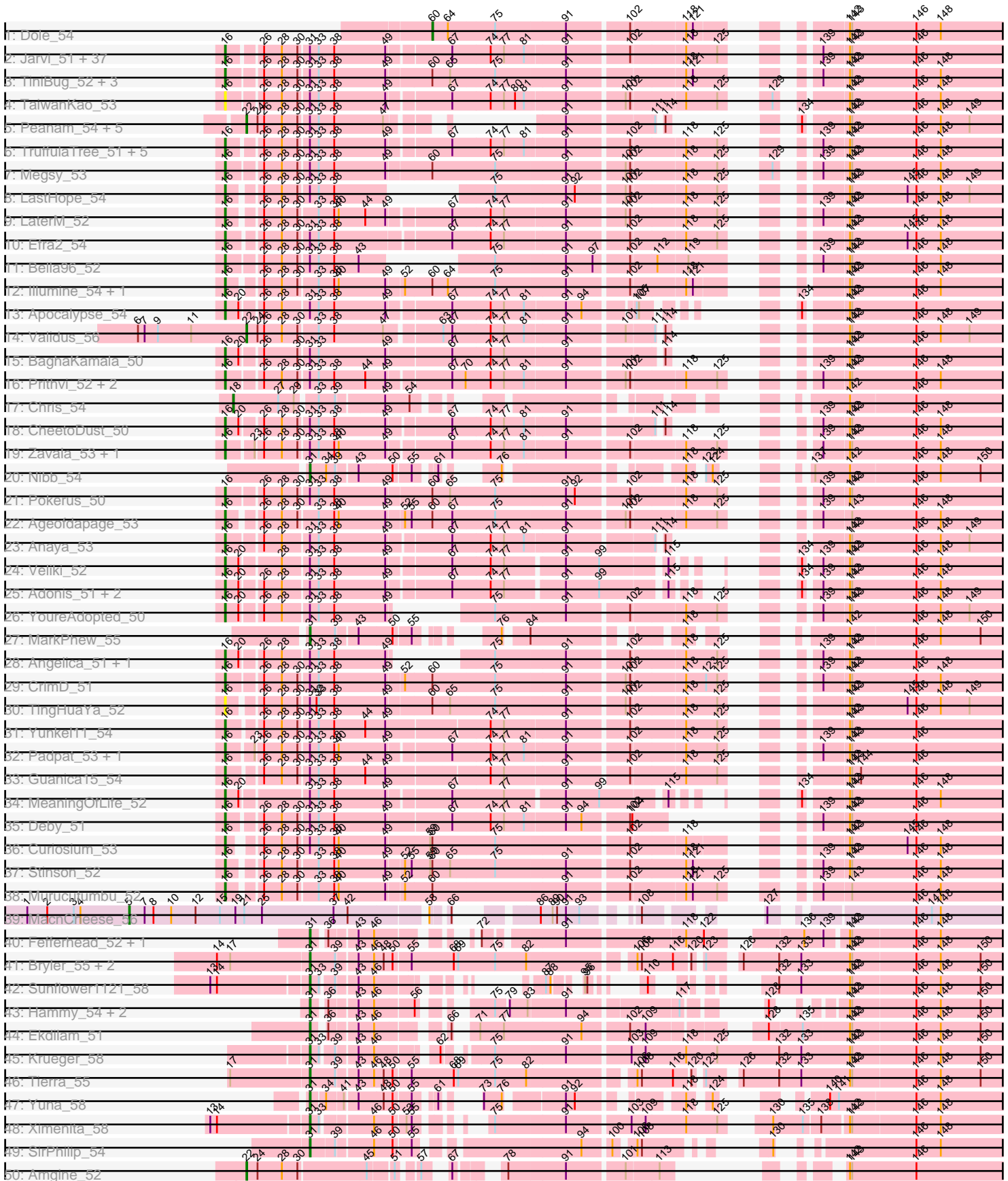
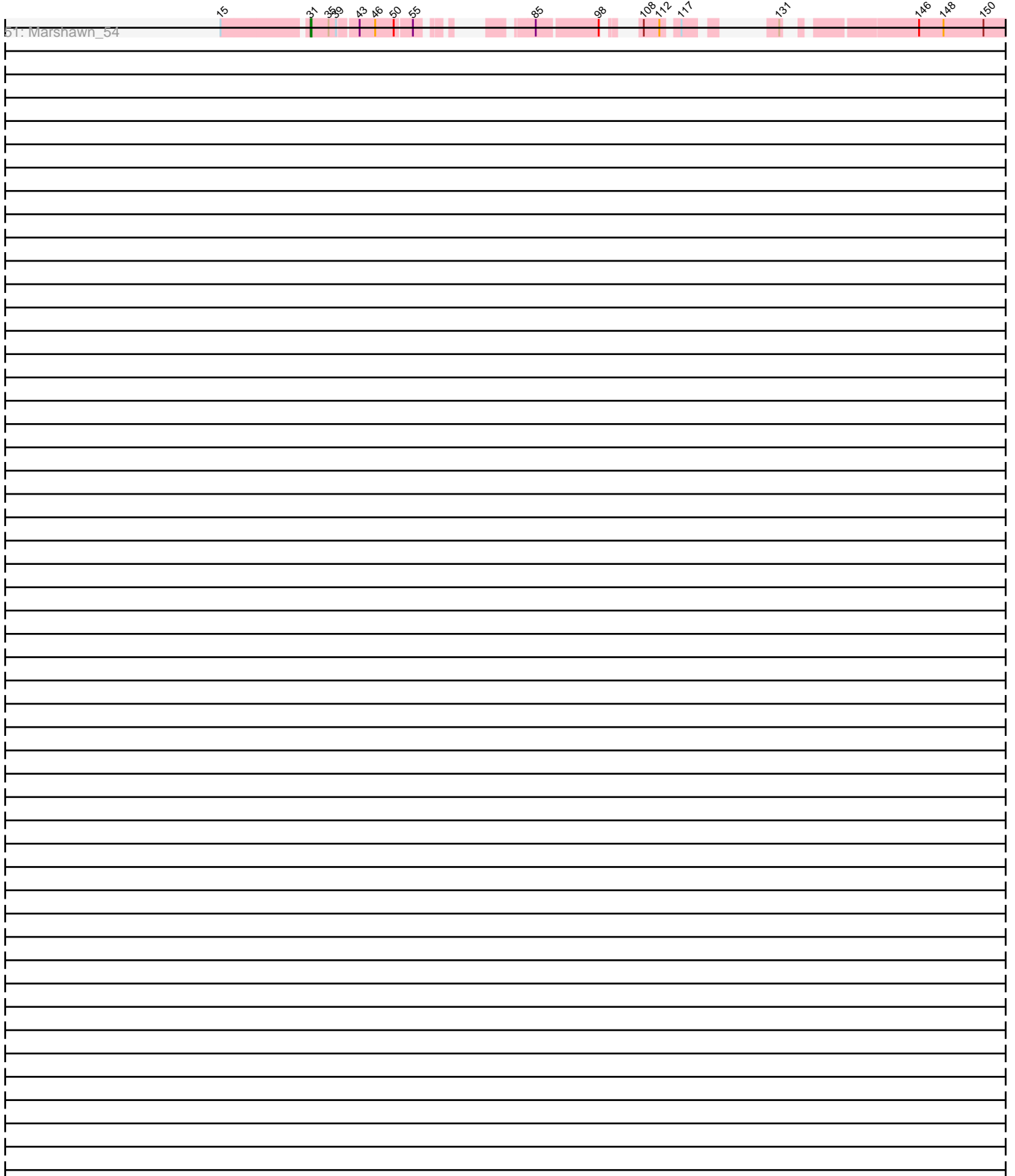


Pham 196396



Pham 196396



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 196396 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196396 has 114 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Dole_54
- Track 2 : Jarvi_51, Peel_51, Rosmarinus_51, CREW_51, Geraldini_54, Boiiii_51, Dalmuri_51, BGIlluviae_51, Asayake_51, Hyperbowlee_51, Jeckyll_51, AlishaPH_51, Atiba_52, ActinUp_51, BEEEST_51, Zabiza_46, Joy99_51, Inky_51, Lunahalos_51, JAWS_51, Capricorn_51, Blizzard_51, Belladonna_51, Beezoo_53, Durfee_51, Adephagia_51, Tachez_51, Homura_51, Spock_51, Ramen_52, Twitch_51, HedwigODU_51, Topper_51, ShiaSurprise_52, Piatt_51, Padfoot_51, Llorens_51, CaseJules_53
- Track 3 : TiniBug_52, DrHayes_52, SamuelLPlaqson_52, Urkel_52
- Track 4 : TaiwanKao_53
- Track 5 : Peanam_54, Dartin_54, Shaobing_54, Richo_54, McMater_54, Niklas_54
- Track 6 : TruffulaTree_51, Tiri_52, Rapunzel97_52, Slimphazie_51, Jayhawk_52, BarrelRoll_51
- Track 7 : Megsy_53
- Track 8 : LastHope_54
- Track 9 : LaterM_52
- Track 10 : Efra2_54
- Track 11 : Bella96_52
- Track 12 : Illumine_54, Devera_56
- Track 13 : Apocalypse_54
- Track 14 : Validus_56
- Track 15 : BaghaKamala_50
- Track 16 : Prithvi_52, LindNT_50, TreyKay_52
- Track 17 : Chris_54
- Track 18 : CheetoDust_50
- Track 19 : Zavala_53, Mynx_52
- Track 20 : Nibb_54
- Track 21 : Pokerus_50
- Track 22 : Ageofdapage_53
- Track 23 : Anaya_53
- Track 24 : Veliki_52
- Track 25 : Adonis_51, Ganymede_52, QuincyRose_50
- Track 26 : YoureAdopted_50
- Track 27 : MarkPhew_55
- Track 28 : Angelica_51, Sulley_51
- Track 29 : CrimD_51
- Track 30 : TingHuaYa_52

- Track 31 : Yunkel11_54
- Track 32 : Padpat_53, Emerson_52
- Track 33 : Guanica15_54
- Track 34 : MeaningOfLife_52
- Track 35 : Deby_51
- Track 36 : Curiosium_53
- Track 37 : Stinson_52
- Track 38 : Murucutumbu_52
- Track 39 : MacnCheese_56
- Track 40 : Fefferhead_52, Ellie_50
- Track 41 : Bryler_55, Cain_55, Phrank_55
- Track 42 : Sunflower1121_58
- Track 43 : Hammy_54, DarthP_54, Amohnition_54
- Track 44 : Ekdilam_51
- Track 45 : Krueger_58
- Track 46 : Tierra_55
- Track 47 : Yuna_58
- Track 48 : Ximenita_58
- Track 49 : SirPhilip_54
- Track 50 : Amgine_52
- Track 51 : Marshawn_54

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

The start number called the most often in the published annotations is 16, it was called in 83 of the 109 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_51, Adephegia_51, Adonis_51, Ageofdapage_53, AlishaPH_51, Anaya_53, Angelica_51, Apocalypse_54, Asayake_51, Atiba_52, BEEST_51, BGlluviae_51, BaghaKamala_50, BarrelRoll_51, Beezoo_53, Bella96_52, Belladonna_51, Blizzard_51, Boiiii_51, CREW_51, Capricorn_51, CaseJules_53, CheetoDust_50, CrimD_51, Curiosium_53, Dalmuri_51, Deby_51, Devera_56, DrHayes_52, Durfee_51, Efra2_54, Emerson_52, Ganymede_52, Geraldini_54, Guanica15_54, HedwigODU_51, Homura_51, Hyperbowlee_51, Illumine_54, Inky_51, JAWS_51, Jarvi_51, Jayhawk_52, Jeckyll_51, Joy99_51, LastHope_54, LaterM_52, LindNT_50, Llorens_51, Lunahalos_51, MeaningOfLife_52, Megsy_53, Murucutumbu_52, Mynx_52, Padfoot_51, Padpat_53, Peel_51, Piatt_51, Pokerus_50, Prithvi_52, QuincyRose_50, Ramen_52, Rapunzel97_52, Rosmarinus_51, SamuelLPlaqson_52, ShiaSurprise_52, Slimphazie_51, Spock_51, Stinson_52, Sulley_51, Tachez_51, TaiwanKao_53, TingHuaYa_52, TiniBug_52, Tiri_52, Topper_51, TreyKay_52, TruffulaTree_51, Twitch_51, Urkel_52, Veliki_52, YoureAdopted_50, Yunkel11_54, Zabiza_46, Zavala_53,

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

-

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

- Amgine_52, Amohnition_54, Bryler_55, Cain_55, Chris_54, DarthP_54, Dartin_54, Dole_54, Ekdilam_51, Ellie_50, Fefferhead_52, Hammy_54, Krueger_58,

MacnCheese_56, MarkPhew_55, Marshawn_54, McMater_54, Nibb_54, Niklas_54, Peanam_54, Phrank_55, Richo_54, Shaobing_54, SirPhilip_54, Sunflower1121_58, Tierra_55, Validus_56, Ximenita_58, Yuna_58,

Summary by start number:

Start 5:

- Found in 1 of 114 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MacnCheese_56 (K3),

Start 16:

- Found in 85 of 114 (74.6%) of genes in pham
- Manual Annotations of this start: 83 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp_51 (K1), Adephagia_51 (K1), Adonis_51 (K1), Ageofdapage_53 (K1), AlishaPH_51 (K1), Anaya_53 (K1), Angelica_51 (K1), Apocalypse_54 (K1), Asayake_51 (K1), Atiba_52 (K1), BEEST_51 (K1), BGlluviae_51 (K1), BaghaKamala_50 (K1), BarrelRoll_51 (K1), Beezoo_53 (K1), Bella96_52 (K1), Belladonna_51 (K1), Blizzard_51 (K1), Boiiii_51 (K1), CREW_51 (K1), Capricorn_51 (K1), CaseJules_53 (K1), CheetoDust_50 (K1), CrimD_51 (K1), Curiosium_53 (K1), Dalmuri_51 (K1), Deby_51 (K1), Devera_56 (K1), DrHayes_52 (K1), Durfee_51 (K1), Efra2_54 (K1), Emerson_52 (K1), Ganymede_52 (K1), Geraldini_54 (K1), Guanica15_54 (K1), HedwigODU_51 (K1), Homura_51 (K1), Hyperbowlee_51 (K1), Illumine_54 (K1), Inky_51 (K1), JAWS_51 (K1), Jarvi_51 (K1), Jayhawk_52 (K1), Jeckyll_51 (K1), Joy99_51 (K1), LastHope_54 (K1), LaterM_52 (K1), LindNT_50 (K1), Llorens_51 (K1), Lunahalos_51 (K1), MeaningOfLife_52 (K1), Megsy_53 (K1), Murucutumbu_52 (K1), Mynx_52 (K1), Padfoot_51 (K1), Padpat_53 (K1), Peel_51 (K1), Piatt_51 (K1), Pokerus_50 (K1), Prithvi_52 (K1), QuincyRose_50 (K1), Ramen_52 (K1), Rapunzel97_52 (K1), Rosmarinus_51 (K1), SamuelLPlaqson_52 (K1), ShiaSurprise_52 (K1), Slimphazie_51 (K1), Spock_51 (K1), Stinson_52 (K1), Sulley_51 (K1), Tachez_51 (K1), TaiwanKao_53 (K1), TingHuaYa_52 (K1), TiniBug_52 (K1), Tiri_52 (K1), Topper_51 (K1), TreyKay_52 (K1), TruffulaTree_51 (K1), Twitch_51 (K1), Urkel_52 (K1), Veliki_52 (K1), YoureAdopted_50 (K1), Yunkel11_54 (K1), Zabiza_46 (K1), Zavala_53 (K1),

Start 18:

- Found in 1 of 114 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chris_54 (K1),

Start 22:

- Found in 8 of 114 (7.0%) of genes in pham
- Manual Annotations of this start: 5 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amgine_52 (K6), Dartin_54 (K1), McMater_54 (K1), Niklas_54 (K1), Peanam_54 (K1), Richo_54 (K1), Shaobing_54 (K1), Validus_56 (K1),

Start 31:

- Found in 103 of 114 (90.4%) of genes in pham
- Manual Annotations of this start: 18 of 109
- Called 17.5% of time when present
- Phage (with cluster) where this start called: Amohnition_54 (K6), Bryler_55 (K6), Cain_55 (K6), DarthP_54 (K6), Ekdilam_51 (K6), Ellie_50 (K6), Fefferhead_52 (K6), Hammy_54 (K6), Krueger_58 (K6), MarkPhew_55 (K1), Marshawn_54 (K6), Nibb_54 (K1), Phrank_55 (K6), SirPhilip_54 (K6), Sunflower1121_58 (K6), Tierra_55 (K6), Ximenita_58 (K6), Yuna_58 (K6),

Start 60:

- Found in 15 of 114 (13.2%) of genes in pham
- Manual Annotations of this start: 1 of 109
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Dole_54 (K1),

Summary by clusters:

There are 3 clusters represented in this pham: K3, K1, K6,

Info for manual annotations of cluster K1:

- Start number 16 was manually annotated 83 times for cluster K1.
- Start number 18 was manually annotated 1 time for cluster K1.
- Start number 22 was manually annotated 4 times for cluster K1.
- Start number 31 was manually annotated 2 times for cluster K1.
- Start number 60 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K3:

- Start number 5 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 31 was manually annotated 16 times for cluster K6.

Gene Information:

Gene: ActinUp_51 Start: 37616, Stop: 38557, Start Num: 16

Candidate Starts for ActinUp_51:

(Start: 16 @37616 has 83 MA's), (26, 37655), (28, 37679), (30, 37700), (Start: 31 @37712 has 18 MA's), (33, 37724), (38, 37745), (49, 37814), (67, 37892), (74, 37943), (77, 37961), (81, 37988), (91, 38039), (102, 38117), (118, 38186), (125, 38228), (139, 38291), (142, 38324), (143, 38327), (146, 38414),

Gene: Adephagia_51 Start: 37613, Stop: 38554, Start Num: 16

Candidate Starts for Adephagia_51:

(Start: 16 @37613 has 83 MA's), (26, 37652), (28, 37676), (30, 37697), (Start: 31 @37709 has 18 MA's), (33, 37721), (38, 37742), (49, 37811), (67, 37889), (74, 37940), (77, 37958), (81, 37985), (91, 38036), (102, 38114), (118, 38183), (125, 38225), (139, 38288), (142, 38321), (143, 38324), (146, 38411),

Gene: Adonis_51 Start: 37911, Stop: 38798, Start Num: 16

Candidate Starts for Adonis_51:

(Start: 16 @37911 has 83 MA's), (20, 37929), (26, 37953), (28, 37977), (Start: 31 @38010 has 18 MA's), (33, 38022), (38, 38043), (49, 38112), (67, 38190), (74, 38241), (77, 38259), (91, 38331), (99, 38376), (115, 38454), (134, 38514), (139, 38532), (142, 38565), (143, 38568), (146, 38655), (148, 38688),

Gene: Ageofdapage_53 Start: 38596, Stop: 39540, Start Num: 16

Candidate Starts for Ageofdapage_53:

(Start: 16 @38596 has 83 MA's), (26, 38632), (28, 38656), (30, 38677), (33, 38701), (38, 38722), (40, 38728), (49, 38791), (52, 38812), (55, 38821), (Start: 60 @38848 has 1 MA's), (67, 38875), (75, 38929), (91, 39022), (101, 39094), (102, 39100), (118, 39169), (125, 39211), (139, 39274), (143, 39310), (146, 39397), (148, 39430),

Gene: AlishaPH_51 Start: 37886, Stop: 38827, Start Num: 16

Candidate Starts for AlishaPH_51:

(Start: 16 @37886 has 83 MA's), (26, 37925), (28, 37949), (30, 37970), (Start: 31 @37982 has 18 MA's), (33, 37994), (38, 38015), (49, 38084), (67, 38162), (74, 38213), (77, 38231), (81, 38258), (91, 38309), (102, 38387), (118, 38456), (125, 38498), (139, 38561), (142, 38594), (143, 38597), (146, 38684),

Gene: Amgine_52 Start: 38804, Stop: 39586, Start Num: 22

Candidate Starts for Amgine_52:

(Start: 22 @38804 has 5 MA's), (24, 38819), (28, 38852), (30, 38873), (45, 38960), (51, 38990), (57, 39011), (67, 39029), (78, 39071), (91, 39146), (101, 39218), (113, 39260), (142, 39341), (143, 39344), (146, 39431),

Gene: Amohnition_54 Start: 38811, Stop: 39545, Start Num: 31

Candidate Starts for Amohnition_54:

(Start: 31 @38811 has 18 MA's), (36, 38826), (43, 38859), (46, 38880), (56, 38928), (75, 38988), (79, 39003), (83, 39027), (91, 39075), (117, 39213), (128, 39255), (142, 39306), (143, 39309), (146, 39393), (148, 39426), (150, 39480),

Gene: Anaya_53 Start: 38213, Stop: 39073, Start Num: 16

Candidate Starts for Anaya_53:

(Start: 16 @38213 has 83 MA's), (26, 38255), (28, 38279), (Start: 31 @38312 has 18 MA's), (33, 38324), (38, 38345), (49, 38414), (67, 38492), (74, 38543), (77, 38561), (81, 38588), (91, 38639), (111, 38747), (114, 38750), (142, 38840), (143, 38843), (146, 38930), (148, 38963), (149, 39002),

Gene: Angelica_51 Start: 37843, Stop: 38703, Start Num: 16

Candidate Starts for Angelica_51:

(Start: 16 @37843 has 83 MA's), (20, 37861), (26, 37885), (28, 37909), (Start: 31 @37942 has 18 MA's), (33, 37954), (38, 37975), (49, 38044), (75, 38092), (91, 38185), (102, 38263), (118, 38332), (125, 38374), (139, 38437), (142, 38470), (143, 38473), (146, 38560),

Gene: Apocalypse_54 Start: 38622, Stop: 39491, Start Num: 16

Candidate Starts for Apocalypse_54:

(Start: 16 @38622 has 83 MA's), (20, 38640), (26, 38664), (28, 38688), (Start: 31 @38721 has 18 MA's), (33, 38733), (38, 38754), (49, 38823), (67, 38901), (74, 38952), (77, 38970), (81, 38997), (91, 39048), (94, 39069), (105, 39126), (107, 39129), (134, 39207), (142, 39258), (143, 39261), (146, 39348),

Gene: Asayake_51 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for Asayake_51:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: Atiba_52 Start: 37576, Stop: 38517, Start Num: 16

Candidate Starts for Atiba_52:

(Start: 16 @37576 has 83 MA's), (26, 37615), (28, 37639), (30, 37660), (Start: 31 @37672 has 18 MA's), (33, 37684), (38, 37705), (49, 37774), (67, 37852), (74, 37903), (77, 37921), (81, 37948), (91, 37999), (102, 38077), (118, 38146), (125, 38188), (139, 38251), (142, 38284), (143, 38287), (146, 38374),

Gene: BEEST_51 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for BEEST_51:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: BGlluviae_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for BGlluviae_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: BaghaKamala_50 Start: 37051, Stop: 37917, Start Num: 16

Candidate Starts for BaghaKamala_50:

(Start: 16 @37051 has 83 MA's), (20, 37069), (26, 37093), (30, 37138), (Start: 31 @37150 has 18 MA's), (33, 37162), (49, 37252), (67, 37336), (74, 37387), (77, 37405), (91, 37483), (114, 37594), (142, 37684), (143, 37687), (146, 37774),

Gene: BarrelRoll_51 Start: 37599, Stop: 38540, Start Num: 16

Candidate Starts for BarrelRoll_51:

(Start: 16 @37599 has 83 MA's), (26, 37638), (28, 37662), (30, 37683), (Start: 31 @37695 has 18 MA's), (33, 37707), (38, 37728), (49, 37797), (67, 37875), (74, 37926), (77, 37944), (81, 37971), (91, 38022), (102, 38100), (118, 38169), (125, 38211), (139, 38274), (142, 38307), (143, 38310), (146, 38397), (148, 38430),

Gene: Beezoo_53 Start: 38574, Stop: 39515, Start Num: 16

Candidate Starts for Beezoo_53:

(Start: 16 @38574 has 83 MA's), (26, 38613), (28, 38637), (30, 38658), (Start: 31 @38670 has 18 MA's), (33, 38682), (38, 38703), (49, 38772), (67, 38850), (74, 38901), (77, 38919), (81, 38946), (91, 38997), (102, 39075), (118, 39144), (125, 39186), (139, 39249), (142, 39282), (143, 39285), (146, 39372),

Gene: Bella96_52 Start: 38440, Stop: 39297, Start Num: 16

Candidate Starts for Bella96_52:

(Start: 16 @38440 has 83 MA's), (26, 38482), (28, 38506), (30, 38527), (Start: 31 @38539 has 18 MA's), (33, 38551), (38, 38572), (43, 38605), (75, 38686), (91, 38779), (97, 38815), (102, 38857), (112, 38890), (119, 38929), (139, 39031), (142, 39064), (143, 39067), (146, 39154), (148, 39187),

Gene: Belladonna_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Belladonna_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: Blizzard_51 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for Blizzard_51:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: Boiiii_51 Start: 37930, Stop: 38871, Start Num: 16

Candidate Starts for Boiiii_51:

(Start: 16 @37930 has 83 MA's), (26, 37969), (28, 37993), (30, 38014), (Start: 31 @38026 has 18 MA's), (33, 38038), (38, 38059), (49, 38128), (67, 38206), (74, 38257), (77, 38275), (81, 38302), (91, 38353), (102, 38431), (118, 38500), (125, 38542), (139, 38605), (142, 38638), (143, 38641), (146, 38728),

Gene: Bryler_55 Start: 37408, Stop: 38334, Start Num: 31

Candidate Starts for Bryler_55:

(14, 37285), (17, 37303), (Start: 31 @37408 has 18 MA's), (39, 37441), (43, 37465), (46, 37486), (48, 37498), (50, 37510), (55, 37531), (68, 37588), (69, 37594), (75, 37642), (82, 37684), (106, 37810), (108, 37816), (116, 37858), (120, 37876), (123, 37885), (126, 37918), (132, 37966), (133, 37996), (142, 38062), (143, 38065), (146, 38149), (148, 38182), (150, 38236),

Gene: CREW_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for CREW_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: Cain_55 Start: 37396, Stop: 38322, Start Num: 31

Candidate Starts for Cain_55:

(14, 37273), (17, 37291), (Start: 31 @37396 has 18 MA's), (39, 37429), (43, 37453), (46, 37474), (48, 37486), (50, 37498), (55, 37519), (68, 37576), (69, 37582), (75, 37630), (82, 37672), (106, 37798), (108, 37804), (116, 37846), (120, 37864), (123, 37873), (126, 37906), (132, 37954), (133, 37984), (142, 38050), (143, 38053), (146, 38137), (148, 38170), (150, 38224),

Gene: Capricorn_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Capricorn_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: CaseJules_53 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for CaseJules_53:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146,

38726),

Gene: CheetoDust_50 Start: 37100, Stop: 37960, Start Num: 16

Candidate Starts for CheetoDust_50:

(Start: 16 @37100 has 83 MA's), (20, 37118), (26, 37142), (28, 37166), (30, 37187), (Start: 31 @37199 has 18 MA's), (33, 37211), (38, 37232), (49, 37301), (67, 37379), (74, 37430), (77, 37448), (81, 37475), (91, 37526), (111, 37634), (114, 37637), (139, 37694), (142, 37727), (143, 37730), (146, 37817), (148, 37850),

Gene: Chris_54 Start: 38558, Stop: 39373, Start Num: 18

Candidate Starts for Chris_54:

(Start: 18 @38558 has 1 MA's), (27, 38618), (29, 38639), (33, 38663), (39, 38684), (49, 38741), (54, 38774), (142, 39137), (146, 39224),

Gene: CrimD_51 Start: 37837, Stop: 38787, Start Num: 16

Candidate Starts for CrimD_51:

(Start: 16 @37837 has 83 MA's), (26, 37879), (28, 37903), (30, 37924), (Start: 31 @37936 has 18 MA's), (33, 37948), (38, 37969), (49, 38038), (52, 38059), (Start: 60 @38095 has 1 MA's), (75, 38176), (91, 38269), (101, 38341), (102, 38347), (118, 38416), (123, 38443), (125, 38458), (139, 38521), (142, 38554), (143, 38557), (146, 38644), (148, 38677),

Gene: Curiosium_53 Start: 36518, Stop: 37456, Start Num: 16

Candidate Starts for Curiosium_53:

(Start: 16 @36518 has 83 MA's), (26, 36548), (28, 36572), (30, 36593), (Start: 31 @36605 has 18 MA's), (33, 36617), (38, 36638), (40, 36644), (49, 36707), (59, 36764), (Start: 60 @36767 has 1 MA's), (75, 36848), (102, 37019), (118, 37088), (142, 37223), (143, 37226), (145, 37301), (146, 37313), (148, 37346),

Gene: Dalmuri_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Dalmuri_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: DarthP_54 Start: 38695, Stop: 39429, Start Num: 31

Candidate Starts for DarthP_54:

(Start: 31 @38695 has 18 MA's), (36, 38710), (43, 38743), (46, 38764), (56, 38812), (75, 38872), (79, 38887), (83, 38911), (91, 38959), (117, 39097), (128, 39139), (142, 39190), (143, 39193), (146, 39277), (148, 39310), (150, 39364),

Gene: Dartin_54 Start: 38545, Stop: 39252, Start Num: 22

Candidate Starts for Dartin_54:

(Start: 22 @38545 has 5 MA's), (24, 38560), (26, 38569), (28, 38593), (30, 38614), (Start: 31 @38626 has 18 MA's), (33, 38638), (38, 38659), (47, 38725), (91, 38818), (111, 38926), (114, 38929), (134, 38968), (142, 39019), (143, 39022), (146, 39109), (148, 39142), (149, 39181),

Gene: Deby_51 Start: 37859, Stop: 38731, Start Num: 16

Candidate Starts for Deby_51:

(Start: 16 @37859 has 83 MA's), (26, 37898), (28, 37922), (30, 37943), (Start: 31 @37955 has 18 MA's), (33, 37967), (38, 37988), (49, 38057), (67, 38141), (74, 38192), (77, 38210), (81, 38237), (91, 38288), (94, 38309), (102, 38366), (104, 38369), (139, 38465), (142, 38498), (143, 38501), (146, 38588),

Gene: Devera_56 Start: 38363, Stop: 39304, Start Num: 16

Candidate Starts for Devera_56:

(Start: 16 @38363 has 83 MA's), (26, 38399), (28, 38423), (30, 38444), (33, 38468), (38, 38489), (40, 38495), (49, 38558), (52, 38579), (Start: 60 @38615 has 1 MA's), (64, 38636), (75, 38696), (91, 38789), (102, 38867), (118, 38936), (121, 38945), (142, 39071), (143, 39074), (146, 39161), (148, 39194),

Gene: Dole_54 Start: 38618, Stop: 39307, Start Num: 60

Candidate Starts for Dole_54:

(Start: 60 @38618 has 1 MA's), (64, 38639), (75, 38699), (91, 38792), (102, 38870), (118, 38939), (121, 38948), (142, 39074), (143, 39077), (146, 39164), (148, 39197),

Gene: DrHayes_52 Start: 38502, Stop: 39452, Start Num: 16

Candidate Starts for DrHayes_52:

(Start: 16 @38502 has 83 MA's), (26, 38544), (28, 38568), (30, 38589), (Start: 31 @38601 has 18 MA's), (33, 38613), (38, 38634), (49, 38703), (Start: 60 @38760 has 1 MA's), (65, 38784), (75, 38841), (91, 38934), (118, 39081), (121, 39090), (139, 39186), (142, 39219), (143, 39222), (146, 39309), (148, 39342),

Gene: Durfee_51 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for Durfee_51:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: Efra2_54 Start: 37447, Stop: 38388, Start Num: 16

Candidate Starts for Efra2_54:

(Start: 16 @37447 has 83 MA's), (26, 37486), (28, 37510), (30, 37531), (Start: 31 @37543 has 18 MA's), (33, 37555), (38, 37576), (67, 37723), (74, 37774), (77, 37792), (91, 37870), (102, 37948), (118, 38017), (125, 38059), (142, 38155), (143, 38158), (145, 38233), (146, 38245), (148, 38278),

Gene: Ekdilam_51 Start: 38242, Stop: 39063, Start Num: 31

Candidate Starts for Ekdilam_51:

(Start: 31 @38242 has 18 MA's), (36, 38254), (43, 38287), (46, 38308), (66, 38380), (71, 38395), (77, 38425), (94, 38527), (102, 38584), (109, 38605), (128, 38722), (135, 38764), (142, 38824), (143, 38827), (146, 38911), (148, 38944), (150, 38998),

Gene: Ellie_50 Start: 37992, Stop: 38804, Start Num: 31

Candidate Starts for Ellie_50:

(Start: 31 @37992 has 18 MA's), (36, 38007), (43, 38040), (46, 38061), (72, 38139), (91, 38232), (118, 38379), (122, 38403), (136, 38499), (139, 38520), (142, 38550), (143, 38553), (146, 38637), (148, 38670),

Gene: Emerson_52 Start: 37607, Stop: 38551, Start Num: 16

Candidate Starts for Emerson_52:

(Start: 16 @37607 has 83 MA's), (23, 37640), (26, 37649), (28, 37673), (30, 37694), (Start: 31 @37706 has 18 MA's), (33, 37718), (38, 37739), (40, 37745), (49, 37808), (67, 37886), (74, 37937), (77, 37955), (81, 37982), (91, 38033), (102, 38111), (118, 38180), (125, 38222), (139, 38285), (142, 38318), (143, 38321), (146, 38408),

Gene: Fefferhead_52 Start: 37942, Stop: 38751, Start Num: 31

Candidate Starts for Fefferhead_52:

(Start: 31 @37942 has 18 MA's), (36, 37957), (43, 37990), (46, 38011), (72, 38089), (91, 38182), (118, 38329), (122, 38353), (136, 38449), (139, 38470), (142, 38497), (143, 38500), (146, 38584), (148, 38617),

Gene: Ganymede_52 Start: 38046, Stop: 38933, Start Num: 16

Candidate Starts for Ganymede_52:

(Start: 16 @38046 has 83 MA's), (20, 38064), (26, 38088), (28, 38112), (Start: 31 @38145 has 18 MA's), (33, 38157), (38, 38178), (49, 38247), (67, 38325), (74, 38376), (77, 38394), (91, 38466), (99, 38511), (115, 38589), (134, 38649), (139, 38667), (142, 38700), (143, 38703), (146, 38790), (148, 38823),

Gene: Geraldini_54 Start: 38663, Stop: 39604, Start Num: 16

Candidate Starts for Geraldini_54:

(Start: 16 @38663 has 83 MA's), (26, 38702), (28, 38726), (30, 38747), (Start: 31 @38759 has 18 MA's), (33, 38771), (38, 38792), (49, 38861), (67, 38939), (74, 38990), (77, 39008), (81, 39035), (91, 39086), (102, 39164), (118, 39233), (125, 39275), (139, 39338), (142, 39371), (143, 39374), (146, 39461),

Gene: Guanica15_54 Start: 37404, Stop: 38348, Start Num: 16

Candidate Starts for Guanica15_54:

(Start: 16 @37404 has 83 MA's), (26, 37443), (28, 37467), (30, 37488), (Start: 31 @37500 has 18 MA's), (33, 37512), (38, 37533), (44, 37575), (49, 37602), (74, 37734), (77, 37752), (91, 37830), (102, 37908), (118, 37977), (125, 38019), (142, 38115), (143, 38118), (144, 38130), (146, 38205),

Gene: Hammy_54 Start: 38683, Stop: 39417, Start Num: 31

Candidate Starts for Hammy_54:

(Start: 31 @38683 has 18 MA's), (36, 38698), (43, 38731), (46, 38752), (56, 38800), (75, 38860), (79, 38875), (83, 38899), (91, 38947), (117, 39085), (128, 39127), (142, 39178), (143, 39181), (146, 39265), (148, 39298), (150, 39352),

Gene: HedwigODU_51 Start: 37616, Stop: 38557, Start Num: 16

Candidate Starts for HedwigODU_51:

(Start: 16 @37616 has 83 MA's), (26, 37655), (28, 37679), (30, 37700), (Start: 31 @37712 has 18 MA's), (33, 37724), (38, 37745), (49, 37814), (67, 37892), (74, 37943), (77, 37961), (81, 37988), (91, 38039), (102, 38117), (118, 38186), (125, 38228), (139, 38291), (142, 38324), (143, 38327), (146, 38414),

Gene: Homura_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Homura_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: Hyperbowlee_51 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for Hyperbowlee_51:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: Illumine_54 Start: 38365, Stop: 39306, Start Num: 16

Candidate Starts for Illumine_54:

(Start: 16 @38365 has 83 MA's), (26, 38401), (28, 38425), (30, 38446), (33, 38470), (38, 38491), (40, 38497), (49, 38560), (52, 38581), (Start: 60 @38617 has 1 MA's), (64, 38638), (75, 38698), (91, 38791), (102, 38869), (118, 38938), (121, 38947), (142, 39073), (143, 39076), (146, 39163), (148, 39196),

Gene: Inky_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Inky_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: JAWS_51 Start: 37605, Stop: 38546, Start Num: 16

Candidate Starts for JAWS_51:

(Start: 16 @37605 has 83 MA's), (26, 37644), (28, 37668), (30, 37689), (Start: 31 @37701 has 18 MA's), (33, 37713), (38, 37734), (49, 37803), (67, 37881), (74, 37932), (77, 37950), (81, 37977), (91, 38028), (102, 38106), (118, 38175), (125, 38217), (139, 38280), (142, 38313), (143, 38316), (146, 38403),

Gene: Jarvi_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Jarvi_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: Jayhawk_52 Start: 37614, Stop: 38555, Start Num: 16

Candidate Starts for Jayhawk_52:

(Start: 16 @37614 has 83 MA's), (26, 37653), (28, 37677), (30, 37698), (Start: 31 @37710 has 18 MA's), (33, 37722), (38, 37743), (49, 37812), (67, 37890), (74, 37941), (77, 37959), (81, 37986), (91, 38037), (102, 38115), (118, 38184), (125, 38226), (139, 38289), (142, 38322), (143, 38325), (146, 38412), (148, 38445),

Gene: Jeckyll_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Jeckyll_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: Joy99_51 Start: 37660, Stop: 38601, Start Num: 16

Candidate Starts for Joy99_51:

(Start: 16 @37660 has 83 MA's), (26, 37699), (28, 37723), (30, 37744), (Start: 31 @37756 has 18 MA's), (33, 37768), (38, 37789), (49, 37858), (67, 37936), (74, 37987), (77, 38005), (81, 38032), (91, 38083), (102, 38161), (118, 38230), (125, 38272), (139, 38335), (142, 38368), (143, 38371), (146, 38458),

Gene: Krueger_58 Start: 38393, Stop: 39313, Start Num: 31

Candidate Starts for Krueger_58:

(Start: 31 @38393 has 18 MA's), (33, 38405), (39, 38420), (43, 38444), (46, 38465), (62, 38531), (75, 38576), (91, 38669), (103, 38747), (109, 38765), (118, 38819), (125, 38861), (132, 38945), (133, 38975), (142, 39041), (143, 39044), (146, 39128), (148, 39161), (150, 39215),

Gene: LastHope_54 Start: 36888, Stop: 37739, Start Num: 16

Candidate Starts for LastHope_54:

(Start: 16 @36888 has 83 MA's), (26, 36924), (28, 36948), (30, 36969), (Start: 31 @36981 has 18 MA's), (33, 36993), (38, 37014), (75, 37128), (91, 37221), (92, 37233), (101, 37293), (102, 37299), (118, 37368), (125, 37410), (142, 37506), (143, 37509), (145, 37584), (146, 37596), (148, 37629), (149, 37668),

Gene: LaterM_52 Start: 38493, Stop: 39431, Start Num: 16

Candidate Starts for LaterM_52:

(Start: 16 @38493 has 83 MA's), (26, 38529), (28, 38553), (30, 38574), (33, 38598), (38, 38619), (40, 38625), (44, 38661), (49, 38688), (67, 38766), (74, 38817), (77, 38835), (91, 38913), (101, 38985), (102, 38991), (118, 39060), (125, 39102), (139, 39165), (142, 39198), (143, 39201), (146, 39288), (148, 39321),

Gene: LindNT_50 Start: 37816, Stop: 38760, Start Num: 16

Candidate Starts for LindNT_50:

(Start: 16 @37816 has 83 MA's), (26, 37858), (28, 37882), (30, 37903), (Start: 31 @37915 has 18 MA's), (33, 37927), (38, 37948), (44, 37990), (49, 38017), (67, 38095), (70, 38113), (74, 38146), (77, 38164), (81, 38191), (91, 38242), (101, 38314), (102, 38320), (118, 38389), (125, 38431), (139, 38494), (142, 38527), (143, 38530), (146, 38617), (148, 38650),

Gene: Llorens_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Llorens_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: Lunahalos_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Lunahalos_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: MacnCheese_56 Start: 39191, Stop: 40129, Start Num: 5

Candidate Starts for MacnCheese_56:

(1, 39053), (2, 39080), (3, 39116), (4, 39125), (Start: 5 @39191 has 1 MA's), (7, 39212), (8, 39224), (10, 39248), (12, 39281), (15, 39314), (19, 39335), (21, 39347), (25, 39371), (37, 39467), (42, 39482), (58, 39572), (66, 39590), (86, 39653), (89, 39668), (90, 39674), (91, 39686), (93, 39704), (108, 39752), (127, 39827), (146, 39986), (147, 40007), (148, 40019),

Gene: MarkPhew_55 Start: 38390, Stop: 39106, Start Num: 31

Candidate Starts for MarkPhew_55:

(Start: 31 @38390 has 18 MA's), (39, 38423), (43, 38447), (50, 38492), (55, 38513), (76, 38570), (84, 38594), (118, 38759), (142, 38870), (146, 38957), (148, 38990), (150, 39044),

Gene: Marshawn_54 Start: 38519, Stop: 39190, Start Num: 31

Candidate Starts for Marshawn_54:

(15, 38411), (Start: 31 @38519 has 18 MA's), (35, 38543), (39, 38552), (43, 38576), (46, 38597), (50, 38621), (55, 38642), (85, 38723), (98, 38801), (108, 38816), (112, 38834), (117, 38852), (131, 38903), (146, 39047), (148, 39080), (150, 39134),

Gene: McMater_54 Start: 38545, Stop: 39252, Start Num: 22

Candidate Starts for McMater_54:

(Start: 22 @38545 has 5 MA's), (24, 38560), (26, 38569), (28, 38593), (30, 38614), (Start: 31 @38626 has 18 MA's), (33, 38638), (38, 38659), (47, 38725), (91, 38818), (111, 38926), (114, 38929), (134, 38968), (142, 39019), (143, 39022), (146, 39109), (148, 39142), (149, 39181),

Gene: MeaningOfLife_52 Start: 38540, Stop: 39427, Start Num: 16

Candidate Starts for MeaningOfLife_52:

(Start: 16 @38540 has 83 MA's), (20, 38558), (Start: 31 @38639 has 18 MA's), (33, 38651), (38, 38672), (49, 38741), (67, 38819), (77, 38888), (91, 38960), (99, 39005), (115, 39083), (134, 39143), (142, 39194), (143, 39197), (146, 39284), (148, 39317),

Gene: Megsy_53 Start: 37875, Stop: 38825, Start Num: 16

Candidate Starts for Megsy_53:

(Start: 16 @37875 has 83 MA's), (26, 37917), (28, 37941), (30, 37962), (Start: 31 @37974 has 18 MA's), (33, 37986), (38, 38007), (49, 38076), (Start: 60 @38133 has 1 MA's), (75, 38214), (91, 38307), (101, 38379), (102, 38385), (118, 38454), (125, 38496), (129, 38526), (139, 38559), (142, 38592), (143, 38595), (146, 38682), (148, 38715),

Gene: Murucutumbu_52 Start: 38586, Stop: 39530, Start Num: 16

Candidate Starts for Murucutumbu_52:

(Start: 16 @38586 has 83 MA's), (26, 38622), (28, 38646), (30, 38667), (33, 38691), (38, 38712), (40, 38718), (49, 38781), (52, 38802), (Start: 60 @38838 has 1 MA's), (91, 39012), (102, 39090), (118, 39159), (121, 39168), (125, 39201), (139, 39264), (143, 39300), (146, 39387), (148, 39420),

Gene: Mynx_52 Start: 37932, Stop: 38876, Start Num: 16

Candidate Starts for Mynx_52:

(Start: 16 @37932 has 83 MA's), (23, 37965), (26, 37974), (28, 37998), (30, 38019), (Start: 31 @38031 has 18 MA's), (33, 38043), (38, 38064), (40, 38070), (49, 38133), (67, 38211), (74, 38262), (77, 38280), (81, 38307), (91, 38358), (102, 38436), (118, 38505), (125, 38547), (139, 38610), (142, 38643), (143, 38646), (146, 38733), (148, 38766),

Gene: Nibb_54 Start: 38079, Stop: 38801, Start Num: 31

Candidate Starts for Nibb_54:

(Start: 31 @38079 has 18 MA's), (34, 38100), (39, 38112), (43, 38136), (50, 38181), (55, 38202), (61, 38223), (76, 38259), (118, 38448), (123, 38460), (124, 38469), (137, 38514), (142, 38559), (146, 38646), (148, 38679), (150, 38733),

Gene: Niklas_54 Start: 38606, Stop: 39313, Start Num: 22

Candidate Starts for Niklas_54:

(Start: 22 @38606 has 5 MA's), (24, 38621), (26, 38630), (28, 38654), (30, 38675), (Start: 31 @38687 has 18 MA's), (33, 38699), (38, 38720), (47, 38786), (91, 38879), (111, 38987), (114, 38990), (134, 39029), (142, 39080), (143, 39083), (146, 39170), (148, 39203), (149, 39242),

Gene: Padfoot_51 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for Padfoot_51:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: Padpat_53 Start: 37607, Stop: 38551, Start Num: 16

Candidate Starts for Padpat_53:

(Start: 16 @37607 has 83 MA's), (23, 37640), (26, 37649), (28, 37673), (30, 37694), (Start: 31 @37706 has 18 MA's), (33, 37718), (38, 37739), (40, 37745), (49, 37808), (67, 37886), (74, 37937), (77, 37955), (81, 37982), (91, 38033), (102, 38111), (118, 38180), (125, 38222), (139, 38285), (142, 38318), (143, 38321), (146, 38408),

Gene: Peanam_54 Start: 38564, Stop: 39271, Start Num: 22

Candidate Starts for Peanam_54:

(Start: 22 @38564 has 5 MA's), (24, 38579), (26, 38588), (28, 38612), (30, 38633), (Start: 31 @38645 has 18 MA's), (33, 38657), (38, 38678), (47, 38744), (91, 38837), (111, 38945), (114, 38948), (134, 38987), (142, 39038), (143, 39041), (146, 39128), (148, 39161), (149, 39200),

Gene: Peel_51 Start: 37733, Stop: 38674, Start Num: 16

Candidate Starts for Peel_51:

(Start: 16 @37733 has 83 MA's), (26, 37772), (28, 37796), (30, 37817), (Start: 31 @37829 has 18 MA's), (33, 37841), (38, 37862), (49, 37931), (67, 38009), (74, 38060), (77, 38078), (81, 38105), (91, 38156), (102, 38234), (118, 38303), (125, 38345), (139, 38408), (142, 38441), (143, 38444), (146, 38531),

Gene: Phrank_55 Start: 37386, Stop: 38312, Start Num: 31

Candidate Starts for Phrank_55:

(14, 37263), (17, 37281), (Start: 31 @37386 has 18 MA's), (39, 37419), (43, 37443), (46, 37464), (48, 37476), (50, 37488), (55, 37509), (68, 37566), (69, 37572), (75, 37620), (82, 37662), (106, 37788), (108, 37794), (116, 37836), (120, 37854), (123, 37863), (126, 37896), (132, 37944), (133, 37974), (142, 38040), (143, 38043), (146, 38127), (148, 38160), (150, 38214),

Gene: Piatt_51 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for Piatt_51:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: Pokerus_50 Start: 37654, Stop: 38604, Start Num: 16

Candidate Starts for Pokerus_50:

(Start: 16 @37654 has 83 MA's), (26, 37696), (28, 37720), (30, 37741), (Start: 31 @37753 has 18 MA's), (33, 37765), (38, 37786), (49, 37855), (Start: 60 @37912 has 1 MA's), (65, 37936), (75, 37993), (91, 38086), (92, 38098), (102, 38164), (118, 38233), (125, 38275), (139, 38338), (142, 38371), (143, 38374), (146, 38461),

Gene: Prithvi_52 Start: 37816, Stop: 38760, Start Num: 16

Candidate Starts for Prithvi_52:

(Start: 16 @37816 has 83 MA's), (26, 37858), (28, 37882), (30, 37903), (Start: 31 @37915 has 18 MA's), (33, 37927), (38, 37948), (44, 37990), (49, 38017), (67, 38095), (70, 38113), (74, 38146), (77, 38164), (81, 38191), (91, 38242), (101, 38314), (102, 38320), (118, 38389), (125, 38431), (139, 38494), (142, 38527), (143, 38530), (146, 38617), (148, 38650),

Gene: QuincyRose_50 Start: 38046, Stop: 38933, Start Num: 16

Candidate Starts for QuincyRose_50:

(Start: 16 @38046 has 83 MA's), (20, 38064), (26, 38088), (28, 38112), (Start: 31 @38145 has 18 MA's), (33, 38157), (38, 38178), (49, 38247), (67, 38325), (74, 38376), (77, 38394), (91, 38466), (99, 38511), (115, 38589), (134, 38649), (139, 38667), (142, 38700), (143, 38703), (146, 38790), (148, 38823),

Gene: Ramen_52 Start: 37618, Stop: 38559, Start Num: 16

Candidate Starts for Ramen_52:

(Start: 16 @37618 has 83 MA's), (26, 37657), (28, 37681), (30, 37702), (Start: 31 @37714 has 18 MA's), (33, 37726), (38, 37747), (49, 37816), (67, 37894), (74, 37945), (77, 37963), (81, 37990), (91, 38041), (102, 38119), (118, 38188), (125, 38230), (139, 38293), (142, 38326), (143, 38329), (146, 38416),

Gene: Rapunzel97_52 Start: 37614, Stop: 38555, Start Num: 16

Candidate Starts for Rapunzel97_52:

(Start: 16 @37614 has 83 MA's), (26, 37653), (28, 37677), (30, 37698), (Start: 31 @37710 has 18 MA's), (33, 37722), (38, 37743), (49, 37812), (67, 37890), (74, 37941), (77, 37959), (81, 37986), (91, 38037), (102, 38115), (118, 38184), (125, 38226), (139, 38289), (142, 38322), (143, 38325), (146, 38412), (148, 38445),

Gene: Richo_54 Start: 38545, Stop: 39252, Start Num: 22

Candidate Starts for Richo_54:

(Start: 22 @38545 has 5 MA's), (24, 38560), (26, 38569), (28, 38593), (30, 38614), (Start: 31 @38626 has 18 MA's), (33, 38638), (38, 38659), (47, 38725), (91, 38818), (111, 38926), (114, 38929), (134, 38968), (142, 39019), (143, 39022), (146, 39109), (148, 39142), (149, 39181),

Gene: Rosmarinus_51 Start: 37719, Stop: 38660, Start Num: 16

Candidate Starts for Rosmarinus_51:

(Start: 16 @37719 has 83 MA's), (26, 37758), (28, 37782), (30, 37803), (Start: 31 @37815 has 18 MA's), (33, 37827), (38, 37848), (49, 37917), (67, 37995), (74, 38046), (77, 38064), (81, 38091), (91, 38142), (102, 38220), (118, 38289), (125, 38331), (139, 38394), (142, 38427), (143, 38430), (146, 38517),

Gene: SamuelLPlaqson_52 Start: 38502, Stop: 39452, Start Num: 16

Candidate Starts for SamuelLPlaqson_52:

(Start: 16 @38502 has 83 MA's), (26, 38544), (28, 38568), (30, 38589), (Start: 31 @38601 has 18 MA's), (33, 38613), (38, 38634), (49, 38703), (Start: 60 @38760 has 1 MA's), (65, 38784), (75, 38841), (91, 38934), (118, 39081), (121, 39090), (139, 39186), (142, 39219), (143, 39222), (146, 39309), (148, 39342),

Gene: Shaobing_54 Start: 38582, Stop: 39289, Start Num: 22

Candidate Starts for Shaobing_54:

(Start: 22 @38582 has 5 MA's), (24, 38597), (26, 38606), (28, 38630), (30, 38651), (Start: 31 @38663 has 18 MA's), (33, 38675), (38, 38696), (47, 38762), (91, 38855), (111, 38963), (114, 38966), (134, 39005), (142, 39056), (143, 39059), (146, 39146), (148, 39179), (149, 39218),

Gene: ShiaSurprise_52 Start: 37928, Stop: 38869, Start Num: 16

Candidate Starts for ShiaSurprise_52:

(Start: 16 @37928 has 83 MA's), (26, 37967), (28, 37991), (30, 38012), (Start: 31 @38024 has 18 MA's), (33, 38036), (38, 38057), (49, 38126), (67, 38204), (74, 38255), (77, 38273), (81, 38300), (91, 38351), (102, 38429), (118, 38498), (125, 38540), (139, 38603), (142, 38636), (143, 38639), (146, 38726),

Gene: SirPhilip_54 Start: 38933, Stop: 39697, Start Num: 31

Candidate Starts for SirPhilip_54:

(Start: 31 @38933 has 18 MA's), (39, 38963), (46, 39008), (50, 39032), (55, 39053), (94, 39245), (100, 39278), (106, 39299), (108, 39305), (130, 39392), (146, 39530), (148, 39563),

Gene: Slimphazie_51 Start: 37614, Stop: 38555, Start Num: 16

Candidate Starts for Slimphazie_51:

(Start: 16 @37614 has 83 MA's), (26, 37653), (28, 37677), (30, 37698), (Start: 31 @37710 has 18 MA's), (33, 37722), (38, 37743), (49, 37812), (67, 37890), (74, 37941), (77, 37959), (81, 37986), (91, 38037), (102, 38115), (118, 38184), (125, 38226), (139, 38289), (142, 38322), (143, 38325), (146, 38412), (148, 38445),

Gene: Spock_51 Start: 37732, Stop: 38673, Start Num: 16

Candidate Starts for Spock_51:

(Start: 16 @37732 has 83 MA's), (26, 37771), (28, 37795), (30, 37816), (Start: 31 @37828 has 18 MA's), (33, 37840), (38, 37861), (49, 37930), (67, 38008), (74, 38059), (77, 38077), (81, 38104), (91, 38155), (102, 38233), (118, 38302), (125, 38344), (139, 38407), (142, 38440), (143, 38443), (146, 38530),

Gene: Stinson_52 Start: 38106, Stop: 39053, Start Num: 16

Candidate Starts for Stinson_52:

(Start: 16 @38106 has 83 MA's), (26, 38142), (28, 38166), (30, 38187), (33, 38211), (38, 38232), (40, 38238), (49, 38301), (52, 38322), (55, 38331), (59, 38355), (Start: 60 @38358 has 1 MA's), (65, 38382), (75, 38439), (91, 38532), (102, 38610), (118, 38682), (121, 38691), (139, 38787), (142, 38820), (143, 38823), (146, 38910), (148, 38943),

Gene: Sulley_51 Start: 37858, Stop: 38718, Start Num: 16

Candidate Starts for Sulley_51:

(Start: 16 @37858 has 83 MA's), (20, 37876), (26, 37900), (28, 37924), (Start: 31 @37957 has 18 MA's), (33, 37969), (38, 37990), (49, 38059), (75, 38107), (91, 38200), (102, 38278), (118, 38347), (125, 38389), (139, 38452), (142, 38485), (143, 38488), (146, 38575),

Gene: Sunflower1121_58 Start: 38639, Stop: 39289, Start Num: 31

Candidate Starts for Sunflower1121_58:

(13, 38513), (14, 38522), (Start: 31 @38639 has 18 MA's), (33, 38651), (39, 38666), (43, 38690), (46, 38711), (87, 38816), (88, 38822), (95, 38843), (96, 38846), (110, 38870), (132, 38939), (133, 38969), (142, 39035), (143, 39038), (146, 39122), (148, 39155), (150, 39209),

Gene: Tachez_51 Start: 37576, Stop: 38517, Start Num: 16

Candidate Starts for Tachez_51:

(Start: 16 @37576 has 83 MA's), (26, 37615), (28, 37639), (30, 37660), (Start: 31 @37672 has 18 MA's), (33, 37684), (38, 37705), (49, 37774), (67, 37852), (74, 37903), (77, 37921), (81, 37948), (91, 37999), (102, 38077), (118, 38146), (125, 38188), (139, 38251), (142, 38284), (143, 38287), (146, 38374),

Gene: TaiwanKao_53 Start: 37872, Stop: 38816, Start Num: 16

Candidate Starts for TaiwanKao_53:

(Start: 16 @37872 has 83 MA's), (26, 37914), (28, 37938), (30, 37959), (Start: 31 @37971 has 18 MA's), (33, 37983), (38, 38004), (49, 38073), (67, 38151), (74, 38202), (77, 38220), (80, 38235), (81, 38247), (91, 38298), (101, 38370), (102, 38376), (118, 38445), (125, 38487), (129, 38517), (142, 38583), (143, 38586), (146, 38673), (148, 38706),

Gene: Tierra_55 Start: 38197, Stop: 39123, Start Num: 31

Candidate Starts for Tierra_55:

(17, 38092), (Start: 31 @38197 has 18 MA's), (39, 38230), (43, 38254), (46, 38275), (48, 38287), (50, 38299), (55, 38320), (68, 38377), (69, 38383), (75, 38431), (82, 38473), (106, 38599), (108, 38605), (116, 38647), (120, 38665), (123, 38674), (126, 38707), (132, 38755), (133, 38785), (142, 38851), (143, 38854), (146, 38938), (148, 38971), (150, 39025),

Gene: TingHuaYa_52 Start: 36657, Stop: 37601, Start Num: 16

Candidate Starts for TingHuaYa_52:

(Start: 16 @36657 has 83 MA's), (26, 36693), (28, 36717), (30, 36738), (Start: 31 @36750 has 18 MA's), (32, 36759), (33, 36762), (38, 36783), (49, 36852), (Start: 60 @36909 has 1 MA's), (65, 36933), (75, 36990), (91, 37083), (101, 37155), (102, 37161), (118, 37230), (125, 37272), (142, 37368), (143, 37371), (145, 37446), (146, 37458), (148, 37491), (149, 37530),

Gene: TiniBug_52 Start: 38498, Stop: 39448, Start Num: 16

Candidate Starts for TiniBug_52:

(Start: 16 @38498 has 83 MA's), (26, 38540), (28, 38564), (30, 38585), (Start: 31 @38597 has 18 MA's), (33, 38609), (38, 38630), (49, 38699), (Start: 60 @38756 has 1 MA's), (65, 38780), (75, 38837), (91, 38930), (118, 39077), (121, 39086), (139, 39182), (142, 39215), (143, 39218), (146, 39305), (148, 39338),

Gene: Tiri_52 Start: 37906, Stop: 38847, Start Num: 16

Candidate Starts for Tiri_52:

(Start: 16 @37906 has 83 MA's), (26, 37945), (28, 37969), (30, 37990), (Start: 31 @38002 has 18 MA's), (33, 38014), (38, 38035), (49, 38104), (67, 38182), (74, 38233), (77, 38251), (81, 38278), (91, 38329), (102, 38407), (118, 38476), (125, 38518), (139, 38581), (142, 38614), (143, 38617), (146, 38704), (148, 38737),

Gene: Topper_51 Start: 37731, Stop: 38672, Start Num: 16

Candidate Starts for Topper_51:

(Start: 16 @37731 has 83 MA's), (26, 37770), (28, 37794), (30, 37815), (Start: 31 @37827 has 18 MA's), (33, 37839), (38, 37860), (49, 37929), (67, 38007), (74, 38058), (77, 38076), (81, 38103), (91, 38154), (102, 38232), (118, 38301), (125, 38343), (139, 38406), (142, 38439), (143, 38442), (146, 38529),

Gene: TreyKay_52 Start: 37816, Stop: 38760, Start Num: 16

Candidate Starts for TreyKay_52:

(Start: 16 @37816 has 83 MA's), (26, 37858), (28, 37882), (30, 37903), (Start: 31 @37915 has 18 MA's), (33, 37927), (38, 37948), (44, 37990), (49, 38017), (67, 38095), (70, 38113), (74, 38146), (77, 38164), (81, 38191), (91, 38242), (101, 38314), (102, 38320), (118, 38389), (125, 38431), (139, 38494), (142, 38527), (143, 38530), (146, 38617), (148, 38650),

Gene: TruffulaTree_51 Start: 37610, Stop: 38551, Start Num: 16

Candidate Starts for TruffulaTree_51:

(Start: 16 @37610 has 83 MA's), (26, 37649), (28, 37673), (30, 37694), (Start: 31 @37706 has 18 MA's), (33, 37718), (38, 37739), (49, 37808), (67, 37886), (74, 37937), (77, 37955), (81, 37982), (91, 38033), (102, 38111), (118, 38180), (125, 38222), (139, 38285), (142, 38318), (143, 38321), (146, 38408), (148, 38441),

Gene: Twitch_51 Start: 37733, Stop: 38674, Start Num: 16

Candidate Starts for Twitch_51:

(Start: 16 @37733 has 83 MA's), (26, 37772), (28, 37796), (30, 37817), (Start: 31 @37829 has 18 MA's), (33, 37841), (38, 37862), (49, 37931), (67, 38009), (74, 38060), (77, 38078), (81, 38105), (91, 38156), (102, 38234), (118, 38303), (125, 38345), (139, 38408), (142, 38441), (143, 38444), (146, 38531),

Gene: Urkel_52 Start: 38502, Stop: 39452, Start Num: 16

Candidate Starts for Urkel_52:

(Start: 16 @38502 has 83 MA's), (26, 38544), (28, 38568), (30, 38589), (Start: 31 @38601 has 18 MA's), (33, 38613), (38, 38634), (49, 38703), (Start: 60 @38760 has 1 MA's), (65, 38784), (75, 38841), (91, 38934), (118, 39081), (121, 39090), (139, 39186), (142, 39219), (143, 39222), (146, 39309), (148, 39342),

Gene: Validus_56 Start: 38620, Stop: 39468, Start Num: 22

Candidate Starts for Validus_56:

(6, 38473), (7, 38482), (9, 38500), (11, 38545), (Start: 22 @38620 has 5 MA's), (24, 38635), (26, 38644), (28, 38668), (30, 38689), (33, 38713), (38, 38734), (47, 38800), (63, 38869), (67, 38881), (74, 38932), (77, 38950), (81, 38977), (91, 39028), (101, 39100), (111, 39136), (114, 39139), (142, 39232), (143, 39235), (146, 39322), (148, 39355), (149, 39394),

Gene: Veliki_52 Start: 37650, Stop: 38537, Start Num: 16

Candidate Starts for Veliki_52:

(Start: 16 @37650 has 83 MA's), (20, 37668), (28, 37716), (Start: 31 @37749 has 18 MA's), (33, 37761), (38, 37782), (49, 37851), (67, 37929), (74, 37980), (77, 37998), (91, 38070), (99, 38115), (115, 38193), (134, 38253), (139, 38271), (142, 38304), (143, 38307), (146, 38394), (148, 38427),

Gene: Ximenita_58 Start: 38492, Stop: 39322, Start Num: 31

Candidate Starts for Ximenita_58:

(13, 38366), (14, 38375), (Start: 31 @38492 has 18 MA's), (33, 38504), (46, 38564), (50, 38588), (53, 38603), (55, 38609), (75, 38654), (91, 38747), (103, 38825), (109, 38843), (118, 38897), (125, 38939), (130, 38975), (135, 39011), (138, 39032), (142, 39065), (143, 39068), (146, 39152), (148, 39185),

Gene: YoureAdopted_50 Start: 37815, Stop: 38675, Start Num: 16

Candidate Starts for YoureAdopted_50:

(Start: 16 @37815 has 83 MA's), (20, 37833), (26, 37857), (28, 37881), (Start: 31 @37914 has 18 MA's), (33, 37926), (38, 37947), (49, 38016), (75, 38064), (91, 38157), (102, 38235), (118, 38304), (125, 38346), (139, 38409), (142, 38442), (143, 38445), (146, 38532), (148, 38565), (149, 38604),

Gene: Yuna_58 Start: 39426, Stop: 40163, Start Num: 31

Candidate Starts for Yuna_58:

(Start: 31 @39426 has 18 MA's), (34, 39444), (41, 39465), (43, 39480), (48, 39513), (50, 39525), (55, 39546), (61, 39567), (73, 39579), (76, 39603), (91, 39672), (92, 39684), (118, 39789), (124, 39810), (140, 39879), (141, 39891), (146, 39993), (148, 40026),

Gene: Yunkel11_54 Start: 37403, Stop: 38347, Start Num: 16

Candidate Starts for Yunkel11_54:

(Start: 16 @37403 has 83 MA's), (26, 37442), (28, 37466), (30, 37487), (Start: 31 @37499 has 18 MA's), (33, 37511), (38, 37532), (44, 37574), (49, 37601), (74, 37733), (77, 37751), (91, 37829), (102, 37907), (118, 37976), (125, 38018), (142, 38114), (143, 38117), (146, 38204),

Gene: Zabiza_46 Start: 33921, Stop: 34862, Start Num: 16

Candidate Starts for Zabiza_46:

(Start: 16 @33921 has 83 MA's), (26, 33960), (28, 33984), (30, 34005), (Start: 31 @34017 has 18 MA's), (33, 34029), (38, 34050), (49, 34119), (67, 34197), (74, 34248), (77, 34266), (81, 34293), (91, 34344), (102, 34422), (118, 34491), (125, 34533), (139, 34596), (142, 34629), (143, 34632), (146, 34719),

Gene: Zavala_53 Start: 37892, Stop: 38836, Start Num: 16

Candidate Starts for Zavala_53:

(Start: 16 @37892 has 83 MA's), (23, 37925), (26, 37934), (28, 37958), (30, 37979), (Start: 31 @37991 has 18 MA's), (33, 38003), (38, 38024), (40, 38030), (49, 38093), (67, 38171), (74, 38222),

(77, 38240), (81, 38267), (91, 38318), (102, 38396), (118, 38465), (125, 38507), (139, 38570), (142, 38603), (143, 38606), (146, 38693), (148, 38726),