

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 303226 Report

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

Pham number 303226 has 113 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Jarvi_51, Peel_51, Rosmarinus_51, CREW_51, Geraldini_54, Topper_51, Boiiii_51, Dalmuri_51, BGlluviae_51, Asayake_51, Hyperbowlee_51, Jeckyll_51, AlishaPH_51, Atiba_52, ActinUp_51, BEEST_51, Zabiza_46, Joy99_51, Inky_51, Lunahalos_51, JAWS_51, Capricorn_51, Blizzard_51, Belladonna_51, CallaLilly_51, Beezoo_53, Durfee_51, Adephagia_51, Tachez_51, Homura_51, Spock_51, Ramen_52, Twitch_51, HedwigODU_51, ShiaSurprise_52, Piatt_51, Padfoot_51, Llorens_51, CaseJules_53
- Track 2 : Illumine_54, Devera_56
- Track 3 : TiniBug_52, DrHayes_52, Anma_53, Urkel_52, SamuelLPlaqson_52
- Track 4 : TaiwanKao_53
- Track 5 : TruffulaTree_51, Tiri_52, Slimphazie_51, Rapunzel97_52, Jayhawk_52, BarrelRoll_51
- Track 6 : Megsy_53
- Track 7 : LastHope_54
- Track 8 : LaterM_52
- Track 9 : Efra2_54
- Track 10 : MacKat_46, Clipper_54
- Track 11 : Bella96_52, DartGoblin_53
- Track 12 : Apocalypse_54
- Track 13 : Bern_52, CheetoDust_50
- Track 14 : Prithvi_52, LindNT_50, TreyKay_52
- Track 15 : Zavala_53, Mynx_52
- Track 16 : Pokerus_50
- Track 17 : Ageofdapage_53
- Track 18 : Veliki_52
- Track 19 : Adonis_51, Ganymede_52, QuincyRose_50
- Track 20 : YoureAdopted_50
- Track 21 : Angelica_51, Sulley_51
- Track 22 : CrimD_51
- Track 23 : TingHuaYa_52
- Track 24 : Yunkel11_54
- Track 25 : Padpat_53, Emerson_52
- Track 26 : Guanica15_54
- Track 27 : Anaya_53
- Track 28 : MeaningOfLife_52
- Track 29 : Deby_51
- Track 30 : Curiosium_53

- Track 31 : Stinson_52
- Track 32 : Murucutumbu_52
- Track 33 : Hurricane_54, TBond007_52, Lea83_54, Pixie_53, ShedlockHolmes_55
- Track 34 : TribbleTrouble_51
- Track 35 : Keshu_56
- Track 36 : Pharb_51
- Track 37 : MacnCheese_56
- Track 38 : Applecrisp_51, Ellie_50
- Track 39 : Bryler_55, Cain_55, Phrank_55
- Track 40 : Unicorn_54, PhelpsODU_54
- Track 41 : Ekdilam_51
- Track 42 : Krueger_58, Tigress9_57
- Track 43 : November_52
- Track 44 : Tierra_55
- Track 45 : Syra333_57
- Track 46 : Ximenita_58

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

The start number called the most often in the published annotations is 6, it was called in 87 of the 110 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, Anma_53, Apocalypse_54, Asayake_51, Atiba_52, BEEST_51, BGlluviae_51, BarrelRoll_51, Beezoo_53, Bella96_52, Belladonna_51, Bern_52, Blizzard_51, Boiiii_51, CREW_51, CallaLilly_51, Capricorn_51, CaseJules_53, CheetoDust_50, Clipper_54, CrimD_51, Curiosium_53, Dalmuri_51, DartGoblin_53, 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, MacKat_46, 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:

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

- Applecrisp_51, Bryler_55, Cain_55, Ekdilam_51, Ellie_50, Hurricane_54, Keshu_56, Krueger_58, Lea83_54, MacnCheese_56, November_52, Pharb_51, PhelpsODU_54, Phrank_55, Pixie_53, ShedlockHolmes_55, Syra333_57, TBond007_52, Tierra_55, Tigress9_57, TribbleTrouble_51, Unicorn_54, Ximenita_58,

Summary by start number:

Start 6:

- Found in 90 of 113 (79.6%) of genes in pham
- Manual Annotations of this start: 87 of 110
- 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), Anma_53 (K1), Apocalypse_54 (K1), Asayake_51 (K1), Atiba_52 (K1), BEEST_51 (K1), BGlluviae_51 (K1), BarrelRoll_51 (K1), Beezoo_53 (K1), Bella96_52 (K1), Belladonna_51 (K1), Bern_52 (K1), Blizzard_51 (K1), Boiiii_51 (K1), CREW_51 (K1), CallaLilly_51 (K1), Capricorn_51 (K1), CaseJules_53 (K1), CheetoDust_50 (K1), Clipper_54 (K1), CrimD_51 (K1), Curiosium_53 (K1), Dalmuri_51 (K1), DartGoblin_53 (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), MacKat_46 (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), SamuelLPlaqsom_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 7:

- Found in 23 of 113 (20.4%) of genes in pham
- Manual Annotations of this start: 23 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applecrisp_51 (K6), Bryler_55 (K6), Cain_55 (K6), Ekdilam_51 (K6), Ellie_50 (K6), Hurricane_54 (K3), Keshu_56 (K3), Krueger_58 (K6), Lea83_54 (K3), MacnCheese_56 (K3), November_52 (K6), Pharb_51 (K3), PhelpsODU_54 (K6), Phrank_55 (K6), Pixie_53 (K3), ShedlockHolmes_55 (K3), Syra333_57 (K6), TBond007_52 (K3), Tierra_55 (K6), Tigress9_57 (K6), TribbleTrouble_51 (K3), Unicorn_54 (K6), Ximenita_58 (K6),

Summary by clusters:

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

Info for manual annotations of cluster K1:

- Start number 6 was manually annotated 87 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 7 was manually annotated 9 times for cluster K3.

Info for manual annotations of cluster K6:

- Start number 7 was manually annotated 14 times for cluster K6.

Gene Information:

Gene: ActinUp_51 Start: 37616, Stop: 38557, Start Num: 6

Candidate Starts for ActinUp_51:

(Start: 6 @37616 has 87 MA's), (12, 37655), (13, 37679), (14, 37700), (15, 37712), (17, 37724), (19, 37745), (33, 37814), (54, 37892), (61, 37943), (64, 37961), (67, 37988), (75, 38039), (91, 38117), (106, 38186), (118, 38228), (125, 38291), (128, 38324), (129, 38327), (132, 38414),

Gene: Adephagia_51 Start: 37613, Stop: 38554, Start Num: 6

Candidate Starts for Adephagia_51:

(Start: 6 @37613 has 87 MA's), (12, 37652), (13, 37676), (14, 37697), (15, 37709), (17, 37721), (19, 37742), (33, 37811), (54, 37889), (61, 37940), (64, 37958), (67, 37985), (75, 38036), (91, 38114), (106, 38183), (118, 38225), (125, 38288), (128, 38321), (129, 38324), (132, 38411),

Gene: Adonis_51 Start: 37911, Stop: 38798, Start Num: 6

Candidate Starts for Adonis_51:

(Start: 6 @37911 has 87 MA's), (8, 37929), (12, 37953), (13, 37977), (15, 38010), (17, 38022), (19, 38043), (33, 38112), (54, 38190), (61, 38241), (64, 38259), (75, 38331), (85, 38376), (101, 38454), (124, 38514), (125, 38532), (128, 38565), (129, 38568), (132, 38655), (134, 38688),

Gene: Ageofdapage_53 Start: 38596, Stop: 39540, Start Num: 6

Candidate Starts for Ageofdapage_53:

(Start: 6 @38596 has 87 MA's), (12, 38632), (13, 38656), (14, 38677), (17, 38701), (19, 38722), (20, 38728), (33, 38791), (43, 38812), (45, 38821), (52, 38848), (57, 38875), (62, 38929), (75, 39022), (90, 39094), (91, 39100), (106, 39169), (118, 39211), (125, 39274), (129, 39310), (132, 39397), (134, 39430),

Gene: AlishaPH_51 Start: 37886, Stop: 38827, Start Num: 6

Candidate Starts for AlishaPH_51:

(Start: 6 @37886 has 87 MA's), (12, 37925), (13, 37949), (14, 37970), (15, 37982), (17, 37994), (19, 38015), (33, 38084), (54, 38162), (61, 38213), (64, 38231), (67, 38258), (75, 38309), (91, 38387), (106, 38456), (118, 38498), (125, 38561), (128, 38594), (129, 38597), (132, 38684),

Gene: Anaya_53 Start: 38213, Stop: 39073, Start Num: 6

Candidate Starts for Anaya_53:

(Start: 6 @38213 has 87 MA's), (12, 38255), (13, 38279), (15, 38312), (17, 38324), (19, 38345), (33, 38414), (54, 38492), (61, 38543), (64, 38561), (67, 38588), (75, 38639), (111, 38747), (112, 38750), (128, 38840), (129, 38843), (132, 38930), (134, 38963), (135, 39002),

Gene: Angelica_51 Start: 37843, Stop: 38703, Start Num: 6

Candidate Starts for Angelica_51:

(Start: 6 @37843 has 87 MA's), (8, 37861), (12, 37885), (13, 37909), (15, 37942), (17, 37954), (19, 37975), (33, 38044), (49, 38092), (75, 38185), (91, 38263), (106, 38332), (118, 38374), (125, 38437), (128, 38470), (129, 38473), (132, 38560),

Gene: Anma_53 Start: 38502, Stop: 39452, Start Num: 6

Candidate Starts for Anma_53:

(Start: 6 @38502 has 87 MA's), (12, 38544), (13, 38568), (14, 38589), (15, 38601), (17, 38613), (19, 38634), (33, 38703), (52, 38760), (56, 38784), (62, 38841), (75, 38934), (106, 39081), (109, 39090), (125, 39186), (128, 39219), (129, 39222), (132, 39309), (134, 39342),

Gene: Apocalypse_54 Start: 38622, Stop: 39491, Start Num: 6

Candidate Starts for Apocalypse_54:

(Start: 6 @38622 has 87 MA's), (8, 38640), (12, 38664), (13, 38688), (15, 38721), (17, 38733), (19, 38754), (33, 38823), (54, 38901), (61, 38952), (64, 38970), (67, 38997), (75, 39048), (79, 39069), (93, 39126), (94, 39129), (124, 39207), (128, 39258), (129, 39261), (132, 39348),

Gene: Applecrisp_51 Start: 38300, Stop: 39112, Start Num: 7

Candidate Starts for Applecrisp_51:

(Start: 7 @38300 has 23 MA's), (11, 38315), (13, 38348), (14, 38369), (39, 38447), (61, 38540), (87, 38687), (96, 38711), (120, 38807), (123, 38828), (128, 38858), (129, 38861), (132, 38945), (134, 38978),

Gene: Asayake_51 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for Asayake_51:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: Atiba_52 Start: 37576, Stop: 38517, Start Num: 6

Candidate Starts for Atiba_52:

(Start: 6 @37576 has 87 MA's), (12, 37615), (13, 37639), (14, 37660), (15, 37672), (17, 37684), (19, 37705), (33, 37774), (54, 37852), (61, 37903), (64, 37921), (67, 37948), (75, 37999), (91, 38077), (106, 38146), (118, 38188), (125, 38251), (128, 38284), (129, 38287), (132, 38374),

Gene: BEEST_51 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for BEEST_51:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: BGlluviae_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for BGlluviae_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: BarrelRoll_51 Start: 37599, Stop: 38540, Start Num: 6

Candidate Starts for BarrelRoll_51:

(Start: 6 @37599 has 87 MA's), (12, 37638), (13, 37662), (14, 37683), (15, 37695), (17, 37707), (19, 37728), (33, 37797), (54, 37875), (61, 37926), (64, 37944), (67, 37971), (75, 38022), (91, 38100), (106, 38169), (118, 38211), (125, 38274), (128, 38307), (129, 38310), (132, 38397), (134, 38430),

Gene: Beezoo_53 Start: 38574, Stop: 39515, Start Num: 6

Candidate Starts for Beezoo_53:

(Start: 6 @38574 has 87 MA's), (12, 38613), (13, 38637), (14, 38658), (15, 38670), (17, 38682), (19, 38703), (33, 38772), (54, 38850), (61, 38901), (64, 38919), (67, 38946), (75, 38997), (91, 39075), (106, 39144), (118, 39186), (125, 39249), (128, 39282), (129, 39285), (132, 39372),

Gene: Bella96_52 Start: 38440, Stop: 39297, Start Num: 6

Candidate Starts for Bella96_52:

(Start: 6 @38440 has 87 MA's), (12, 38482), (13, 38506), (14, 38527), (15, 38539), (17, 38551), (19, 38572), (24, 38605), (62, 38686), (75, 38779), (84, 38815), (91, 38857), (99, 38890), (107, 38929), (125, 39031), (128, 39064), (129, 39067), (132, 39154), (134, 39187),

Gene: Belladonna_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Belladonna_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: Bern_52 Start: 36646, Stop: 37506, Start Num: 6

Candidate Starts for Bern_52:

(Start: 6 @36646 has 87 MA's), (8, 36664), (12, 36688), (13, 36712), (14, 36733), (15, 36745), (17, 36757), (19, 36778), (33, 36847), (54, 36925), (61, 36976), (64, 36994), (67, 37021), (75, 37072), (111, 37180), (112, 37183), (125, 37240), (128, 37273), (129, 37276), (132, 37363), (134, 37396),

Gene: Blizzard_51 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for Blizzard_51:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: Boiiii_51 Start: 37930, Stop: 38871, Start Num: 6

Candidate Starts for Boiiii_51:

(Start: 6 @37930 has 87 MA's), (12, 37969), (13, 37993), (14, 38014), (15, 38026), (17, 38038), (19, 38059), (33, 38128), (54, 38206), (61, 38257), (64, 38275), (67, 38302), (75, 38353), (91, 38431), (106, 38500), (118, 38542), (125, 38605), (128, 38638), (129, 38641), (132, 38728),

Gene: Bryler_55 Start: 37408, Stop: 38334, Start Num: 7

Candidate Starts for Bryler_55:

(2, 37285), (3, 37303), (Start: 7 @37408 has 23 MA's), (12, 37441), (13, 37465), (14, 37486), (15, 37498), (17, 37510), (19, 37531), (34, 37588), (35, 37594), (46, 37642), (54, 37684), (72, 37810), (74, 37816), (80, 37858), (86, 37876), (87, 37885), (97, 37918), (108, 37966), (116, 37996), (128, 38062), (129, 38065), (132, 38149), (134, 38182), (136, 38236),

Gene: CREW_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for CREW_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: Cain_55 Start: 37396, Stop: 38322, Start Num: 7

Candidate Starts for Cain_55:

(2, 37273), (3, 37291), (Start: 7 @37396 has 23 MA's), (12, 37429), (13, 37453), (14, 37474), (15, 37486), (17, 37498), (19, 37519), (34, 37576), (35, 37582), (46, 37630), (54, 37672), (72, 37798), (74, 37804), (80, 37846), (86, 37864), (87, 37873), (97, 37906), (108, 37954), (116, 37984), (128, 38050), (129, 38053), (132, 38137), (134, 38170), (136, 38224),

Gene: CallaLilly_51 Start: 37654, Stop: 38595, Start Num: 6

Candidate Starts for CallaLilly_51:

(Start: 6 @37654 has 87 MA's), (12, 37693), (13, 37717), (14, 37738), (15, 37750), (17, 37762), (19, 37783), (33, 37852), (54, 37930), (61, 37981), (64, 37999), (67, 38026), (75, 38077), (91, 38155), (106, 38224), (118, 38266), (125, 38329), (128, 38362), (129, 38365), (132, 38452),

Gene: Capricorn_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Capricorn_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106,

38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: CaseJules_53 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for CaseJules_53:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: CheetoDust_50 Start: 37100, Stop: 37960, Start Num: 6

Candidate Starts for CheetoDust_50:

(Start: 6 @37100 has 87 MA's), (8, 37118), (12, 37142), (13, 37166), (14, 37187), (15, 37199), (17, 37211), (19, 37232), (33, 37301), (54, 37379), (61, 37430), (64, 37448), (67, 37475), (75, 37526), (111, 37634), (112, 37637), (125, 37694), (128, 37727), (129, 37730), (132, 37817), (134, 37850),

Gene: Clipper_54 Start: 38247, Stop: 39134, Start Num: 6

Candidate Starts for Clipper_54:

(Start: 6 @38247 has 87 MA's), (12, 38289), (13, 38313), (14, 38334), (15, 38346), (17, 38358), (19, 38379), (33, 38448), (54, 38526), (64, 38595), (75, 38667), (85, 38712), (101, 38790), (124, 38850), (128, 38901), (129, 38904), (132, 38991), (134, 39024),

Gene: CrimD_51 Start: 37837, Stop: 38787, Start Num: 6

Candidate Starts for CrimD_51:

(Start: 6 @37837 has 87 MA's), (12, 37879), (13, 37903), (14, 37924), (15, 37936), (17, 37948), (19, 37969), (33, 38038), (43, 38059), (52, 38095), (62, 38176), (75, 38269), (90, 38341), (91, 38347), (106, 38416), (116, 38443), (118, 38458), (125, 38521), (128, 38554), (129, 38557), (132, 38644), (134, 38677),

Gene: Curiosium_53 Start: 36518, Stop: 37456, Start Num: 6

Candidate Starts for Curiosium_53:

(Start: 6 @36518 has 87 MA's), (12, 36548), (13, 36572), (14, 36593), (15, 36605), (17, 36617), (19, 36638), (20, 36644), (33, 36707), (51, 36764), (52, 36767), (62, 36848), (91, 37019), (106, 37088), (128, 37223), (129, 37226), (131, 37301), (132, 37313), (134, 37346),

Gene: Dalmuri_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Dalmuri_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: DartGoblin_53 Start: 38412, Stop: 39269, Start Num: 6

Candidate Starts for DartGoblin_53:

(Start: 6 @38412 has 87 MA's), (12, 38454), (13, 38478), (14, 38499), (15, 38511), (17, 38523), (19, 38544), (24, 38577), (62, 38658), (75, 38751), (84, 38787), (91, 38829), (99, 38862), (107, 38901), (125, 39003), (128, 39036), (129, 39039), (132, 39126), (134, 39159),

Gene: Deby_51 Start: 37859, Stop: 38731, Start Num: 6

Candidate Starts for Deby_51:

(Start: 6 @37859 has 87 MA's), (12, 37898), (13, 37922), (14, 37943), (15, 37955), (17, 37967), (19, 37988), (33, 38057), (54, 38141), (61, 38192), (64, 38210), (67, 38237), (75, 38288), (79, 38309), (93, 38366), (94, 38369), (125, 38465), (128, 38498), (129, 38501), (132, 38588),

Gene: Devera_56 Start: 38363, Stop: 39304, Start Num: 6

Candidate Starts for Devera_56:

(Start: 6 @38363 has 87 MA's), (12, 38399), (13, 38423), (14, 38444), (17, 38468), (19, 38489), (20, 38495), (33, 38558), (43, 38579), (52, 38615), (54, 38636), (62, 38696), (75, 38789), (91, 38867), (106, 38936), (109, 38945), (128, 39071), (129, 39074), (132, 39161), (134, 39194),

Gene: DrHayes_52 Start: 38502, Stop: 39452, Start Num: 6

Candidate Starts for DrHayes_52:

(Start: 6 @38502 has 87 MA's), (12, 38544), (13, 38568), (14, 38589), (15, 38601), (17, 38613), (19, 38634), (33, 38703), (52, 38760), (56, 38784), (62, 38841), (75, 38934), (106, 39081), (109, 39090), (125, 39186), (128, 39219), (129, 39222), (132, 39309), (134, 39342),

Gene: Durfee_51 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for Durfee_51:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: Efra2_54 Start: 37447, Stop: 38388, Start Num: 6

Candidate Starts for Efra2_54:

(Start: 6 @37447 has 87 MA's), (12, 37486), (13, 37510), (14, 37531), (15, 37543), (17, 37555), (19, 37576), (54, 37723), (61, 37774), (64, 37792), (75, 37870), (91, 37948), (106, 38017), (118, 38059), (128, 38155), (129, 38158), (131, 38233), (132, 38245), (134, 38278),

Gene: Ekdilam_51 Start: 38242, Stop: 39063, Start Num: 7

Candidate Starts for Ekdilam_51:

(Start: 7 @38242 has 23 MA's), (11, 38254), (13, 38287), (14, 38308), (37, 38380), (42, 38395), (48, 38425), (65, 38527), (73, 38584), (75, 38605), (105, 38722), (117, 38764), (128, 38824), (129, 38827), (132, 38911), (134, 38944), (136, 38998),

Gene: Ellie_50 Start: 37992, Stop: 38804, Start Num: 7

Candidate Starts for Ellie_50:

(Start: 7 @37992 has 23 MA's), (11, 38007), (13, 38040), (14, 38061), (39, 38139), (61, 38232), (87, 38379), (96, 38403), (120, 38499), (123, 38520), (128, 38550), (129, 38553), (132, 38637), (134, 38670),

Gene: Emerson_52 Start: 37607, Stop: 38551, Start Num: 6

Candidate Starts for Emerson_52:

(Start: 6 @37607 has 87 MA's), (11, 37640), (12, 37649), (13, 37673), (14, 37694), (15, 37706), (17, 37718), (19, 37739), (20, 37745), (33, 37808), (54, 37886), (61, 37937), (64, 37955), (67, 37982), (75, 38033), (91, 38111), (106, 38180), (118, 38222), (125, 38285), (128, 38318), (129, 38321), (132, 38408),

Gene: Ganymede_52 Start: 38046, Stop: 38933, Start Num: 6

Candidate Starts for Ganymede_52:

(Start: 6 @38046 has 87 MA's), (8, 38064), (12, 38088), (13, 38112), (15, 38145), (17, 38157), (19, 38178), (33, 38247), (54, 38325), (61, 38376), (64, 38394), (75, 38466), (85, 38511), (101, 38589), (124, 38649), (125, 38667), (128, 38700), (129, 38703), (132, 38790), (134, 38823),

Gene: Geraldini_54 Start: 38663, Stop: 39604, Start Num: 6

Candidate Starts for Geraldini_54:

(Start: 6 @38663 has 87 MA's), (12, 38702), (13, 38726), (14, 38747), (15, 38759), (17, 38771), (19, 38792), (33, 38861), (54, 38939), (61, 38990), (64, 39008), (67, 39035), (75, 39086), (91, 39164), (106, 39233), (118, 39275), (125, 39338), (128, 39371), (129, 39374), (132, 39461),

Gene: Guanica15_54 Start: 37404, Stop: 38348, Start Num: 6

Candidate Starts for Guanica15_54:

(Start: 6 @37404 has 87 MA's), (12, 37443), (13, 37467), (14, 37488), (15, 37500), (17, 37512), (19, 37533), (26, 37575), (33, 37602), (61, 37734), (64, 37752), (75, 37830), (91, 37908), (106, 37977), (118, 38019), (128, 38115), (129, 38118), (130, 38130), (132, 38205),

Gene: HedwigODU_51 Start: 37616, Stop: 38557, Start Num: 6

Candidate Starts for HedwigODU_51:

(Start: 6 @37616 has 87 MA's), (12, 37655), (13, 37679), (14, 37700), (15, 37712), (17, 37724), (19, 37745), (33, 37814), (54, 37892), (61, 37943), (64, 37961), (67, 37988), (75, 38039), (91, 38117), (106, 38186), (118, 38228), (125, 38291), (128, 38324), (129, 38327), (132, 38414),

Gene: Homura_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Homura_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: Hurricane_54 Start: 38185, Stop: 39534, Start Num: 7

Candidate Starts for Hurricane_54:

(3, 38074), (4, 38110), (5, 38119), (Start: 7 @38185 has 23 MA's), (10, 38206), (12, 38218), (13, 38242), (14, 38263), (18, 38302), (31, 38449), (36, 38506), (44, 38548), (59, 38689), (61, 38713), (63, 38728), (71, 38806), (75, 38851), (76, 38863), (78, 38869), (98, 39022), (102, 39094), (115, 39160), (132, 39391), (134, 39424),

Gene: Hyperbowlee_51 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for Hyperbowlee_51:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: Illumine_54 Start: 38365, Stop: 39306, Start Num: 6

Candidate Starts for Illumine_54:

(Start: 6 @38365 has 87 MA's), (12, 38401), (13, 38425), (14, 38446), (17, 38470), (19, 38491), (20, 38497), (33, 38560), (43, 38581), (52, 38617), (54, 38638), (62, 38698), (75, 38791), (91, 38869), (106, 38938), (109, 38947), (128, 39073), (129, 39076), (132, 39163), (134, 39196),

Gene: Inky_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Inky_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: JAWS_51 Start: 37605, Stop: 38546, Start Num: 6

Candidate Starts for JAWS_51:

(Start: 6 @37605 has 87 MA's), (12, 37644), (13, 37668), (14, 37689), (15, 37701), (17, 37713), (19, 37734), (33, 37803), (54, 37881), (61, 37932), (64, 37950), (67, 37977), (75, 38028), (91, 38106), (106, 38175), (118, 38217), (125, 38280), (128, 38313), (129, 38316), (132, 38403),

Gene: Jarvi_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Jarvi_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106,

38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: Jayhawk_52 Start: 37614, Stop: 38555, Start Num: 6

Candidate Starts for Jayhawk_52:

(Start: 6 @37614 has 87 MA's), (12, 37653), (13, 37677), (14, 37698), (15, 37710), (17, 37722), (19, 37743), (33, 37812), (54, 37890), (61, 37941), (64, 37959), (67, 37986), (75, 38037), (91, 38115), (106, 38184), (118, 38226), (125, 38289), (128, 38322), (129, 38325), (132, 38412), (134, 38445),

Gene: Jeckyll_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Jeckyll_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: Joy99_51 Start: 37660, Stop: 38601, Start Num: 6

Candidate Starts for Joy99_51:

(Start: 6 @37660 has 87 MA's), (12, 37699), (13, 37723), (14, 37744), (15, 37756), (17, 37768), (19, 37789), (33, 37858), (54, 37936), (61, 37987), (64, 38005), (67, 38032), (75, 38083), (91, 38161), (106, 38230), (118, 38272), (125, 38335), (128, 38368), (129, 38371), (132, 38458),

Gene: Keshu_56 Start: 38252, Stop: 39637, Start Num: 7

Candidate Starts for Keshu_56:

(3, 38141), (4, 38177), (5, 38186), (Start: 7 @38252 has 23 MA's), (10, 38273), (12, 38285), (13, 38309), (14, 38330), (18, 38369), (30, 38447), (36, 38534), (44, 38576), (59, 38717), (61, 38741), (63, 38756), (68, 38792), (70, 38816), (71, 38834), (75, 38879), (76, 38891), (78, 38897), (82, 38942), (86, 38996), (114, 39206), (127, 39365), (132, 39470), (134, 39503),

Gene: Krueger_58 Start: 38393, Stop: 39313, Start Num: 7

Candidate Starts for Krueger_58:

(Start: 7 @38393 has 23 MA's), (9, 38405), (12, 38420), (13, 38444), (14, 38465), (22, 38531), (46, 38576), (61, 38669), (74, 38747), (75, 38765), (83, 38819), (88, 38861), (108, 38945), (116, 38975), (128, 39041), (129, 39044), (132, 39128), (134, 39161), (136, 39215),

Gene: LastHope_54 Start: 36888, Stop: 37739, Start Num: 6

Candidate Starts for LastHope_54:

(Start: 6 @36888 has 87 MA's), (12, 36924), (13, 36948), (14, 36969), (15, 36981), (17, 36993), (19, 37014), (62, 37128), (75, 37221), (77, 37233), (90, 37293), (91, 37299), (106, 37368), (118, 37410), (128, 37506), (129, 37509), (131, 37584), (132, 37596), (134, 37629), (135, 37668),

Gene: LaterM_52 Start: 38493, Stop: 39431, Start Num: 6

Candidate Starts for LaterM_52:

(Start: 6 @38493 has 87 MA's), (12, 38529), (13, 38553), (14, 38574), (17, 38598), (19, 38619), (20, 38625), (26, 38661), (33, 38688), (54, 38766), (61, 38817), (64, 38835), (75, 38913), (90, 38985), (91, 38991), (106, 39060), (118, 39102), (125, 39165), (128, 39198), (129, 39201), (132, 39288), (134, 39321),

Gene: Lea83_54 Start: 38238, Stop: 39587, Start Num: 7

Candidate Starts for Lea83_54:

(3, 38127), (4, 38163), (5, 38172), (Start: 7 @38238 has 23 MA's), (10, 38259), (12, 38271), (13, 38295), (14, 38316), (18, 38355), (31, 38502), (36, 38559), (44, 38601), (59, 38742), (61, 38766), (63, 38781), (71, 38859), (75, 38904), (76, 38916), (78, 38922), (98, 39075), (102, 39147), (115, 39213), (132, 39444), (134, 39477),

Gene: LindNT_50 Start: 37816, Stop: 38760, Start Num: 6

Candidate Starts for LindNT_50:

(Start: 6 @37816 has 87 MA's), (12, 37858), (13, 37882), (14, 37903), (15, 37915), (17, 37927), (19, 37948), (26, 37990), (33, 38017), (54, 38095), (58, 38113), (61, 38146), (64, 38164), (67, 38191), (75, 38242), (90, 38314), (91, 38320), (106, 38389), (118, 38431), (125, 38494), (128, 38527), (129, 38530), (132, 38617), (134, 38650),

Gene: Llorens_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Llorens_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: Lunahalos_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Lunahalos_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: MacKat_46 Start: 33131, Stop: 34018, Start Num: 6

Candidate Starts for MacKat_46:

(Start: 6 @33131 has 87 MA's), (12, 33173), (13, 33197), (14, 33218), (15, 33230), (17, 33242), (19, 33263), (33, 33332), (54, 33410), (64, 33479), (75, 33551), (85, 33596), (101, 33674), (124, 33734), (128, 33785), (129, 33788), (132, 33875), (134, 33908),

Gene: MacnCheese_56 Start: 39191, Stop: 40129, Start Num: 7

Candidate Starts for MacnCheese_56:

(1, 39053), (3, 39080), (4, 39116), (5, 39125), (Start: 7 @39191 has 23 MA's), (10, 39212), (12, 39224), (13, 39248), (15, 39281), (19, 39314), (23, 39335), (24, 39347), (28, 39371), (38, 39467), (41, 39482), (52, 39572), (53, 39590), (61, 39653), (63, 39668), (65, 39674), (66, 39686), (68, 39704), (78, 39752), (119, 39827), (132, 39986), (133, 40007), (134, 40019),

Gene: MeaningOfLife_52 Start: 38540, Stop: 39427, Start Num: 6

Candidate Starts for MeaningOfLife_52:

(Start: 6 @38540 has 87 MA's), (8, 38558), (15, 38639), (17, 38651), (19, 38672), (33, 38741), (54, 38819), (64, 38888), (75, 38960), (85, 39005), (101, 39083), (124, 39143), (128, 39194), (129, 39197), (132, 39284), (134, 39317),

Gene: Megsy_53 Start: 37875, Stop: 38825, Start Num: 6

Candidate Starts for Megsy_53:

(Start: 6 @37875 has 87 MA's), (12, 37917), (13, 37941), (14, 37962), (15, 37974), (17, 37986), (19, 38007), (33, 38076), (52, 38133), (62, 38214), (75, 38307), (90, 38379), (91, 38385), (106, 38454), (118, 38496), (122, 38526), (125, 38559), (128, 38592), (129, 38595), (132, 38682), (134, 38715),

Gene: Murucutumbu_52 Start: 38586, Stop: 39530, Start Num: 6

Candidate Starts for Murucutumbu_52:

(Start: 6 @38586 has 87 MA's), (12, 38622), (13, 38646), (14, 38667), (17, 38691), (19, 38712), (20, 38718), (33, 38781), (43, 38802), (52, 38838), (75, 39012), (91, 39090), (106, 39159), (109, 39168), (118, 39201), (125, 39264), (129, 39300), (132, 39387), (134, 39420),

Gene: Mynx_52 Start: 37932, Stop: 38876, Start Num: 6

Candidate Starts for Mynx_52:

(Start: 6 @37932 has 87 MA's), (11, 37965), (12, 37974), (13, 37998), (14, 38019), (15, 38031), (17, 38043), (19, 38064), (20, 38070), (33, 38133), (54, 38211), (61, 38262), (64, 38280), (67, 38307), (75, 38358), (91, 38436), (106, 38505), (118, 38547), (125, 38610), (128, 38643), (129, 38646), (132, 38733), (134, 38766),

Gene: November_52 Start: 38446, Stop: 39297, Start Num: 7

Candidate Starts for November_52:

(3, 38335), (Start: 7 @38446 has 23 MA's), (11, 38461), (13, 38494), (14, 38515), (21, 38563), (47, 38635), (55, 38671), (61, 38716), (89, 38866), (106, 38944), (110, 38956), (120, 39007), (128, 39058), (129, 39061), (132, 39145), (134, 39178), (136, 39232),

Gene: Padfoot_51 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for Padfoot_51:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: Padpat_53 Start: 37607, Stop: 38551, Start Num: 6

Candidate Starts for Padpat_53:

(Start: 6 @37607 has 87 MA's), (11, 37640), (12, 37649), (13, 37673), (14, 37694), (15, 37706), (17, 37718), (19, 37739), (20, 37745), (33, 37808), (54, 37886), (61, 37937), (64, 37955), (67, 37982), (75, 38033), (91, 38111), (106, 38180), (118, 38222), (125, 38285), (128, 38318), (129, 38321), (132, 38408),

Gene: Peel_51 Start: 37733, Stop: 38674, Start Num: 6

Candidate Starts for Peel_51:

(Start: 6 @37733 has 87 MA's), (12, 37772), (13, 37796), (14, 37817), (15, 37829), (17, 37841), (19, 37862), (33, 37931), (54, 38009), (61, 38060), (64, 38078), (67, 38105), (75, 38156), (91, 38234), (106, 38303), (118, 38345), (125, 38408), (128, 38441), (129, 38444), (132, 38531),

Gene: Pharb_51 Start: 36939, Stop: 38099, Start Num: 7

Candidate Starts for Pharb_51:

(3, 36828), (4, 36864), (5, 36873), (Start: 7 @36939 has 23 MA's), (10, 36960), (12, 36972), (13, 36996), (14, 37017), (17, 37041), (19, 37062), (28, 37119), (36, 37164), (44, 37206), (59, 37278), (61, 37302), (63, 37317), (75, 37446), (76, 37455), (78, 37461), (81, 37473), (82, 37506), (92, 37581), (100, 37620), (132, 37932), (134, 37965),

Gene: PhelpsODU_54 Start: 37429, Stop: 38442, Start Num: 7

Candidate Starts for PhelpsODU_54:

(Start: 7 @37429 has 23 MA's), (12, 37459), (13, 37483), (14, 37504), (15, 37516), (17, 37528), (18, 37543), (19, 37549), (34, 37621), (54, 37723), (61, 37774), (72, 37849), (74, 37855), (75, 37873), (80, 37897), (86, 37915), (87, 37924), (97, 37957), (108, 38005), (116, 38032), (128, 38188), (129, 38191), (132, 38275), (134, 38308), (136, 38362),

Gene: Phrank_55 Start: 37386, Stop: 38312, Start Num: 7

Candidate Starts for Phrank_55:

(2, 37263), (3, 37281), (Start: 7 @37386 has 23 MA's), (12, 37419), (13, 37443), (14, 37464), (15, 37476), (17, 37488), (19, 37509), (34, 37566), (35, 37572), (46, 37620), (54, 37662), (72, 37788), (74, 37794), (80, 37836), (86, 37854), (87, 37863), (97, 37896), (108, 37944), (116, 37974), (128, 38040), (129, 38043), (132, 38127), (134, 38160), (136, 38214),

Gene: Piatt_51 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for Piatt_51:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: Pixie_53 Start: 37717, Stop: 39072, Start Num: 7

Candidate Starts for Pixie_53:

(3, 37606), (4, 37642), (5, 37651), (Start: 7 @37717 has 23 MA's), (10, 37738), (12, 37750), (13, 37774), (14, 37795), (18, 37834), (31, 37981), (36, 38038), (44, 38080), (59, 38221), (61, 38245), (63, 38260), (71, 38344), (75, 38389), (76, 38401), (78, 38407), (98, 38560), (102, 38632), (115, 38698), (132, 38929), (134, 38962),

Gene: Pokerus_50 Start: 37654, Stop: 38604, Start Num: 6

Candidate Starts for Pokerus_50:

(Start: 6 @37654 has 87 MA's), (12, 37696), (13, 37720), (14, 37741), (15, 37753), (17, 37765), (19, 37786), (33, 37855), (52, 37912), (56, 37936), (62, 37993), (75, 38086), (77, 38098), (91, 38164), (106, 38233), (118, 38275), (125, 38338), (128, 38371), (129, 38374), (132, 38461),

Gene: Prithvi_52 Start: 37816, Stop: 38760, Start Num: 6

Candidate Starts for Prithvi_52:

(Start: 6 @37816 has 87 MA's), (12, 37858), (13, 37882), (14, 37903), (15, 37915), (17, 37927), (19, 37948), (26, 37990), (33, 38017), (54, 38095), (58, 38113), (61, 38146), (64, 38164), (67, 38191), (75, 38242), (90, 38314), (91, 38320), (106, 38389), (118, 38431), (125, 38494), (128, 38527), (129, 38530), (132, 38617), (134, 38650),

Gene: QuincyRose_50 Start: 38046, Stop: 38933, Start Num: 6

Candidate Starts for QuincyRose_50:

(Start: 6 @38046 has 87 MA's), (8, 38064), (12, 38088), (13, 38112), (15, 38145), (17, 38157), (19, 38178), (33, 38247), (54, 38325), (61, 38376), (64, 38394), (75, 38466), (85, 38511), (101, 38589), (124, 38649), (125, 38667), (128, 38700), (129, 38703), (132, 38790), (134, 38823),

Gene: Ramen_52 Start: 37618, Stop: 38559, Start Num: 6

Candidate Starts for Ramen_52:

(Start: 6 @37618 has 87 MA's), (12, 37657), (13, 37681), (14, 37702), (15, 37714), (17, 37726), (19, 37747), (33, 37816), (54, 37894), (61, 37945), (64, 37963), (67, 37990), (75, 38041), (91, 38119), (106, 38188), (118, 38230), (125, 38293), (128, 38326), (129, 38329), (132, 38416),

Gene: Rapunzel97_52 Start: 37614, Stop: 38555, Start Num: 6

Candidate Starts for Rapunzel97_52:

(Start: 6 @37614 has 87 MA's), (12, 37653), (13, 37677), (14, 37698), (15, 37710), (17, 37722), (19, 37743), (33, 37812), (54, 37890), (61, 37941), (64, 37959), (67, 37986), (75, 38037), (91, 38115), (106, 38184), (118, 38226), (125, 38289), (128, 38322), (129, 38325), (132, 38412), (134, 38445),

Gene: Rosmarinus_51 Start: 37719, Stop: 38660, Start Num: 6

Candidate Starts for Rosmarinus_51:

(Start: 6 @37719 has 87 MA's), (12, 37758), (13, 37782), (14, 37803), (15, 37815), (17, 37827), (19, 37848), (33, 37917), (54, 37995), (61, 38046), (64, 38064), (67, 38091), (75, 38142), (91, 38220), (106, 38289), (118, 38331), (125, 38394), (128, 38427), (129, 38430), (132, 38517),

Gene: SamuelLPlaqson_52 Start: 38502, Stop: 39452, Start Num: 6

Candidate Starts for SamuelLPlaqson_52:

(Start: 6 @38502 has 87 MA's), (12, 38544), (13, 38568), (14, 38589), (15, 38601), (17, 38613), (19, 38634), (33, 38703), (52, 38760), (56, 38784), (62, 38841), (75, 38934), (106, 39081), (109, 39090), (125, 39186), (128, 39219), (129, 39222), (132, 39309), (134, 39342),

Gene: ShedlockHolmes_55 Start: 38242, Stop: 39591, Start Num: 7

Candidate Starts for ShedlockHolmes_55:

(3, 38131), (4, 38167), (5, 38176), (Start: 7 @38242 has 23 MA's), (10, 38263), (12, 38275), (13, 38299), (14, 38320), (18, 38359), (31, 38506), (36, 38563), (44, 38605), (59, 38746), (61, 38770), (63, 38785), (71, 38863), (75, 38908), (76, 38920), (78, 38926), (98, 39079), (102, 39151), (115, 39217), (132, 39448), (134, 39481),

Gene: ShiaSurprise_52 Start: 37928, Stop: 38869, Start Num: 6

Candidate Starts for ShiaSurprise_52:

(Start: 6 @37928 has 87 MA's), (12, 37967), (13, 37991), (14, 38012), (15, 38024), (17, 38036), (19, 38057), (33, 38126), (54, 38204), (61, 38255), (64, 38273), (67, 38300), (75, 38351), (91, 38429), (106, 38498), (118, 38540), (125, 38603), (128, 38636), (129, 38639), (132, 38726),

Gene: Slimphazie_51 Start: 37614, Stop: 38555, Start Num: 6

Candidate Starts for Slimphazie_51:

(Start: 6 @37614 has 87 MA's), (12, 37653), (13, 37677), (14, 37698), (15, 37710), (17, 37722), (19, 37743), (33, 37812), (54, 37890), (61, 37941), (64, 37959), (67, 37986), (75, 38037), (91, 38115), (106, 38184), (118, 38226), (125, 38289), (128, 38322), (129, 38325), (132, 38412), (134, 38445),

Gene: Spock_51 Start: 37732, Stop: 38673, Start Num: 6

Candidate Starts for Spock_51:

(Start: 6 @37732 has 87 MA's), (12, 37771), (13, 37795), (14, 37816), (15, 37828), (17, 37840), (19, 37861), (33, 37930), (54, 38008), (61, 38059), (64, 38077), (67, 38104), (75, 38155), (91, 38233), (106, 38302), (118, 38344), (125, 38407), (128, 38440), (129, 38443), (132, 38530),

Gene: Stinson_52 Start: 38106, Stop: 39053, Start Num: 6

Candidate Starts for Stinson_52:

(Start: 6 @38106 has 87 MA's), (12, 38142), (13, 38166), (14, 38187), (17, 38211), (19, 38232), (20, 38238), (33, 38301), (43, 38322), (45, 38331), (51, 38355), (52, 38358), (56, 38382), (62, 38439), (75, 38532), (91, 38610), (106, 38682), (109, 38691), (125, 38787), (128, 38820), (129, 38823), (132, 38910), (134, 38943),

Gene: Sulley_51 Start: 37858, Stop: 38718, Start Num: 6

Candidate Starts for Sulley_51:

(Start: 6 @37858 has 87 MA's), (8, 37876), (12, 37900), (13, 37924), (15, 37957), (17, 37969), (19, 37990), (33, 38059), (49, 38107), (75, 38200), (91, 38278), (106, 38347), (118, 38389), (125, 38452), (128, 38485), (129, 38488), (132, 38575),

Gene: Syra333_57 Start: 38303, Stop: 39322, Start Num: 7

Candidate Starts for Syra333_57:

(2, 38186), (Start: 7 @38303 has 23 MA's), (9, 38315), (12, 38330), (13, 38354), (14, 38375), (22, 38441), (25, 38462), (27, 38465), (29, 38489), (46, 38585), (61, 38678), (75, 38774), (83, 38828), (88, 38870), (108, 38954), (116, 38984), (128, 39050), (129, 39053), (132, 39137), (134, 39170), (136, 39224),

Gene: TBond007_52 Start: 37716, Stop: 39071, Start Num: 7

Candidate Starts for TBond007_52:

(3, 37605), (4, 37641), (5, 37650), (Start: 7 @37716 has 23 MA's), (10, 37737), (12, 37749), (13, 37773), (14, 37794), (18, 37833), (31, 37980), (36, 38037), (44, 38079), (59, 38220), (61, 38244), (63, 38259), (71, 38343), (75, 38388), (76, 38400), (78, 38406), (98, 38559), (102, 38631), (115, 38697), (132, 38928), (134, 38961),

Gene: Tachez_51 Start: 37576, Stop: 38517, Start Num: 6

Candidate Starts for Tachez_51:

(Start: 6 @37576 has 87 MA's), (12, 37615), (13, 37639), (14, 37660), (15, 37672), (17, 37684), (19, 37705), (33, 37774), (54, 37852), (61, 37903), (64, 37921), (67, 37948), (75, 37999), (91, 38077), (106, 38146), (118, 38188), (125, 38251), (128, 38284), (129, 38287), (132, 38374),

Gene: TaiwanKao_53 Start: 37872, Stop: 38816, Start Num: 6

Candidate Starts for TaiwanKao_53:

(Start: 6 @37872 has 87 MA's), (12, 37914), (13, 37938), (14, 37959), (15, 37971), (17, 37983), (19, 38004), (33, 38073), (54, 38151), (61, 38202), (64, 38220), (66, 38235), (67, 38247), (75, 38298), (90, 38370), (91, 38376), (106, 38445), (118, 38487), (122, 38517), (128, 38583), (129, 38586), (132, 38673), (134, 38706),

Gene: Tierra_55 Start: 38197, Stop: 39123, Start Num: 7

Candidate Starts for Tierra_55:

(3, 38092), (Start: 7 @38197 has 23 MA's), (12, 38230), (13, 38254), (14, 38275), (15, 38287), (17, 38299), (19, 38320), (34, 38377), (35, 38383), (46, 38431), (54, 38473), (72, 38599), (74, 38605), (80, 38647), (86, 38665), (87, 38674), (97, 38707), (108, 38755), (116, 38785), (128, 38851), (129, 38854), (132, 38938), (134, 38971), (136, 39025),

Gene: Tigress9_57 Start: 38393, Stop: 39313, Start Num: 7

Candidate Starts for Tigress9_57:

(Start: 7 @38393 has 23 MA's), (9, 38405), (12, 38420), (13, 38444), (14, 38465), (22, 38531), (46, 38576), (61, 38669), (74, 38747), (75, 38765), (83, 38819), (88, 38861), (108, 38945), (116, 38975), (128, 39041), (129, 39044), (132, 39128), (134, 39161), (136, 39215),

Gene: TingHuaYa_52 Start: 36657, Stop: 37601, Start Num: 6

Candidate Starts for TingHuaYa_52:

(Start: 6 @36657 has 87 MA's), (12, 36693), (13, 36717), (14, 36738), (15, 36750), (16, 36759), (17, 36762), (19, 36783), (33, 36852), (52, 36909), (56, 36933), (62, 36990), (75, 37083), (90, 37155), (91, 37161), (106, 37230), (118, 37272), (128, 37368), (129, 37371), (131, 37446), (132, 37458), (134, 37491), (135, 37530),

Gene: TiniBug_52 Start: 38498, Stop: 39448, Start Num: 6

Candidate Starts for TiniBug_52:

(Start: 6 @38498 has 87 MA's), (12, 38540), (13, 38564), (14, 38585), (15, 38597), (17, 38609), (19, 38630), (33, 38699), (52, 38756), (56, 38780), (62, 38837), (75, 38930), (106, 39077), (109, 39086), (125, 39182), (128, 39215), (129, 39218), (132, 39305), (134, 39338),

Gene: Tiri_52 Start: 37906, Stop: 38847, Start Num: 6

Candidate Starts for Tiri_52:

(Start: 6 @37906 has 87 MA's), (12, 37945), (13, 37969), (14, 37990), (15, 38002), (17, 38014), (19, 38035), (33, 38104), (54, 38182), (61, 38233), (64, 38251), (67, 38278), (75, 38329), (91, 38407), (106, 38476), (118, 38518), (125, 38581), (128, 38614), (129, 38617), (132, 38704), (134, 38737),

Gene: Topper_51 Start: 37731, Stop: 38672, Start Num: 6

Candidate Starts for Topper_51:

(Start: 6 @37731 has 87 MA's), (12, 37770), (13, 37794), (14, 37815), (15, 37827), (17, 37839), (19, 37860), (33, 37929), (54, 38007), (61, 38058), (64, 38076), (67, 38103), (75, 38154), (91, 38232), (106, 38301), (118, 38343), (125, 38406), (128, 38439), (129, 38442), (132, 38529),

Gene: TreyKay_52 Start: 37816, Stop: 38760, Start Num: 6

Candidate Starts for TreyKay_52:

(Start: 6 @37816 has 87 MA's), (12, 37858), (13, 37882), (14, 37903), (15, 37915), (17, 37927), (19, 37948), (26, 37990), (33, 38017), (54, 38095), (58, 38113), (61, 38146), (64, 38164), (67, 38191), (75, 38242), (90, 38314), (91, 38320), (106, 38389), (118, 38431), (125, 38494), (128, 38527), (129, 38530), (132, 38617), (134, 38650),

Gene: TribbleTrouble_51 Start: 37598, Stop: 38950, Start Num: 7

Candidate Starts for TribbleTrouble_51:

(1, 37460), (3, 37487), (4, 37523), (5, 37532), (Start: 7 @37598 has 23 MA's), (12, 37631), (13, 37655), (15, 37688), (19, 37721), (24, 37754), (32, 37877), (40, 37946), (50, 38015), (52, 38057), (60, 38126), (61, 38141), (63, 38156), (65, 38162), (66, 38174), (68, 38192), (69, 38198), (75, 38285), (76, 38297), (78, 38303), (104, 38492), (113, 38525), (126, 38657), (128, 38693), (132, 38783), (134, 38816),

Gene: TruffulaTree_51 Start: 37610, Stop: 38551, Start Num: 6

Candidate Starts for TruffulaTree_51:

(Start: 6 @37610 has 87 MA's), (12, 37649), (13, 37673), (14, 37694), (15, 37706), (17, 37718), (19, 37739), (33, 37808), (54, 37886), (61, 37937), (64, 37955), (67, 37982), (75, 38033), (91, 38111), (106, 38180), (118, 38222), (125, 38285), (128, 38318), (129, 38321), (132, 38408), (134, 38441),

Gene: Twitch_51 Start: 37733, Stop: 38674, Start Num: 6

Candidate Starts for Twitch_51:

(Start: 6 @37733 has 87 MA's), (12, 37772), (13, 37796), (14, 37817), (15, 37829), (17, 37841), (19, 37862), (33, 37931), (54, 38009), (61, 38060), (64, 38078), (67, 38105), (75, 38156), (91, 38234), (106, 38303), (118, 38345), (125, 38408), (128, 38441), (129, 38444), (132, 38531),

Gene: Unicorn_54 Start: 37429, Stop: 38442, Start Num: 7

Candidate Starts for Unicorn_54:

(Start: 7 @37429 has 23 MA's), (12, 37459), (13, 37483), (14, 37504), (15, 37516), (17, 37528), (18, 37543), (19, 37549), (34, 37621), (54, 37723), (61, 37774), (72, 37849), (74, 37855), (75, 37873), (80, 37897), (86, 37915), (87, 37924), (97, 37957), (108, 38005), (116, 38032), (128, 38188), (129, 38191), (132, 38275), (134, 38308), (136, 38362),

Gene: Urkel_52 Start: 38502, Stop: 39452, Start Num: 6

Candidate Starts for Urkel_52:

(Start: 6 @38502 has 87 MA's), (12, 38544), (13, 38568), (14, 38589), (15, 38601), (17, 38613), (19, 38634), (33, 38703), (52, 38760), (56, 38784), (62, 38841), (75, 38934), (106, 39081), (109, 39090), (125, 39186), (128, 39219), (129, 39222), (132, 39309), (134, 39342),

Gene: Veliki_52 Start: 37650, Stop: 38537, Start Num: 6

Candidate Starts for Veliki_52:

(Start: 6 @37650 has 87 MA's), (8, 37668), (13, 37716), (15, 37749), (17, 37761), (19, 37782), (33, 37851), (54, 37929), (61, 37980), (64, 37998), (75, 38070), (85, 38115), (101, 38193), (124, 38253), (125, 38271), (128, 38304), (129, 38307), (132, 38394), (134, 38427),

Gene: Ximenita_58 Start: 38492, Stop: 39322, Start Num: 7

Candidate Starts for Ximenita_58:

(1, 38366), (2, 38375), (Start: 7 @38492 has 23 MA's), (9, 38504), (14, 38564), (17, 38588), (18, 38603), (19, 38609), (46, 38654), (61, 38747), (74, 38825), (75, 38843), (83, 38897), (88, 38939), (95, 38975), (103, 39011), (110, 39032), (121, 39065), (129, 39068), (132, 39152), (134, 39185),

Gene: YoureAdopted_50 Start: 37815, Stop: 38675, Start Num: 6

Candidate Starts for YoureAdopted_50:

(Start: 6 @37815 has 87 MA's), (8, 37833), (12, 37857), (13, 37881), (15, 37914), (17, 37926), (19, 37947), (33, 38016), (49, 38064), (75, 38157), (91, 38235), (106, 38304), (118, 38346), (125, 38409),

(128, 38442), (129, 38445), (132, 38532), (134, 38565), (135, 38604),

Gene: Yunkel11_54 Start: 37403, Stop: 38347, Start Num: 6

Candidate Starts for Yunkel11_54:

(Start: 6 @37403 has 87 MA's), (12, 37442), (13, 37466), (14, 37487), (15, 37499), (17, 37511), (19, 37532), (26, 37574), (33, 37601), (61, 37733), (64, 37751), (75, 37829), (91, 37907), (106, 37976), (118, 38018), (128, 38114), (129, 38117), (132, 38204),

Gene: Zabiza_46 Start: 33921, Stop: 34862, Start Num: 6

Candidate Starts for Zabiza_46:

(Start: 6 @33921 has 87 MA's), (12, 33960), (13, 33984), (14, 34005), (15, 34017), (17, 34029), (19, 34050), (33, 34119), (54, 34197), (61, 34248), (64, 34266), (67, 34293), (75, 34344), (91, 34422), (106, 34491), (118, 34533), (125, 34596), (128, 34629), (129, 34632), (132, 34719),

Gene: Zavala_53 Start: 37892, Stop: 38836, Start Num: 6

Candidate Starts for Zavala_53:

(Start: 6 @37892 has 87 MA's), (11, 37925), (12, 37934), (13, 37958), (14, 37979), (15, 37991), (17, 38003), (19, 38024), (20, 38030), (33, 38093), (54, 38171), (61, 38222), (64, 38240), (67, 38267), (75, 38318), (91, 38396), (106, 38465), (118, 38507), (125, 38570), (128, 38603), (129, 38606), (132, 38693), (134, 38726),