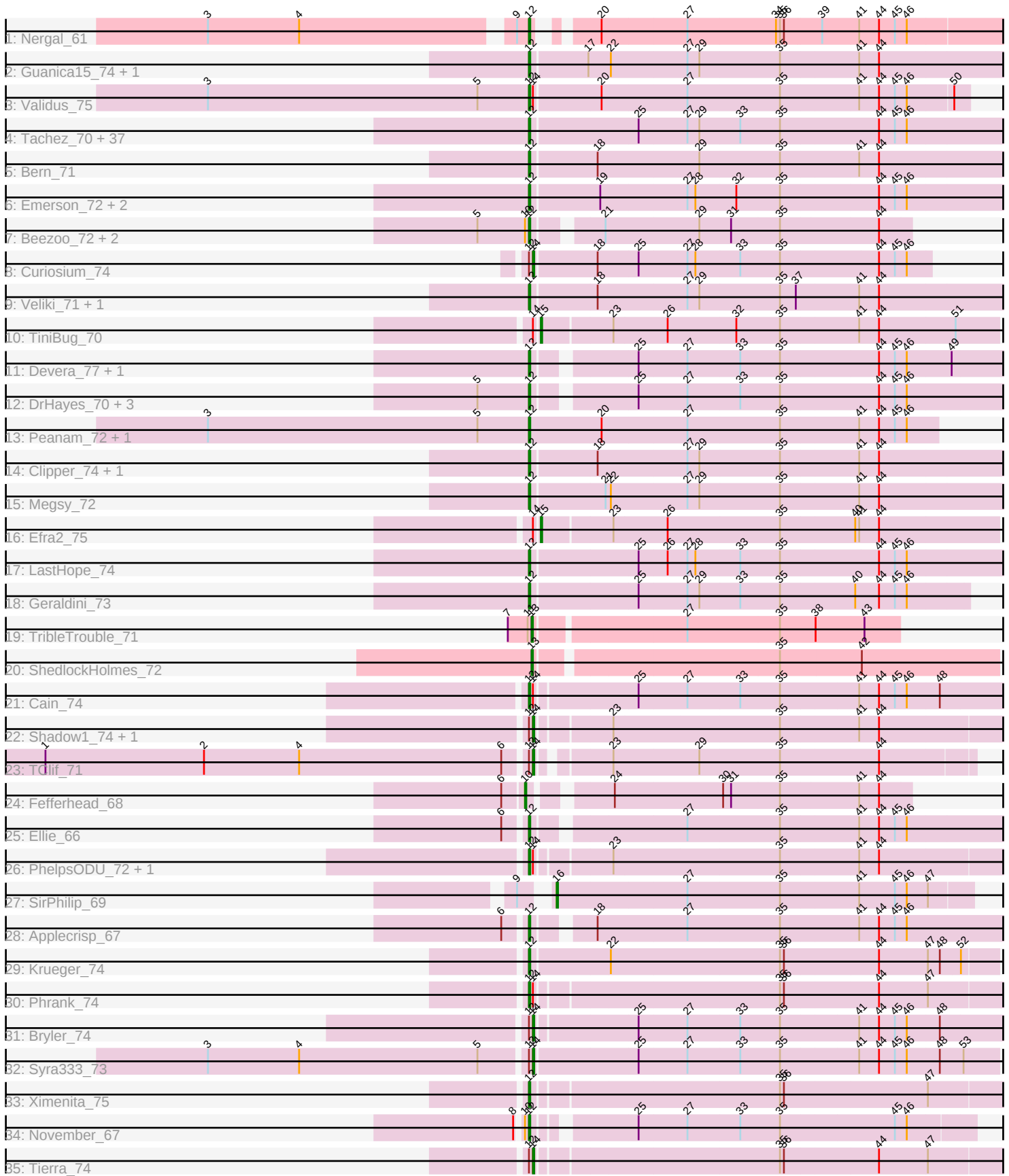


Pham 280330



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 280330 Report

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

Pham number 280330 has 86 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Nergal_61
- Track 2 : Guanica15_74, Yunkel11_74
- Track 3 : Validus_75
- Track 4 : Tachez_70, MeaningOfLife_71, BGlluviae_70, Atiba_71, Twitch_70, Jarvi_70, Blizzard_70, Rapunzel97_72, Zabiza_65, CaseJules_72, Llorens_70, TruffulaTree_71, Spock_70, Rosmarinus_70, Lunahalos_70, Apocalypse_72, Durfee_70, Boiiii_70, BaghaKamala_69, Joy99_70, ShiaSurprise_71, Zavala_73, CheetoDust_69, Tiri_70, Jayhawk_72, Peel_70, Slimphazie_71, Belladonna_70, Padfoot_70, ActinUp_70, Topper_70, Dalmuri_70, Inky_70, Asayake_70, CallaLilly_70, Capricorn_70, Jeckyll_70, BEEST_70
- Track 5 : Bern_71
- Track 6 : Emerson_72, Padpat_73, Ageofdapage_73
- Track 7 : Beezoo_72, Pokerus_70, YoureAdopted_69
- Track 8 : Curiosium_74
- Track 9 : Veliki_71, Ramen_71
- Track 10 : TiniBug_70
- Track 11 : Devera_77, Illumine_75
- Track 12 : DrHayes_70, Urkel_70, Bella96_70, SamuelLPlaqson_70
- Track 13 : Peanam_72, Niklas_72
- Track 14 : Clipper_74, MacKat_66
- Track 15 : Megsy_72
- Track 16 : Efra2_75
- Track 17 : LastHope_74
- Track 18 : Geraldini_73
- Track 19 : TribbleTrouble_71
- Track 20 : ShedlockHolmes_72
- Track 21 : Cain_74
- Track 22 : Shadow1_74, Sunflower1121_75
- Track 23 : TClif_71
- Track 24 : Fefferhead_68
- Track 25 : Ellie_66
- Track 26 : PhelpsODU_72, Unicorn_72
- Track 27 : SirPhilip_69
- Track 28 : Applecrisp_67
- Track 29 : Krueger_74
- Track 30 : Phrank_74
- Track 31 : Bryler_74

- Track 32 : Syra333_73
- Track 33 : Ximenita_75
- Track 34 : November_67
- Track 35 : Tierra_74

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

The start number called the most often in the published annotations is 12, it was called in 73 of the 86 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_70, Ageofdapage_73, Apocalypse_72, Applecrisp_67, Asayake_70, Atiba_71, BEEST_70, BGlluviae_70, BaghaKamala_69, Beezoo_72, Bella96_70, Belladonna_70, Bern_71, Blizzard_70, Boiii_70, Cain_74, CallaLilly_70, Capricorn_70, CaseJules_72, CheetoDust_69, Clipper_74, Dalmuri_70, Devera_77, DrHayes_70, Durfee_70, Ellie_66, Emerson_72, Geraldini_73, Guanica15_74, Illumine_75, Inky_70, Jarvi_70, Jayhawk_72, Jeckyll_70, Joy99_70, Krueger_74, LastHope_74, Llorens_70, Lunahalos_70, MacKat_66, MeaningOfLife_71, Megsy_72, Nergal_61, Niklas_72, November_67, Padfoot_70, Padpat_73, Peanam_72, Peel_70, PhelpsODU_72, Phrank_74, Pokerus_70, Ramen_71, Rapunzel97_72, Rosmarinus_70, SamuelLPlagson_70, ShiaSurprise_71, Slimphazie_71, Spock_70, Tachez_70, Tiri_70, Topper_70, TruffulaTree_71, Twitch_70, Unicorn_72, Urkel_70, Validus_75, Veliki_71, Ximenita_75, YoureAdopted_69, Yunkel11_74, Zabiza_65, Zavala_73,

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

- Bryler_74, Curiosium_74, Shadow1_74, Sunflower1121_75, Syra333_73, TClif_71, Tierra_74,

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

- Efra2_75, Fefferhead_68, ShedlockHolmes_72, SirPhilip_69, TiniBug_70, TribbleTrouble_71,

Summary by start number:

Start 10:

- Found in 5 of 86 (5.8%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Fefferhead_68 (K6),

Start 12:

- Found in 80 of 86 (93.0%) of genes in pham
- Manual Annotations of this start: 73 of 86
- Called 91.2% of time when present
- Phage (with cluster) where this start called: ActinUp_70 (K1), Ageofdapage_73 (K1), Apocalypse_72 (K1), Applecrisp_67 (K6), Asayake_70 (K1), Atiba_71 (K1), BEEST_70 (K1), BGlluviae_70 (K1), BaghaKamala_69 (K1), Beezoo_72 (K1), Bella96_70 (K1), Belladonna_70 (K1), Bern_71 (K1), Blizzard_70 (K1), Boiii_70 (K1), Cain_74 (K6), CallaLilly_70 (K1), Capricorn_70 (K1), CaseJules_72 (K1),

CheetoDust_69 (K1), Clipper_74 (K1), Dalmuri_70 (K1), Devera_77 (K1), DrHayes_70 (K1), Durfee_70 (K1), Ellie_66 (K6), Emerson_72 (K1), Geraldini_73 (K1), Guanica15_74 (K1), Illumine_75 (K1), Inky_70 (K1), Jarvi_70 (K1), Jayhawk_72 (K1), Jeckyll_70 (K1), Joy99_70 (K1), Krueger_74 (K6), LastHope_74 (K1), Llorens_70 (K1), Lunahalos_70 (K1), MacKat_66 (K1), MeaningOfLife_71 (K1), Megsy_72 (K1), Nergal_61 (AG), Niklas_72 (K1), November_67 (K6), Padfoot_70 (K1), Padpat_73 (K1), Peanam_72 (K1), Peel_70 (K1), PhelpsODU_72 (K6), Phrank_74 (K6), Pokerus_70 (K1), Ramen_71 (K1), Rapunzel97_72 (K1), Rosmarinus_70 (K1), SamuelLPlaqson_70 (K1), ShiaSurprise_71 (K1), Slimphazie_71 (K1), Spock_70 (K1), Tachez_70 (K1), Tiri_70 (K1), Topper_70 (K1), TruffulaTree_71 (K1), Twitch_70 (K1), Unicorn_72 (K6), Urkel_70 (K1), Validus_75 (K1), Veliki_71 (K1), Ximenita_75 (K6), YoureAdopted_69 (K1), Yunkel11_74 (K1), Zabiza_65 (K1), Zavala_73 (K1),

Start 13:

- Found in 2 of 86 (2.3%) of genes in pham
- Manual Annotations of this start: 2 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ShedlockHolmes_72 (K3), TripleTrouble_71 (K3),

Start 14:

- Found in 14 of 86 (16.3%) of genes in pham
- Manual Annotations of this start: 7 of 86
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bryler_74 (K6), Curiosium_74 (K1), Shadow1_74 (K6), Sunflower1121_75 (K6), Syra333_73 (K6), TClif_71 (K6), Tierra_74 (K6),

Start 15:

- Found in 2 of 86 (2.3%) of genes in pham
- Manual Annotations of this start: 2 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Efra2_75 (K1), TiniBug_70 (K1),

Start 16:

- Found in 1 of 86 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 86
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SirPhilip_69 (K6),

Summary by clusters:

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

Info for manual annotations of cluster AG:

- Start number 12 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K1:

- Start number 12 was manually annotated 63 times for cluster K1.
- Start number 14 was manually annotated 1 time for cluster K1.
- Start number 15 was manually annotated 2 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 13 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K6:

- Start number 10 was manually annotated 1 time for cluster K6.
- Start number 12 was manually annotated 9 times for cluster K6.
- Start number 14 was manually annotated 6 times for cluster K6.
- Start number 16 was manually annotated 1 time for cluster K6.

Gene Information:

Gene: ActinUp_70 Start: 46973, Stop: 47329, Start Num: 12

Candidate Starts for ActinUp_70:

(Start: 12 @46973 has 73 MA's), (25, 47051), (27, 47087), (29, 47096), (33, 47126), (35, 47156), (44, 47228), (45, 47240), (46, 47249),

Gene: Ageofdapage_73 Start: 48168, Stop: 48524, Start Num: 12

Candidate Starts for Ageofdapage_73:

(Start: 12 @48168 has 73 MA's), (19, 48219), (27, 48282), (28, 48288), (32, 48318), (35, 48351), (44, 48423), (45, 48435), (46, 48444),

Gene: Apocalypse_72 Start: 47693, Stop: 48049, Start Num: 12

Candidate Starts for Apocalypse_72:

(Start: 12 @47693 has 73 MA's), (25, 47771), (27, 47807), (29, 47816), (33, 47846), (35, 47876), (44, 47948), (45, 47960), (46, 47969),

Gene: Applecrisp_67 Start: 47124, Stop: 47468, Start Num: 12

Candidate Starts for Applecrisp_67:

(6, 47109), (Start: 12 @47124 has 73 MA's), (18, 47160), (27, 47226), (35, 47295), (41, 47352), (44, 47367), (45, 47379), (46, 47388),

Gene: Asayake_70 Start: 47325, Stop: 47681, Start Num: 12

Candidate Starts for Asayake_70:

(Start: 12 @47325 has 73 MA's), (25, 47403), (27, 47439), (29, 47448), (33, 47478), (35, 47508), (44, 47580), (45, 47592), (46, 47601),

Gene: Atiba_71 Start: 46973, Stop: 47329, Start Num: 12

Candidate Starts for Atiba_71:

(Start: 12 @46973 has 73 MA's), (25, 47051), (27, 47087), (29, 47096), (33, 47126), (35, 47156), (44, 47228), (45, 47240), (46, 47249),

Gene: BEEST_70 Start: 47325, Stop: 47681, Start Num: 12

Candidate Starts for BEEST_70:

(Start: 12 @47325 has 73 MA's), (25, 47403), (27, 47439), (29, 47448), (33, 47478), (35, 47508), (44, 47580), (45, 47592), (46, 47601),

Gene: BGlluviae_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for BGlluviae_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: BaghaKamala_69 Start: 46559, Stop: 46915, Start Num: 12

Candidate Starts for BaghaKamala_69:

(Start: 12 @46559 has 73 MA's), (25, 46637), (27, 46673), (29, 46682), (33, 46712), (35, 46742), (44, 46814), (45, 46826), (46, 46835),

Gene: Beezoo_72 Start: 47929, Stop: 48195, Start Num: 12

Candidate Starts for Beezoo_72:

(5, 47890), (Start: 10 @47926 has 1 MA's), (Start: 12 @47929 has 73 MA's), (21, 47971), (29, 48040), (31, 48064), (35, 48100), (44, 48172),

Gene: Bella96_70 Start: 47481, Stop: 47825, Start Num: 12

Candidate Starts for Bella96_70:

(5, 47442), (Start: 12 @47481 has 73 MA's), (25, 47547), (27, 47583), (33, 47622), (35, 47652), (44, 47724), (45, 47736), (46, 47745),

Gene: Belladonna_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Belladonna_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: Bern_71 Start: 46152, Stop: 46508, Start Num: 12

Candidate Starts for Bern_71:

(Start: 12 @46152 has 73 MA's), (18, 46200), (29, 46275), (35, 46335), (41, 46392), (44, 46407),

Gene: Blizzard_70 Start: 47325, Stop: 47681, Start Num: 12

Candidate Starts for Blizzard_70:

(Start: 12 @47325 has 73 MA's), (25, 47403), (27, 47439), (29, 47448), (33, 47478), (35, 47508), (44, 47580), (45, 47592), (46, 47601),

Gene: Boiiii_70 Start: 47327, Stop: 47683, Start Num: 12

Candidate Starts for Boiiii_70:

(Start: 12 @47327 has 73 MA's), (25, 47405), (27, 47441), (29, 47450), (33, 47480), (35, 47510), (44, 47582), (45, 47594), (46, 47603),

Gene: Bryler_74 Start: 46880, Stop: 47230, Start Num: 14

Candidate Starts for Bryler_74:

(Start: 12 @46877 has 73 MA's), (Start: 14 @46880 has 7 MA's), (25, 46952), (27, 46988), (33, 47027), (35, 47057), (41, 47114), (44, 47129), (45, 47141), (46, 47150), (48, 47174),

Gene: Cain_74 Start: 46865, Stop: 47218, Start Num: 12

Candidate Starts for Cain_74:

(Start: 12 @46865 has 73 MA's), (Start: 14 @46868 has 7 MA's), (25, 46940), (27, 46976), (33, 47015), (35, 47045), (41, 47102), (44, 47117), (45, 47129), (46, 47138), (48, 47162),

Gene: CallaLilly_70 Start: 47051, Stop: 47407, Start Num: 12

Candidate Starts for CallaLilly_70:

(Start: 12 @47051 has 73 MA's), (25, 47129), (27, 47165), (29, 47174), (33, 47204), (35, 47234), (44, 47306), (45, 47318), (46, 47327),

Gene: Capricorn_70 Start: 47128, Stop: 47460, Start Num: 12

Candidate Starts for Capricorn_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: CaseJules_72 Start: 47325, Stop: 47681, Start Num: 12

Candidate Starts for CaseJules_72:

(Start: 12 @47325 has 73 MA's), (25, 47403), (27, 47439), (29, 47448), (33, 47478), (35, 47508), (44, 47580), (45, 47592), (46, 47601),

Gene: CheetoDust_69 Start: 46606, Stop: 46962, Start Num: 12

Candidate Starts for CheetoDust_69:

(Start: 12 @46606 has 73 MA's), (25, 46684), (27, 46720), (29, 46729), (33, 46759), (35, 46789), (44, 46861), (45, 46873), (46, 46882),

Gene: Clipper_74 Start: 48027, Stop: 48383, Start Num: 12

Candidate Starts for Clipper_74:

(Start: 12 @48027 has 73 MA's), (18, 48075), (27, 48141), (29, 48150), (35, 48210), (41, 48267), (44, 48282),

Gene: Curiosium_74 Start: 46635, Stop: 46925, Start Num: 14

Candidate Starts for Curiosium_74:

(Start: 12 @46632 has 73 MA's), (Start: 14 @46635 has 7 MA's), (18, 46680), (25, 46710), (27, 46746), (28, 46752), (33, 46785), (35, 46815), (44, 46887), (45, 46899), (46, 46908),

Gene: Dalmuri_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Dalmuri_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: Devera_77 Start: 48731, Stop: 49075, Start Num: 12

Candidate Starts for Devera_77:

(Start: 12 @48731 has 73 MA's), (25, 48797), (27, 48833), (33, 48872), (35, 48902), (44, 48974), (45, 48986), (46, 48995), (49, 49028),

Gene: DrHayes_70 Start: 47635, Stop: 47979, Start Num: 12

Candidate Starts for DrHayes_70:

(5, 47596), (Start: 12 @47635 has 73 MA's), (25, 47701), (27, 47737), (33, 47776), (35, 47806), (44, 47878), (45, 47890), (46, 47899),

Gene: Durfee_70 Start: 47325, Stop: 47681, Start Num: 12

Candidate Starts for Durfee_70:

(Start: 12 @47325 has 73 MA's), (25, 47403), (27, 47439), (29, 47448), (33, 47478), (35, 47508), (44, 47580), (45, 47592), (46, 47601),

Gene: Efra2_75 Start: 47471, Stop: 47806, Start Num: 15

Candidate Starts for Efra2_75:

(Start: 14 @47468 has 7 MA's), (Start: 15 @47471 has 2 MA's), (23, 47522), (26, 47561), (35, 47645), (40, 47699), (41, 47702), (44, 47717),

Gene: Ellie_66 Start: 46854, Stop: 47198, Start Num: 12

Candidate Starts for Ellie_66:

(6, 46839), (Start: 12 @46854 has 73 MA's), (27, 46956), (35, 47025), (41, 47082), (44, 47097), (45, 47109), (46, 47118),

Gene: Emerson_72 Start: 47445, Stop: 47801, Start Num: 12

Candidate Starts for Emerson_72:

(Start: 12 @47445 has 73 MA's), (19, 47496), (27, 47559), (28, 47565), (32, 47595), (35, 47628), (44, 47700), (45, 47712), (46, 47721),

Gene: Fefferhead_68 Start: 46763, Stop: 47029, Start Num: 10

Candidate Starts for Fefferhead_68:

(6, 46748), (Start: 10 @46763 has 1 MA's), (24, 46811), (30, 46892), (31, 46898), (35, 46934), (41, 46991), (44, 47006),

Gene: Geraldini_73 Start: 48007, Stop: 48327, Start Num: 12

Candidate Starts for Geraldini_73:

(Start: 12 @48007 has 73 MA's), (25, 48085), (27, 48121), (29, 48130), (33, 48160), (35, 48190), (40, 48244), (44, 48262), (45, 48274), (46, 48283),

Gene: Guanica15_74 Start: 47209, Stop: 47565, Start Num: 12

Candidate Starts for Guanica15_74:

(Start: 12 @47209 has 73 MA's), (17, 47251), (22, 47266), (27, 47323), (29, 47332), (35, 47392), (41, 47449), (44, 47464),

Gene: Illumine_75 Start: 48733, Stop: 49077, Start Num: 12

Candidate Starts for Illumine_75:

(Start: 12 @48733 has 73 MA's), (25, 48799), (27, 48835), (33, 48874), (35, 48904), (44, 48976), (45, 48988), (46, 48997), (49, 49030),

Gene: Inky_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Inky_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: Jarvi_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Jarvi_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: Jayhawk_72 Start: 47471, Stop: 47827, Start Num: 12

Candidate Starts for Jayhawk_72:

(Start: 12 @47471 has 73 MA's), (25, 47549), (27, 47585), (29, 47594), (33, 47624), (35, 47654), (44, 47726), (45, 47738), (46, 47747),

Gene: Jeckyll_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Jeckyll_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: Joy99_70 Start: 47057, Stop: 47413, Start Num: 12

Candidate Starts for Joy99_70:

(Start: 12 @47057 has 73 MA's), (25, 47135), (27, 47171), (29, 47180), (33, 47210), (35, 47240), (44, 47312), (45, 47324), (46, 47333),

Gene: Krueger_74 Start: 47000, Stop: 47341, Start Num: 12

Candidate Starts for Krueger_74:

(Start: 12 @47000 has 73 MA's), (22, 47057), (35, 47183), (36, 47186), (44, 47255), (47, 47291), (48, 47300), (52, 47315),

Gene: LastHope_74 Start: 46319, Stop: 46675, Start Num: 12

Candidate Starts for LastHope_74:

(Start: 12 @46319 has 73 MA's), (25, 46397), (26, 46418), (27, 46433), (28, 46439), (33, 46472), (35, 46502), (44, 46574), (45, 46586), (46, 46595),

Gene: Llorens_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Llorens_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: Lunahalos_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Lunahalos_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: MacKat_66 Start: 42911, Stop: 43267, Start Num: 12

Candidate Starts for MacKat_66:

(Start: 12 @42911 has 73 MA's), (18, 42959), (27, 43025), (29, 43034), (35, 43094), (41, 43151), (44, 43166),

Gene: MeaningOfLife_71 Start: 47880, Stop: 48236, Start Num: 12

Candidate Starts for MeaningOfLife_71:

(Start: 12 @47880 has 73 MA's), (25, 47958), (27, 47994), (29, 48003), (33, 48033), (35, 48063), (44, 48135), (45, 48147), (46, 48156),

Gene: Megsy_72 Start: 47305, Stop: 47661, Start Num: 12

Candidate Starts for Megsy_72:

(Start: 12 @47305 has 73 MA's), (21, 47359), (22, 47362), (27, 47419), (29, 47428), (35, 47488), (41, 47545), (44, 47560),

Gene: Nergal_61 Start: 43426, Stop: 43770, Start Num: 12

Candidate Starts for Nergal_61:

(3, 43198), (4, 43267), (9, 43417), (Start: 12 @43426 has 73 MA's), (20, 43456), (27, 43519), (34, 43585), (35, 43588), (36, 43591), (39, 43618), (41, 43645), (44, 43660), (45, 43672), (46, 43681),

Gene: Niklas_72 Start: 47424, Stop: 47780, Start Num: 12

Candidate Starts for Niklas_72:

(3, 47181), (5, 47385), (Start: 12 @47424 has 73 MA's), (20, 47478), (27, 47541), (35, 47610), (41, 47667), (44, 47682), (45, 47694), (46, 47703),

Gene: November_67 Start: 47087, Stop: 47395, Start Num: 12

Candidate Starts for November_67:

(8, 47081), (Start: 10 @47084 has 1 MA's), (Start: 12 @47087 has 73 MA's), (25, 47150), (27, 47186), (33, 47225), (35, 47255), (45, 47339), (46, 47348),

Gene: Padfoot_70 Start: 47325, Stop: 47681, Start Num: 12

Candidate Starts for Padfoot_70:

(Start: 12 @47325 has 73 MA's), (25, 47403), (27, 47439), (29, 47448), (33, 47478), (35, 47508), (44, 47580), (45, 47592), (46, 47601),

Gene: Padpat_73 Start: 47445, Stop: 47801, Start Num: 12

Candidate Starts for Padpat_73:

(Start: 12 @47445 has 73 MA's), (19, 47496), (27, 47559), (28, 47565), (32, 47595), (35, 47628), (44, 47700), (45, 47712), (46, 47721),

Gene: Peanam_72 Start: 47381, Stop: 47683, Start Num: 12

Candidate Starts for Peanam_72:

(3, 47138), (5, 47342), (Start: 12 @47381 has 73 MA's), (20, 47435), (27, 47498), (35, 47567), (41, 47624), (44, 47639), (45, 47651), (46, 47660),

Gene: Peel_70 Start: 47130, Stop: 47486, Start Num: 12

Candidate Starts for Peel_70:

(Start: 12 @47130 has 73 MA's), (25, 47208), (27, 47244), (29, 47253), (33, 47283), (35, 47313), (44, 47385), (45, 47397), (46, 47406),

Gene: PhelpsODU_72 Start: 46792, Stop: 47142, Start Num: 12

Candidate Starts for PhelpsODU_72:

(Start: 12 @46792 has 73 MA's), (Start: 14 @46795 has 7 MA's), (23, 46846), (35, 46969), (41, 47026), (44, 47041),

Gene: Phrank_74 Start: 46855, Stop: 47205, Start Num: 12

Candidate Starts for Phrank_74:

(Start: 12 @46855 has 73 MA's), (Start: 14 @46858 has 7 MA's), (35, 47032), (36, 47035), (44, 47104), (47, 47140),

Gene: Pokerus_70 Start: 47476, Stop: 47742, Start Num: 12

Candidate Starts for Pokerus_70:

(5, 47437), (Start: 10 @47473 has 1 MA's), (Start: 12 @47476 has 73 MA's), (21, 47518), (29, 47587), (31, 47611), (35, 47647), (44, 47719),

Gene: Ramen_71 Start: 46975, Stop: 47331, Start Num: 12

Candidate Starts for Ramen_71:

(Start: 12 @46975 has 73 MA's), (18, 47023), (27, 47089), (29, 47098), (35, 47158), (37, 47170), (41, 47215), (44, 47230),

Gene: Rapunzel97_72 Start: 47426, Stop: 47782, Start Num: 12

Candidate Starts for Rapunzel97_72:

(Start: 12 @47426 has 73 MA's), (25, 47504), (27, 47540), (29, 47549), (33, 47579), (35, 47609), (44, 47681), (45, 47693), (46, 47702),

Gene: Rosmarinus_70 Start: 47116, Stop: 47472, Start Num: 12

Candidate Starts for Rosmarinus_70:

(Start: 12 @47116 has 73 MA's), (25, 47194), (27, 47230), (29, 47239), (33, 47269), (35, 47299), (44, 47371), (45, 47383), (46, 47392),

Gene: SamuelLPlaqson_70 Start: 47635, Stop: 47979, Start Num: 12

Candidate Starts for SamuelLPlaqson_70:

(5, 47596), (Start: 12 @47635 has 73 MA's), (25, 47701), (27, 47737), (33, 47776), (35, 47806), (44, 47878), (45, 47890), (46, 47899),

Gene: Shadow1_74 Start: 47155, Stop: 47502, Start Num: 14

Candidate Starts for Shadow1_74:

(Start: 12 @47152 has 73 MA's), (Start: 14 @47155 has 7 MA's), (23, 47206), (35, 47329), (41, 47386), (44, 47401),

Gene: ShedlockHolmes_72 Start: 47403, Stop: 47735, Start Num: 13

Candidate Starts for ShedlockHolmes_72:

(Start: 13 @47403 has 2 MA's), (35, 47574), (42, 47634),

Gene: ShiaSurprise_71 Start: 47325, Stop: 47681, Start Num: 12

Candidate Starts for ShiaSurprise_71:

(Start: 12 @47325 has 73 MA's), (25, 47403), (27, 47439), (29, 47448), (33, 47478), (35, 47508), (44, 47580), (45, 47592), (46, 47601),

Gene: SirPhilip_69 Start: 47533, Stop: 47838, Start Num: 16

Candidate Starts for SirPhilip_69:

(9, 47518), (Start: 16 @47533 has 1 MA's), (27, 47629), (35, 47698), (41, 47755), (45, 47782), (46, 47791), (47, 47806),

Gene: Slimphazie_71 Start: 47426, Stop: 47782, Start Num: 12

Candidate Starts for Slimphazie_71:

(Start: 12 @47426 has 73 MA's), (25, 47504), (27, 47540), (29, 47549), (33, 47579), (35, 47609), (44, 47681), (45, 47693), (46, 47702),

Gene: Spock_70 Start: 47129, Stop: 47485, Start Num: 12

Candidate Starts for Spock_70:

(Start: 12 @47129 has 73 MA's), (25, 47207), (27, 47243), (29, 47252), (33, 47282), (35, 47312), (44, 47384), (45, 47396), (46, 47405),

Gene: Sunflower1121_75 Start: 47301, Stop: 47648, Start Num: 14

Candidate Starts for Sunflower1121_75:

(Start: 12 @47298 has 73 MA's), (Start: 14 @47301 has 7 MA's), (23, 47352), (35, 47475), (41, 47532), (44, 47547),

Gene: Syra333_73 Start: 47015, Stop: 47353, Start Num: 14

Candidate Starts for Syra333_73:

(3, 46775), (4, 46844), (5, 46979), (Start: 12 @47012 has 73 MA's), (Start: 14 @47015 has 7 MA's), (25, 47090), (27, 47126), (33, 47165), (35, 47195), (41, 47252), (44, 47267), (45, 47279), (46, 47288), (48, 47312), (53, 47327),

Gene: TClif_71 Start: 46972, Stop: 47280, Start Num: 14

Candidate Starts for TClif_71:

(1, 46609), (2, 46729), (4, 46801), (6, 46954), (Start: 12 @46969 has 73 MA's), (Start: 14 @46972 has 7 MA's), (23, 47017), (29, 47080), (35, 47140), (44, 47212),

Gene: Tachez_70 Start: 46973, Stop: 47329, Start Num: 12

Candidate Starts for Tachez_70:

(Start: 12 @46973 has 73 MA's), (25, 47051), (27, 47087), (29, 47096), (33, 47126), (35, 47156), (44, 47228), (45, 47240), (46, 47249),

Gene: Tierra_74 Start: 47669, Stop: 48016, Start Num: 14

Candidate Starts for Tierra_74:

(Start: 12 @47666 has 73 MA's), (Start: 14 @47669 has 7 MA's), (35, 47843), (36, 47846), (44, 47915), (47, 47951),

Gene: TiniBug_70 Start: 47631, Stop: 47966, Start Num: 15

Candidate Starts for TiniBug_70:

(Start: 14 @47628 has 7 MA's), (Start: 15 @47631 has 2 MA's), (23, 47682), (26, 47721), (32, 47772), (35, 47805), (41, 47862), (44, 47877), (51, 47934),

Gene: Tiri_70 Start: 47029, Stop: 47385, Start Num: 12

Candidate Starts for Tiri_70:

(Start: 12 @47029 has 73 MA's), (25, 47107), (27, 47143), (29, 47152), (33, 47182), (35, 47212), (44, 47284), (45, 47296), (46, 47305),

Gene: Topper_70 Start: 47128, Stop: 47484, Start Num: 12

Candidate Starts for Topper_70:

(Start: 12 @47128 has 73 MA's), (25, 47206), (27, 47242), (29, 47251), (33, 47281), (35, 47311), (44, 47383), (45, 47395), (46, 47404),

Gene: TribbleTrouble_71 Start: 47859, Stop: 48122, Start Num: 13

Candidate Starts for TribbleTrouble_71:

(7, 47841), (11, 47856), (Start: 13 @47859 has 2 MA's), (27, 47964), (35, 48033), (38, 48060), (43, 48096),

Gene: TruffulaTree_71 Start: 47422, Stop: 47778, Start Num: 12

Candidate Starts for TruffulaTree_71:

(Start: 12 @47422 has 73 MA's), (25, 47500), (27, 47536), (29, 47545), (33, 47575), (35, 47605), (44, 47677), (45, 47689), (46, 47698),

Gene: Twitch_70 Start: 47130, Stop: 47486, Start Num: 12

Candidate Starts for Twitch_70:

(Start: 12 @47130 has 73 MA's), (25, 47208), (27, 47244), (29, 47253), (33, 47283), (35, 47313), (44, 47385), (45, 47397), (46, 47406),

Gene: Unicorn_72 Start: 46792, Stop: 47142, Start Num: 12

Candidate Starts for Unicorn_72:

(Start: 12 @46792 has 73 MA's), (Start: 14 @46795 has 7 MA's), (23, 46846), (35, 46969), (41, 47026), (44, 47041),

Gene: Urkel_70 Start: 47635, Stop: 47979, Start Num: 12

Candidate Starts for Urkel_70:

(5, 47596), (Start: 12 @47635 has 73 MA's), (25, 47701), (27, 47737), (33, 47776), (35, 47806), (44, 47878), (45, 47890), (46, 47899),

Gene: Validus_75 Start: 47975, Stop: 48295, Start Num: 12

Candidate Starts for Validus_75:

(3, 47732), (5, 47936), (Start: 12 @47975 has 73 MA's), (Start: 14 @47978 has 7 MA's), (20, 48026), (27, 48089), (35, 48158), (41, 48215), (44, 48230), (45, 48242), (46, 48251), (50, 48284),

Gene: Veliki_71 Start: 47162, Stop: 47518, Start Num: 12

Candidate Starts for Veliki_71:

(Start: 12 @47162 has 73 MA's), (18, 47210), (27, 47276), (29, 47285), (35, 47345), (37, 47357), (41, 47402), (44, 47417),

Gene: Ximenita_75 Start: 47341, Stop: 47691, Start Num: 12

Candidate Starts for Ximenita_75:

(Start: 12 @47341 has 73 MA's), (35, 47518), (36, 47521), (47, 47626),

Gene: YoureAdopted_69 Start: 47314, Stop: 47580, Start Num: 12

Candidate Starts for YoureAdopted_69:

(5, 47275), (Start: 10 @47311 has 1 MA's), (Start: 12 @47314 has 73 MA's), (21, 47356), (29, 47425), (31, 47449), (35, 47485), (44, 47557),

Gene: Yunkel11_74 Start: 47214, Stop: 47570, Start Num: 12

Candidate Starts for Yunkel11_74:

(Start: 12 @47214 has 73 MA's), (17, 47256), (22, 47271), (27, 47328), (29, 47337), (35, 47397), (41, 47454), (44, 47469),

Gene: Zabiza_65 Start: 43278, Stop: 43634, Start Num: 12

Candidate Starts for Zabiza_65:

(Start: 12 @43278 has 73 MA's), (25, 43356), (27, 43392), (29, 43401), (33, 43431), (35, 43461), (44, 43533), (45, 43545), (46, 43554),

Gene: Zavala_73 Start: 47700, Stop: 48056, Start Num: 12

Candidate Starts for Zavala_73:

(Start: 12 @47700 has 73 MA's), (25, 47778), (27, 47814), (29, 47823), (33, 47853), (35, 47883), (44, 47955), (45, 47967), (46, 47976),