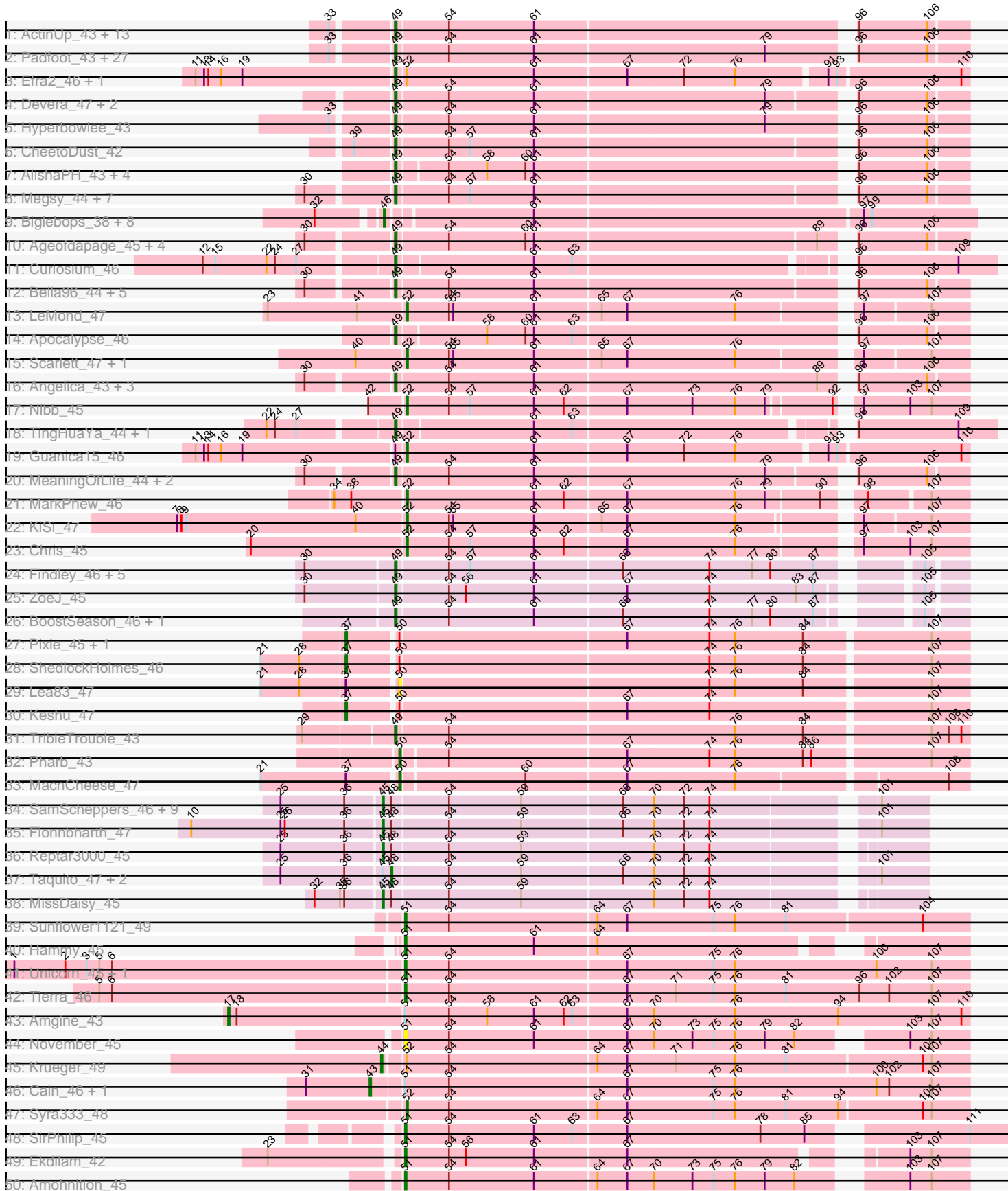


Pham 224348



Pham 224348



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 224348 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224348 has 154 members, 8 are drafts.

Phages represented in each track:

- Track 1 : ActinUp_43, Jayhawk_44, BarrelRoll_43, Ramen_43, TruffulaTree_43, Slimphazie_43, Atiba_43, Veliki_43, Adephagia_43, Padpat_44, Rapunzel97_43, HedwigODU_43, Tachez_43, Emerson_44
- Track 2 : Padfoot_43, Topper_43, Llorens_43, BGIlluviae_43, Dalmuri_43, CaseJules_44, Jeckyll_43, Rosmarinus_43, CREW_43, Boiiii_43, Joy99_43, Asayake_43, BEEST_43, CallaLilly_45, Blizzard_43, Belladonna_43, Homura_43, Inky_43, Spock_43, JAWS_43, Lunahalos_43, Capricorn_43, ShiaSurprise_44, Durfee_43, Piatt_43, Jarvi_43, Twitch_43, Peel_43
- Track 3 : Efra2_46, Yunkel11_46
- Track 4 : Devera_47, Illumine_46, Dole_46
- Track 5 : Hyperbowlee_43
- Track 6 : CheetoDust_42
- Track 7 : AlishaPH_43, Geraldini_45, BaghaKamala_42, Pokerus_42, Clipper_47
- Track 8 : Megsy_44, LindNT_43, Zavala_44, Prithvi_44, Mynx_44, TreyKay_44, CrimD_43, TaiwanKao_45
- Track 9 : Binglebops_38, Nikao_41, Teejan_41, Amelie_38, Torres_41, SgtBeansprout_38, Nutello_38, Mdavu_39, Enkosi_41
- Track 10 : Ageofdapage_45, Adonis_43, LaterM_44, Stinson_44, Murucutumbu_44
- Track 11 : Curiosium_46
- Track 12 : Bella96_44, Beezoo_45, Urkel_44, SamuelLPlaqson_44, TiniBug_44, DrHayes_44
- Track 13 : LeMond_47
- Track 14 : Apocalypse_46
- Track 15 : Scarlett_47, Oscar_47
- Track 16 : Angelica_43, Anaya_45, Deby_43, Sulley_43
- Track 17 : Nibb_45
- Track 18 : TingHuaYa_44, LastHope_46
- Track 19 : Guanica15_46
- Track 20 : MeaningOfLife_44, Ganymede_44, QuincyRose_42
- Track 21 : MarkPhew_46
- Track 22 : KiSi_47
- Track 23 : Chris_45
- Track 24 : Findley_46, Strobilo_46, DismalStressor_46, Milly_46, Marcoliusprime_46, DismalFunk_46
- Track 25 : ZoeJ_45
- Track 26 : BoostSeason_46, Mufasa_46
- Track 27 : Pixie_45, TBond007_45

- Track 28 : ShedlockHolmes_46
- Track 29 : Lea83_47
- Track 30 : Keshu_47
- Track 31 : TribbleTrouble_43
- Track 32 : Pharb_43
- Track 33 : MacnCheese_47
- Track 34 : SamScheppers_46, Chancellor_47, Juliette_49, Eponine_49, Slarp_47, Wintermute_47, Cheetobro_47, Malthus_48, Ruthiejr_48, Mitti_47
- Track 35 : Fionnbharth_47
- Track 36 : Reptar3000_45
- Track 37 : Taquito_47, Y10_46, Y2_46
- Track 38 : MissDaisy_45
- Track 39 : Sunflower1121_49
- Track 40 : Hammy_45
- Track 41 : Unicorn_45, PhelpsODU_45
- Track 42 : Tierra_46
- Track 43 : Amgine_43
- Track 44 : November_45
- Track 45 : Krueger_49
- Track 46 : Cain_46, Bryler_46
- Track 47 : Syra333_48
- Track 48 : SirPhilip_45
- Track 49 : Ekdilam_42
- Track 50 : Amohnition_45
- Track 51 : Ximenita_49
- Track 52 : Yuna_49
- Track 53 : Phrank_46
- Track 54 : Shadow1_48
- Track 55 : DarthP_45
- Track 56 : Aminay_46

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

The start number called the most often in the published annotations is 49, it was called in 90 of the 146 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_43, Adephagia_43, Adonis_43, Ageofdapage_45, AlishaPH_43, Anaya_45, Angelica_43, Apocalypse_46, Asayake_43, Atiba_43, BEEST_43, BGlluviae_43, BaghaKamala_42, BarrelRoll_43, Beezoo_45, Bella96_44, Belladonna_43, Blizzard_43, Boiiii_43, BoostSeason_46, CREW_43, CallaLilly_45, Capricorn_43, CaseJules_44, CheetoDust_42, Clipper_47, CrimD_43, Curiosium_46, Dalmuri_43, Deby_43, Devera_47, DismalFunk_46, DismalStressor_46, Dole_46, DrHayes_44, Durfee_43, Efra2_46, Emerson_44, Findley_46, Ganymede_44, Geraldini_45, HedwigODU_43, Homura_43, Hyperbowlee_43, Illumine_46, Inky_43, JAWS_43, Jarvi_43, Jayhawk_44, Jeckyll_43, Joy99_43, LastHope_46, LaterM_44, LindNT_43, Llorens_43, Lunahalos_43, Marcoliusprime_46, MeaningOfLife_44, Megsy_44, Milly_46, Mufasa_46, Murucutumbu_44, Mynx_44, Padfoot_43, Padpat_44, Peel_43, Piatt_43, Pokerus_42, Prithvi_44, QuincyRose_42, Ramen_43, Rapunzel97_43, Rosmarinus_43, SamuelLPlaqson_44, ShiaSurprise_44, Slimphazie_43, Spock_43,

Stinson_44, Strobilo_46, Sulley_43, Tachez_43, TaiwanKao_45, TingHuaYa_44, TiniBug_44, Topper_43, TreyKay_44, TribbleTrouble_43, TruffulaTree_43, Twitch_43, Urkel_44, Veliki_43, Yunkel11_46, Zavala_44, ZoeJ_45,

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

- Guanica15_46,

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

- Amelie_38, Amgine_43, Aminay_46, Amohnition_45, Biglebops_38, Bryler_46, Cain_46, Chancellor_47, Cheetobro_47, Chris_45, DARTH_P_45, Ekdilam_42, Enkosi_41, Eponine_49, Fionnbharth_47, Hammy_45, Juliette_49, Keshu_47, KiSi_47, Krueger_49, LeMond_47, Lea83_47, MacnCheese_47, Malthus_48, MarkPhew_46, Mdavu_39, MissDaisy_45, Mitti_47, Nibb_45, Nikao_41, November_45, Nutello_38, Oscar_47, Pharb_43, PhelpsODU_45, Phrank_46, Pixie_45, Reptar3000_45, Ruthiejr_48, SamScheppers_46, Scarlett_47, SgtBeansprout_38, Shadow1_48, ShedlockHolmes_46, SirPhilip_45, Slarp_47, Sunflower1121_49, Syra333_48, TBond007_45, Taquito_47, Teejan_41, Tierra_46, Torres_41, Unicorn_45, Wintermute_47, Ximenita_49, Y10_46, Y2_46, Yuna_49,

Summary by start number:

Start 17:

- Found in 1 of 154 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amgine_43 (K6),

Start 37:

- Found in 6 of 154 (3.9%) of genes in pham
- Manual Annotations of this start: 4 of 146
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Keshu_47 (K3), Pixie_45 (K3), ShedlockHolmes_46 (K3), TBond007_45 (K3),

Start 43:

- Found in 2 of 154 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bryler_46 (K6), Cain_46 (K6),

Start 44:

- Found in 1 of 154 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Krueger_49 (K6),

Start 45:

- Found in 16 of 154 (10.4%) of genes in pham
- Manual Annotations of this start: 13 of 146
- Called 81.2% of time when present
- Phage (with cluster) where this start called: Chancellor_47 (K4), Cheetobro_47 (K4), Eponine_49 (K4), Fionnbharth_47 (K4), Juliette_49 (K4), Malthus_48 (K4), MissDaisy_45 (K4), Mitti_47 (K4), Reptar3000_45 (K4), Ruthiejr_48 (K4),

SamScheppers_46 (K4), Slarp_47 (K4), Wintermute_47 (K4),

Start 46:

- Found in 9 of 154 (5.8%) of genes in pham
- Manual Annotations of this start: 7 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amelie_38 (K1), Binglebops_38 (K1), Enkosi_41 (K1), Mdavu_39 (K1), Nikao_41 (K1), Nutello_38 (K1), SgtBeansprout_38 (K1), Teejan_41 (K1), Torres_41 (K1),

Start 48:

- Found in 16 of 154 (10.4%) of genes in pham
- Manual Annotations of this start: 3 of 146
- Called 18.8% of time when present
- Phage (with cluster) where this start called: Taquito_47 (K4), Y10_46 (K4), Y2_46 (K4),

Start 49:

- Found in 95 of 154 (61.7%) of genes in pham
- Manual Annotations of this start: 90 of 146
- Called 98.9% of time when present
- Phage (with cluster) where this start called: ActinUp_43 (K1), Adephagia_43 (K1), Adonis_43 (K1), Ageofdapage_45 (K1), AlishaPH_43 (K1), Anaya_45 (K1), Angelica_43 (K1), Apocalypse_46 (K1), Asayake_43 (K1), Atiba_43 (K1), BEEST_43 (K1), BGlluviae_43 (K1), BaghaKamala_42 (K1), BarrelRoll_43 (K1), Beezoo_45 (K1), Bella96_44 (K1), Belladonna_43 (K1), Blizzard_43 (K1), Boiiii_43 (K1), BoostSeason_46 (K2), CREW_43 (K1), CallaLilly_45 (K1), Capricorn_43 (K1), CaseJules_44 (K1), CheetoDust_42 (K1), Clipper_47 (K1), CrimD_43 (K1), Curiosium_46 (K1), Dalmuri_43 (K1), Deby_43 (K1), Devera_47 (K1), DismalFunk_46 (K2), DismalStressor_46 (K2), Dole_46 (K1), DrHayes_44 (K1), Durfee_43 (K1), Efra2_46 (K1), Emerson_44 (K1), Findley_46 (K2), Ganymede_44 (K1), Geraldini_45 (K1), HedwigODU_43 (K1), Homura_43 (K1), Hyperbowlee_43 (K1), Illumine_46 (K1), Inky_43 (K1), JAWS_43 (K1), Jarvi_43 (K1), Jayhawk_44 (K1), Jeckyll_43 (K1), Joy99_43 (K1), LastHope_46 (K1), LaterM_44 (K1), LindNT_43 (K1), Llorens_43 (K1), Lunahalos_43 (K1), Marcoliusprime_46 (K2), MeaningOfLife_44 (K1), Megsy_44 (K1), Milly_46 (K2), Mufasa_46 (K2), Murucutumbu_44 (K1), Mynx_44 (K1), Padfoot_43 (K1), Padpat_44 (K1), Peel_43 (K1), Piatt_43 (K1), Pokerus_42 (K1), Prithvi_44 (K1), QuincyRose_42 (K1), Ramen_43 (K1), Rapunzel97_43 (K1), Rosmarinus_43 (K1), SamuelLPlaqson_44 (K1), ShiaSurprise_44 (K1), Slimphazie_43 (K1), Spock_43 (K1), Stinson_44 (K1), Strobilo_46 (K2), Sulley_43 (K1), Tachez_43 (K1), TaiwanKao_45 (K1), TingHuaYa_44 (K1), TiniBug_44 (K1), Topper_43 (K1), TreyKay_44 (K1), TribbleTrouble_43 (K3), TruffulaTree_43 (K1), Twitch_43 (K1), Urkel_44 (K1), Veliki_43 (K1), Yunkel11_46 (K1), Zavala_44 (K1), ZoeJ_45 (K2),

Start 50:

- Found in 7 of 154 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 146
- Called 42.9% of time when present
- Phage (with cluster) where this start called: Lea83_47 (K3), MacnCheese_47 (K3), Pharb_43 (K3),

Start 51:

- Found in 15 of 154 (9.7%) of genes in pham
- Manual Annotations of this start: 11 of 146
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Amohnition_45 (K6), DARTH_P_45 (K6), Ekdilam_42 (K6), Hammy_45 (K6), November_45 (K6), PhelpsODU_45 (K6), Phrank_46 (K6), SirPhilip_45 (K6), Sunflower1121_49 (K6), Tierra_46 (K6), Unicorn_45 (K6), Yuna_49 (K6),

Start 52:

- Found in 14 of 154 (9.1%) of genes in pham
- Manual Annotations of this start: 11 of 146
- Called 78.6% of time when present
- Phage (with cluster) where this start called: Chris_45 (K1), Guanica15_46 (K1), KiSi_47 (K1), LeMond_47 (K1), MarkPhew_46 (K1), Nibb_45 (K1), Oscar_47 (K1), Scarlett_47 (K1), Shadow1_48 (K6), Syra333_48 (K6), Ximenita_49 (K6),

Start 54:

- Found in 130 of 154 (84.4%) of genes in pham
- Manual Annotations of this start: 1 of 146
- Called 0.8% of time when present
- Phage (with cluster) where this start called: Aminay_46 (K7),

Summary by clusters:

There are 6 clusters represented in this pham: K3, K2, K1, K7, K6, K4,

Info for manual annotations of cluster K1:

- Start number 46 was manually annotated 7 times for cluster K1.
- Start number 49 was manually annotated 80 times for cluster K1.
- Start number 52 was manually annotated 8 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 49 was manually annotated 9 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 37 was manually annotated 4 times for cluster K3.
- Start number 49 was manually annotated 1 time for cluster K3.
- Start number 50 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 45 was manually annotated 13 times for cluster K4.
- Start number 48 was manually annotated 3 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 17 was manually annotated 1 time for cluster K6.
- Start number 43 was manually annotated 2 times for cluster K6.
- Start number 44 was manually annotated 1 time for cluster K6.
- Start number 51 was manually annotated 11 times for cluster K6.
- Start number 52 was manually annotated 3 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 54 was manually annotated 1 time for cluster K7.

Gene Information:

Gene: ActinUp_43 Start: 34981, Stop: 34601, Start Num: 49

Candidate Starts for ActinUp_43:

(33, 35017), (Start: 49 @34981 has 90 MA's), (Start: 54 @34945 has 1 MA's), (61, 34885), (96, 34675), (106, 34627),

Gene: Adephagia_43 Start: 34978, Stop: 34598, Start Num: 49

Candidate Starts for Adephagia_43:

(33, 35014), (Start: 49 @34978 has 90 MA's), (Start: 54 @34942 has 1 MA's), (61, 34882), (96, 34672), (106, 34624),

Gene: Adonis_43 Start: 35277, Stop: 34897, Start Num: 49

Candidate Starts for Adonis_43:

(30, 35328), (Start: 49 @35277 has 90 MA's), (Start: 54 @35241 has 1 MA's), (60, 35187), (61, 35181), (89, 34986), (96, 34971), (106, 34923),

Gene: Ageofdapage_45 Start: 35950, Stop: 35573, Start Num: 49

Candidate Starts for Ageofdapage_45:

(30, 36001), (Start: 49 @35950 has 90 MA's), (Start: 54 @35914 has 1 MA's), (60, 35860), (61, 35854), (89, 35662), (96, 35647), (106, 35599),

Gene: AlishaPH_43 Start: 35250, Stop: 34873, Start Num: 49

Candidate Starts for AlishaPH_43:

(Start: 49 @35250 has 90 MA's), (Start: 54 @35217 has 1 MA's), (58, 35190), (60, 35163), (61, 35157), (96, 34947), (106, 34899),

Gene: Amelie_38 Start: 34527, Stop: 34129, Start Num: 46

Candidate Starts for Amelie_38:

(32, 34566), (Start: 46 @34527 has 7 MA's), (61, 34431), (97, 34206), (99, 34200),

Gene: Amgine_43 Start: 36096, Stop: 35581, Start Num: 17

Candidate Starts for Amgine_43:

(Start: 17 @36096 has 1 MA's), (18, 36090), (Start: 51 @35973 has 11 MA's), (Start: 54 @35943 has 1 MA's), (58, 35916), (61, 35883), (62, 35862), (63, 35856), (67, 35820), (70, 35802), (76, 35745), (94, 35673), (107, 35607), (110, 35586),

Gene: Aminay_46 Start: 36466, Stop: 36146, Start Num: 54

Candidate Starts for Aminay_46:

(47, 36508), (53, 36478), (Start: 54 @36466 has 1 MA's), (55, 36463), (61, 36406), (69, 36328), (73, 36298), (75, 36283), (88, 36214),

Gene: Amohntion_45 Start: 36010, Stop: 35639, Start Num: 51

Candidate Starts for Amohntion_45:

(Start: 51 @36010 has 11 MA's), (Start: 54 @35980 has 1 MA's), (61, 35920), (64, 35878), (67, 35857), (70, 35839), (73, 35812), (75, 35797), (76, 35782), (79, 35761), (82, 35740), (103, 35680), (107, 35665),

Gene: Anaya_45 Start: 35589, Stop: 35209, Start Num: 49

Candidate Starts for Anaya_45:

(30, 35640), (Start: 49 @35589 has 90 MA's), (Start: 54 @35553 has 1 MA's), (61, 35493), (89, 35298), (96, 35283), (106, 35235),

Gene: Angelica_43 Start: 35209, Stop: 34829, Start Num: 49

Candidate Starts for Angelica_43:

(30, 35260), (Start: 49 @35209 has 90 MA's), (Start: 54 @35173 has 1 MA's), (61, 35113), (89, 34918), (96, 34903), (106, 34855),

Gene: Apocalypse_46 Start: 35992, Stop: 35615, Start Num: 49

Candidate Starts for Apocalypse_46:

(Start: 49 @35992 has 90 MA's), (58, 35932), (60, 35905), (61, 35899), (63, 35872), (96, 35689), (106, 35641),

Gene: Asayake_43 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for Asayake_43:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: Atiba_43 Start: 34941, Stop: 34561, Start Num: 49

Candidate Starts for Atiba_43:

(33, 34977), (Start: 49 @34941 has 90 MA's), (Start: 54 @34905 has 1 MA's), (61, 34845), (96, 34635), (106, 34587),

Gene: BEEST_43 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for BEEST_43:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: BGlluviae_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for BGlluviae_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: BaghaKamala_42 Start: 34415, Stop: 34038, Start Num: 49

Candidate Starts for BaghaKamala_42:

(Start: 49 @34415 has 90 MA's), (Start: 54 @34382 has 1 MA's), (58, 34355), (60, 34328), (61, 34322), (96, 34112), (106, 34064),

Gene: BarrelRoll_43 Start: 34964, Stop: 34584, Start Num: 49

Candidate Starts for BarrelRoll_43:

(33, 35000), (Start: 49 @34964 has 90 MA's), (Start: 54 @34928 has 1 MA's), (61, 34868), (96, 34658), (106, 34610),

Gene: Beezoo_45 Start: 35940, Stop: 35563, Start Num: 49

Candidate Starts for Beezoo_45:

(30, 35991), (Start: 49 @35940 has 90 MA's), (Start: 54 @35904 has 1 MA's), (61, 35844), (96, 35637), (106, 35589),

Gene: Bella96_44 Start: 35832, Stop: 35455, Start Num: 49

Candidate Starts for Bella96_44:

(30, 35883), (Start: 49 @35832 has 90 MA's), (Start: 54 @35796 has 1 MA's), (61, 35736), (96, 35529), (106, 35481),

Gene: Belladonna_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Belladonna_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: Biglebops_38 Start: 34527, Stop: 34129, Start Num: 46

Candidate Starts for Biglebops_38:

(32, 34566), (Start: 46 @34527 has 7 MA's), (61, 34431), (97, 34206), (99, 34200),

Gene: Blizzard_43 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for Blizzard_43:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: Boiiii_43 Start: 35295, Stop: 34915, Start Num: 49

Candidate Starts for Boiiii_43:

(33, 35331), (Start: 49 @35295 has 90 MA's), (Start: 54 @35259 has 1 MA's), (61, 35199), (79, 35040), (96, 34989), (106, 34941),

Gene: BoostSeason_46 Start: 36618, Stop: 36250, Start Num: 49

Candidate Starts for BoostSeason_46:

(Start: 49 @36618 has 90 MA's), (Start: 54 @36582 has 1 MA's), (61, 36522), (66, 36462), (74, 36402), (77, 36372), (80, 36360), (87, 36330), (105, 36276),

Gene: Bryler_46 Start: 34876, Stop: 34463, Start Num: 43

Candidate Starts for Bryler_46:

(31, 34921), (Start: 43 @34876 has 2 MA's), (Start: 51 @34855 has 11 MA's), (Start: 54 @34825 has 1 MA's), (67, 34702), (75, 34642), (76, 34627), (100, 34528), (102, 34519), (107, 34489),

Gene: CREW_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for CREW_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: Cain_46 Start: 34864, Stop: 34451, Start Num: 43

Candidate Starts for Cain_46:

(31, 34909), (Start: 43 @34864 has 2 MA's), (Start: 51 @34843 has 11 MA's), (Start: 54 @34813 has 1 MA's), (67, 34690), (75, 34630), (76, 34615), (100, 34516), (102, 34507), (107, 34477),

Gene: CallaLilly_45 Start: 35019, Stop: 34639, Start Num: 49

Candidate Starts for CallaLilly_45:

(33, 35055), (Start: 49 @35019 has 90 MA's), (Start: 54 @34983 has 1 MA's), (61, 34923), (79, 34764), (96, 34713), (106, 34665),

Gene: Capricorn_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Capricorn_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: CaseJules_44 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for CaseJules_44:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: Chancellor_47 Start: 36038, Stop: 35679, Start Num: 45

Candidate Starts for Chancellor_47:

(25, 36107), (36, 36062), (Start: 45 @36038 has 13 MA's), (Start: 48 @36032 has 3 MA's), (Start: 54 @35993 has 1 MA's), (59, 35942), (66, 35873), (70, 35852), (72, 35831), (74, 35813), (101, 35711),

Gene: CheetoDust_42 Start: 34466, Stop: 34089, Start Num: 49

Candidate Starts for CheetoDust_42:

(39, 34490), (Start: 49 @34466 has 90 MA's), (Start: 54 @34430 has 1 MA's), (57, 34415), (61, 34370), (96, 34163), (106, 34115),

Gene: Cheetobro_47 Start: 36035, Stop: 35676, Start Num: 45

Candidate Starts for Cheetobro_47:

(25, 36104), (36, 36059), (Start: 45 @36035 has 13 MA's), (Start: 48 @36029 has 3 MA's), (Start: 54 @35990 has 1 MA's), (59, 35939), (66, 35870), (70, 35849), (72, 35828), (74, 35810), (101, 35708),

Gene: Chris_45 Start: 35677, Stop: 35300, Start Num: 52

Candidate Starts for Chris_45:

(20, 35785), (Start: 52 @35677 has 11 MA's), (Start: 54 @35647 has 1 MA's), (57, 35632), (61, 35587), (62, 35566), (67, 35524), (76, 35449), (97, 35374), (103, 35341), (107, 35326),

Gene: Clipper_47 Start: 35611, Stop: 35234, Start Num: 49

Candidate Starts for Clipper_47:

(Start: 49 @35611 has 90 MA's), (Start: 54 @35578 has 1 MA's), (58, 35551), (60, 35524), (61, 35518), (96, 35308), (106, 35260),

Gene: CrimD_43 Start: 35221, Stop: 34844, Start Num: 49

Candidate Starts for CrimD_43:

(30, 35272), (Start: 49 @35221 has 90 MA's), (Start: 54 @35185 has 1 MA's), (57, 35170), (61, 35125), (96, 34918), (106, 34870),

Gene: Curiosium_46 Start: 34128, Stop: 33742, Start Num: 49

Candidate Starts for Curiosium_46:

(12, 34254), (15, 34245), (22, 34209), (24, 34203), (27, 34188), (Start: 49 @34128 has 90 MA's), (61, 34035), (63, 34008), (96, 33837), (109, 33768),

Gene: Dalmuri_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Dalmuri_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: DARTH_P_45 Start: 35904, Stop: 35545, Start Num: 51

Candidate Starts for DARTH_P_45:

(Start: 51 @35904 has 11 MA's), (Start: 54 @35874 has 1 MA's), (61, 35814), (64, 35772),

Gene: Deby_43 Start: 35225, Stop: 34845, Start Num: 49

Candidate Starts for Deby_43:

(30, 35276), (Start: 49 @35225 has 90 MA's), (Start: 54 @35189 has 1 MA's), (61, 35129), (89, 34934), (96, 34919), (106, 34871),

Gene: Devera_47 Start: 35759, Stop: 35382, Start Num: 49

Candidate Starts for Devera_47:

(Start: 49 @35759 has 90 MA's), (Start: 54 @35723 has 1 MA's), (61, 35663), (79, 35504), (96, 35456), (106, 35408),

Gene: DismalFunk_46 Start: 37051, Stop: 36680, Start Num: 49

Candidate Starts for DismalFunk_46:

(30, 37105), (Start: 49 @37051 has 90 MA's), (Start: 54 @37015 has 1 MA's), (57, 37000), (61, 36955), (66, 36895), (74, 36835), (77, 36805), (80, 36793), (87, 36763), (105, 36706),

Gene: DismalStressor_46 Start: 37051, Stop: 36680, Start Num: 49

Candidate Starts for DismalStressor_46:

(30, 37105), (Start: 49 @37051 has 90 MA's), (Start: 54 @37015 has 1 MA's), (57, 37000), (61, 36955), (66, 36895), (74, 36835), (77, 36805), (80, 36793), (87, 36763), (105, 36706),

Gene: Dole_46 Start: 35761, Stop: 35384, Start Num: 49

Candidate Starts for Dole_46:

(Start: 49 @35761 has 90 MA's), (Start: 54 @35725 has 1 MA's), (61, 35665), (79, 35506), (96, 35458), (106, 35410),

Gene: DrHayes_44 Start: 35877, Stop: 35500, Start Num: 49

Candidate Starts for DrHayes_44:

(30, 35928), (Start: 49 @35877 has 90 MA's), (Start: 54 @35841 has 1 MA's), (61, 35781), (96, 35574), (106, 35526),

Gene: Durfee_43 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for Durfee_43:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: Efra2_46 Start: 35018, Stop: 34629, Start Num: 49

Candidate Starts for Efra2_46:

(11, 35156), (13, 35150), (14, 35147), (16, 35138), (19, 35123), (Start: 49 @35018 has 90 MA's), (Start: 52 @35012 has 11 MA's), (61, 34922), (67, 34859), (72, 34820), (76, 34784), (91, 34724), (93, 34718), (110, 34634),

Gene: Ekdilam_42 Start: 35465, Stop: 35106, Start Num: 51

Candidate Starts for Ekdilam_42:

(23, 35549), (Start: 51 @35465 has 11 MA's), (Start: 54 @35435 has 1 MA's), (56, 35423), (61, 35375), (67, 35312), (103, 35147), (107, 35132),

Gene: Emerson_44 Start: 34972, Stop: 34592, Start Num: 49

Candidate Starts for Emerson_44:

(33, 35008), (Start: 49 @34972 has 90 MA's), (Start: 54 @34936 has 1 MA's), (61, 34876), (96, 34666), (106, 34618),

Gene: Enkosi_41 Start: 37140, Stop: 36742, Start Num: 46

Candidate Starts for Enkosi_41:

(32, 37179), (Start: 46 @37140 has 7 MA's), (61, 37044), (97, 36819), (99, 36813),

Gene: Eponine_49 Start: 36791, Stop: 36432, Start Num: 45

Candidate Starts for Eponine_49:

(25, 36860), (36, 36815), (Start: 45 @36791 has 13 MA's), (Start: 48 @36785 has 3 MA's), (Start: 54 @36746 has 1 MA's), (59, 36695), (66, 36626), (70, 36605), (72, 36584), (74, 36566), (101, 36464),

Gene: Findley_46 Start: 37044, Stop: 36673, Start Num: 49

Candidate Starts for Findley_46:

(30, 37098), (Start: 49 @37044 has 90 MA's), (Start: 54 @37008 has 1 MA's), (57, 36993), (61, 36948), (66, 36888), (74, 36828), (77, 36798), (80, 36786), (87, 36756), (105, 36699),

Gene: Fionnbharth_47 Start: 36189, Stop: 35830, Start Num: 45

Candidate Starts for Fionnbharth_47:

(10, 36321), (25, 36258), (26, 36255), (36, 36213), (Start: 45 @36189 has 13 MA's), (Start: 48 @36183 has 3 MA's), (Start: 54 @36144 has 1 MA's), (59, 36093), (66, 36024), (70, 36003), (72, 35982), (74, 35964), (101, 35862),

Gene: Ganymede_44 Start: 35413, Stop: 35036, Start Num: 49

Candidate Starts for Ganymede_44:

(30, 35464), (Start: 49 @35413 has 90 MA's), (Start: 54 @35377 has 1 MA's), (61, 35317), (79, 35158), (96, 35110), (106, 35062),

Gene: Geraldini_45 Start: 36027, Stop: 35650, Start Num: 49

Candidate Starts for Geraldini_45:

(Start: 49 @36027 has 90 MA's), (Start: 54 @35994 has 1 MA's), (58, 35967), (60, 35940), (61, 35934), (96, 35724), (106, 35676),

Gene: Guanica15_46 Start: 34969, Stop: 34586, Start Num: 52

Candidate Starts for Guanica15_46:

(11, 35113), (13, 35107), (14, 35104), (16, 35095), (19, 35080), (Start: 49 @34975 has 90 MA's), (Start: 52 @34969 has 11 MA's), (61, 34879), (67, 34816), (72, 34777), (76, 34741), (91, 34681), (93, 34675), (110, 34591),

Gene: Hammy_45 Start: 35892, Stop: 35533, Start Num: 51

Candidate Starts for Hammy_45:

(Start: 51 @35892 has 11 MA's), (61, 35802), (64, 35760),

Gene: HedwigODU_43 Start: 34981, Stop: 34601, Start Num: 49

Candidate Starts for HedwigODU_43:

(33, 35017), (Start: 49 @34981 has 90 MA's), (Start: 54 @34945 has 1 MA's), (61, 34885), (96, 34675), (106, 34627),

Gene: Homura_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Homura_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: Hyperbowlee_43 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for Hyperbowlee_43:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: Illumine_46 Start: 35761, Stop: 35384, Start Num: 49

Candidate Starts for Illumine_46:

(Start: 49 @35761 has 90 MA's), (Start: 54 @35725 has 1 MA's), (61, 35665), (79, 35506), (96, 35458), (106, 35410),

Gene: Inky_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Inky_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: JAWS_43 Start: 34970, Stop: 34590, Start Num: 49

Candidate Starts for JAWS_43:

(33, 35006), (Start: 49 @34970 has 90 MA's), (Start: 54 @34934 has 1 MA's), (61, 34874), (79, 34715), (96, 34664), (106, 34616),

Gene: Jarvi_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Jarvi_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: Jayhawk_44 Start: 34979, Stop: 34599, Start Num: 49

Candidate Starts for Jayhawk_44:

(33, 35015), (Start: 49 @34979 has 90 MA's), (Start: 54 @34943 has 1 MA's), (61, 34883), (96, 34673), (106, 34625),

Gene: Jeckyll_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Jeckyll_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: Joy99_43 Start: 35025, Stop: 34645, Start Num: 49

Candidate Starts for Joy99_43:

(33, 35061), (Start: 49 @35025 has 90 MA's), (Start: 54 @34989 has 1 MA's), (61, 34929), (79, 34770), (96, 34719), (106, 34671),

Gene: Juliette_49 Start: 36262, Stop: 35903, Start Num: 45

Candidate Starts for Juliette_49:

(25, 36331), (36, 36286), (Start: 45 @36262 has 13 MA's), (Start: 48 @36256 has 3 MA's), (Start: 54 @36217 has 1 MA's), (59, 36166), (66, 36097), (70, 36076), (72, 36055), (74, 36037), (101, 35935),

Gene: Keshu_47 Start: 35704, Stop: 35282, Start Num: 37

Candidate Starts for Keshu_47:

(Start: 37 @35704 has 4 MA's), (Start: 50 @35671 has 2 MA's), (67, 35515), (74, 35458), (107, 35308),

Gene: KiSi_47 Start: 36100, Stop: 35729, Start Num: 52

Candidate Starts for KiSi_47:

(7, 36259), (8, 36256), (9, 36253), (40, 36133), (Start: 52 @36100 has 11 MA's), (Start: 54 @36070 has 1 MA's), (55, 36067), (61, 36010), (65, 35965), (67, 35947), (76, 35872), (97, 35800), (107, 35755),

Gene: Krueger_49 Start: 35862, Stop: 35461, Start Num: 44

Candidate Starts for Krueger_49:

(Start: 44 @35862 has 1 MA's), (Start: 52 @35850 has 11 MA's), (Start: 54 @35820 has 1 MA's), (64, 35718), (67, 35697), (71, 35664), (76, 35622), (81, 35586), (104, 35493), (107, 35487),

Gene: LastHope_46 Start: 34433, Stop: 34047, Start Num: 49

Candidate Starts for LastHope_46:

(22, 34514), (24, 34508), (27, 34493), (Start: 49 @34433 has 90 MA's), (61, 34340), (63, 34313), (96, 34142), (109, 34073),

Gene: LaterM_44 Start: 35874, Stop: 35497, Start Num: 49

Candidate Starts for LaterM_44:

(30, 35925), (Start: 49 @35874 has 90 MA's), (Start: 54 @35838 has 1 MA's), (60, 35784), (61, 35778), (89, 35586), (96, 35571), (106, 35523),

Gene: LeMond_47 Start: 36084, Stop: 35710, Start Num: 52

Candidate Starts for LeMond_47:

(23, 36180), (41, 36117), (Start: 52 @36084 has 11 MA's), (Start: 54 @36054 has 1 MA's), (55, 36051), (61, 35994), (65, 35949), (67, 35931), (76, 35856), (97, 35781), (107, 35736),

Gene: Lea83_47 Start: 35646, Stop: 35257, Start Num: 50

Candidate Starts for Lea83_47:

(21, 35736), (28, 35709), (Start: 37 @35679 has 4 MA's), (Start: 50 @35646 has 2 MA's), (74, 35433), (76, 35415), (84, 35367), (107, 35283),

Gene: LindNT_43 Start: 35164, Stop: 34787, Start Num: 49

Candidate Starts for LindNT_43:

(30, 35215), (Start: 49 @35164 has 90 MA's), (Start: 54 @35128 has 1 MA's), (57, 35113), (61, 35068), (96, 34861), (106, 34813),

Gene: Llorens_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Llorens_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: Lunahalos_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Lunahalos_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: MacnCheese_47 Start: 36557, Stop: 36177, Start Num: 50

Candidate Starts for MacnCheese_47:

(21, 36650), (Start: 37 @36590 has 4 MA's), (Start: 50 @36557 has 2 MA's), (60, 36473), (67, 36404), (76, 36329), (108, 36191),

Gene: Malthus_48 Start: 35950, Stop: 35591, Start Num: 45

Candidate Starts for Malthus_48:

(25, 36019), (36, 35974), (Start: 45 @35950 has 13 MA's), (Start: 48 @35944 has 3 MA's), (Start: 54 @35905 has 1 MA's), (59, 35854), (66, 35785), (70, 35764), (72, 35743), (74, 35725), (101, 35623),

Gene: Marcoliusprime_46 Start: 37051, Stop: 36680, Start Num: 49

Candidate Starts for Marcoliusprime_46:

(30, 37105), (Start: 49 @37051 has 90 MA's), (Start: 54 @37015 has 1 MA's), (57, 37000), (61, 36955), (66, 36895), (74, 36835), (77, 36805), (80, 36793), (87, 36763), (105, 36706),

Gene: MarkPhew_46 Start: 35518, Stop: 35147, Start Num: 52

Candidate Starts for MarkPhew_46:

(34, 35566), (38, 35554), (Start: 52 @35518 has 11 MA's), (61, 35428), (62, 35407), (67, 35365), (76, 35290), (79, 35269), (90, 35233), (98, 35212), (107, 35173),

Gene: Mdavu_39 Start: 34516, Stop: 34118, Start Num: 46

Candidate Starts for Mdavu_39:

(32, 34555), (Start: 46 @34516 has 7 MA's), (61, 34420), (97, 34195), (99, 34189),

Gene: MeaningOfLife_44 Start: 35907, Stop: 35530, Start Num: 49

Candidate Starts for MeaningOfLife_44:

(30, 35958), (Start: 49 @35907 has 90 MA's), (Start: 54 @35871 has 1 MA's), (61, 35811), (79, 35652), (96, 35604), (106, 35556),

Gene: Megsy_44 Start: 35223, Stop: 34846, Start Num: 49

Candidate Starts for Megsy_44:

(30, 35274), (Start: 49 @35223 has 90 MA's), (Start: 54 @35187 has 1 MA's), (57, 35172), (61, 35127), (96, 34920), (106, 34872),

Gene: Milly_46 Start: 37024, Stop: 36653, Start Num: 49

Candidate Starts for Milly_46:

(30, 37078), (Start: 49 @37024 has 90 MA's), (Start: 54 @36988 has 1 MA's), (57, 36973), (61, 36928), (66, 36868), (74, 36808), (77, 36778), (80, 36766), (87, 36736), (105, 36679),

Gene: MissDaisy_45 Start: 35425, Stop: 35069, Start Num: 45

Candidate Starts for MissDaisy_45:

(32, 35470), (35, 35452), (36, 35449), (Start: 45 @35425 has 13 MA's), (Start: 48 @35419 has 3 MA's), (Start: 54 @35380 has 1 MA's), (59, 35329), (70, 35239), (72, 35218), (74, 35200),

Gene: Mitti_47 Start: 36126, Stop: 35767, Start Num: 45

Candidate Starts for Mitti_47:

(25, 36195), (36, 36150), (Start: 45 @36126 has 13 MA's), (Start: 48 @36120 has 3 MA's), (Start: 54 @36081 has 1 MA's), (59, 36030), (66, 35961), (70, 35940), (72, 35919), (74, 35901), (101, 35799),

Gene: Mufasa_46 Start: 36609, Stop: 36241, Start Num: 49

Candidate Starts for Mufasa_46:

(Start: 49 @36609 has 90 MA's), (Start: 54 @36573 has 1 MA's), (61, 36513), (66, 36453), (74, 36393), (77, 36363), (80, 36351), (87, 36321), (105, 36267),

Gene: Murucutumbu_44 Start: 35967, Stop: 35590, Start Num: 49

Candidate Starts for Murucutumbu_44:

(30, 36018), (Start: 49 @35967 has 90 MA's), (Start: 54 @35931 has 1 MA's), (60, 35877), (61, 35871), (89, 35679), (96, 35664), (106, 35616),

Gene: Mynx_44 Start: 35298, Stop: 34921, Start Num: 49

Candidate Starts for Mynx_44:

(30, 35349), (Start: 49 @35298 has 90 MA's), (Start: 54 @35262 has 1 MA's), (57, 35247), (61, 35202), (96, 34995), (106, 34947),

Gene: Nibb_45 Start: 35241, Stop: 34867, Start Num: 52

Candidate Starts for Nibb_45:

(42, 35265), (Start: 52 @35241 has 11 MA's), (Start: 54 @35211 has 1 MA's), (57, 35196), (61, 35151), (62, 35130), (67, 35088), (73, 35043), (76, 35013), (79, 34992), (92, 34950), (97, 34941), (103, 34908), (107, 34893),

Gene: Nikao_41 Start: 37140, Stop: 36742, Start Num: 46

Candidate Starts for Nikao_41:

(32, 37179), (Start: 46 @37140 has 7 MA's), (61, 37044), (97, 36819), (99, 36813),

Gene: November_45 Start: 35619, Stop: 35248, Start Num: 51

Candidate Starts for November_45:

(Start: 51 @35619 has 11 MA's), (Start: 54 @35589 has 1 MA's), (61, 35529), (67, 35466), (70, 35448), (73, 35421), (75, 35406), (76, 35391), (79, 35370), (82, 35349), (103, 35289), (107, 35274),

Gene: Nutello_38 Start: 34527, Stop: 34129, Start Num: 46

Candidate Starts for Nutello_38:

(32, 34566), (Start: 46 @34527 has 7 MA's), (61, 34431), (97, 34206), (99, 34200),

Gene: Oscar_47 Start: 35987, Stop: 35613, Start Num: 52

Candidate Starts for Oscar_47:

(40, 36020), (Start: 52 @35987 has 11 MA's), (Start: 54 @35957 has 1 MA's), (55, 35954), (61, 35897), (65, 35852), (67, 35834), (76, 35759), (97, 35684), (107, 35639),

Gene: Padfoot_43 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for Padfoot_43:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: Padpat_44 Start: 34972, Stop: 34592, Start Num: 49

Candidate Starts for Padpat_44:

(33, 35008), (Start: 49 @34972 has 90 MA's), (Start: 54 @34936 has 1 MA's), (61, 34876), (96, 34666), (106, 34618),

Gene: Peel_43 Start: 35098, Stop: 34718, Start Num: 49

Candidate Starts for Peel_43:

(33, 35134), (Start: 49 @35098 has 90 MA's), (Start: 54 @35062 has 1 MA's), (61, 35002), (79, 34843), (96, 34792), (106, 34744),

Gene: Pharb_43 Start: 34363, Stop: 33977, Start Num: 50

Candidate Starts for Pharb_43:

(Start: 50 @34363 has 2 MA's), (Start: 54 @34333 has 1 MA's), (67, 34210), (74, 34153), (76, 34135), (84, 34087), (86, 34081), (107, 34003),

Gene: PhelpsODU_45 Start: 34877, Stop: 34485, Start Num: 51

Candidate Starts for PhelpsODU_45:

(1, 35147), (2, 35111), (3, 35096), (5, 35087), (6, 35078), (Start: 51 @34877 has 11 MA's), (Start: 54 @34847 has 1 MA's), (67, 34724), (75, 34664), (76, 34649), (100, 34550), (107, 34511),

Gene: Phrank_46 Start: 34834, Stop: 34442, Start Num: 51

Candidate Starts for Phrank_46:

(4, 35047), (6, 35035), (Start: 51 @34834 has 11 MA's), (Start: 54 @34804 has 1 MA's), (67, 34681), (71, 34648), (75, 34621), (76, 34606), (81, 34570), (102, 34498), (107, 34468),

Gene: Piatt_43 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for Piatt_43:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: Pixie_45 Start: 35157, Stop: 34735, Start Num: 37

Candidate Starts for Pixie_45:

(Start: 37 @35157 has 4 MA's), (Start: 50 @35124 has 2 MA's), (67, 34968), (74, 34911), (76, 34893), (84, 34845), (107, 34761),

Gene: Pokerus_42 Start: 35018, Stop: 34638, Start Num: 49

Candidate Starts for Pokerus_42:

(Start: 49 @35018 has 90 MA's), (Start: 54 @34985 has 1 MA's), (58, 34958), (60, 34931), (61, 34925), (96, 34712), (106, 34664),

Gene: Prithvi_44 Start: 35164, Stop: 34787, Start Num: 49

Candidate Starts for Prithvi_44:

(30, 35215), (Start: 49 @35164 has 90 MA's), (Start: 54 @35128 has 1 MA's), (57, 35113), (61, 35068), (96, 34861), (106, 34813),

Gene: QuincyRose_42 Start: 35413, Stop: 35036, Start Num: 49

Candidate Starts for QuincyRose_42:

(30, 35464), (Start: 49 @35413 has 90 MA's), (Start: 54 @35377 has 1 MA's), (61, 35317), (79, 35158), (96, 35110), (106, 35062),

Gene: Ramen_43 Start: 34983, Stop: 34603, Start Num: 49

Candidate Starts for Ramen_43:

(33, 35019), (Start: 49 @34983 has 90 MA's), (Start: 54 @34947 has 1 MA's), (61, 34887), (96, 34677), (106, 34629),

Gene: Rapunzel97_43 Start: 34979, Stop: 34599, Start Num: 49

Candidate Starts for Rapunzel97_43:

(33, 35015), (Start: 49 @34979 has 90 MA's), (Start: 54 @34943 has 1 MA's), (61, 34883), (96, 34673), (106, 34625),

Gene: Reptar3000_45 Start: 35140, Stop: 34784, Start Num: 45

Candidate Starts for Reptar3000_45:

(25, 35209), (36, 35164), (Start: 45 @35140 has 13 MA's), (Start: 48 @35134 has 3 MA's), (Start: 54 @35095 has 1 MA's), (59, 35044), (70, 34954), (72, 34933), (74, 34915),

Gene: Rosmarinus_43 Start: 35084, Stop: 34704, Start Num: 49

Candidate Starts for Rosmarinus_43:

(33, 35120), (Start: 49 @35084 has 90 MA's), (Start: 54 @35048 has 1 MA's), (61, 34988), (79, 34829), (96, 34778), (106, 34730),

Gene: Ruthiejr_48 Start: 36000, Stop: 35641, Start Num: 45

Candidate Starts for Ruthiejr_48:

(25, 36069), (36, 36024), (Start: 45 @36000 has 13 MA's), (Start: 48 @35994 has 3 MA's), (Start: 54 @35955 has 1 MA's), (59, 35904), (66, 35835), (70, 35814), (72, 35793), (74, 35775), (101, 35673),

Gene: SamScheppers_46 Start: 36429, Stop: 36070, Start Num: 45

Candidate Starts for SamScheppers_46:

(25, 36498), (36, 36453), (Start: 45 @36429 has 13 MA's), (Start: 48 @36423 has 3 MA's), (Start: 54 @36384 has 1 MA's), (59, 36333), (66, 36264), (70, 36243), (72, 36222), (74, 36204), (101, 36102),

Gene: SamuelLPlaqson_44 Start: 35877, Stop: 35500, Start Num: 49

Candidate Starts for SamuelLPlaqson_44:

(30, 35928), (Start: 49 @35877 has 90 MA's), (Start: 54 @35841 has 1 MA's), (61, 35781), (96, 35574), (106, 35526),

Gene: Scarlett_47 Start: 35979, Stop: 35605, Start Num: 52

Candidate Starts for Scarlett_47:

(40, 36012), (Start: 52 @35979 has 11 MA's), (Start: 54 @35949 has 1 MA's), (55, 35946), (61, 35889), (65, 35844), (67, 35826), (76, 35751), (97, 35676), (107, 35631),

Gene: SgtBeansprout_38 Start: 34527, Stop: 34063, Start Num: 46

Candidate Starts for SgtBeansprout_38:

(32, 34566), (Start: 46 @34527 has 7 MA's), (61, 34431), (97, 34206), (99, 34200),

Gene: Shadow1_48 Start: 35996, Stop: 35607, Start Num: 52

Candidate Starts for Shadow1_48:

(Start: 52 @35996 has 11 MA's), (Start: 54 @35966 has 1 MA's), (64, 35864), (67, 35843), (75, 35783), (76, 35768), (81, 35732), (94, 35696), (104, 35639), (107, 35633),

Gene: ShedlockHolmes_46 Start: 35683, Stop: 35261, Start Num: 37

Candidate Starts for ShedlockHolmes_46:

(21, 35740), (28, 35713), (Start: 37 @35683 has 4 MA's), (Start: 50 @35650 has 2 MA's), (74, 35437), (76, 35419), (84, 35371), (107, 35287),

Gene: ShiaSurprise_44 Start: 35293, Stop: 34913, Start Num: 49

Candidate Starts for ShiaSurprise_44:

(33, 35329), (Start: 49 @35293 has 90 MA's), (Start: 54 @35257 has 1 MA's), (61, 35197), (79, 35038), (96, 34987), (106, 34939),

Gene: SirPhilip_45 Start: 36219, Stop: 35824, Start Num: 51

Candidate Starts for SirPhilip_45:

(Start: 51 @36219 has 11 MA's), (Start: 54 @36189 has 1 MA's), (61, 36129), (63, 36102), (67, 36066), (78, 35973), (85, 35943), (111, 35850),

Gene: Slarp_47 Start: 36038, Stop: 35679, Start Num: 45

Candidate Starts for Slarp_47:

(25, 36107), (36, 36062), (Start: 45 @36038 has 13 MA's), (Start: 48 @36032 has 3 MA's), (Start: 54 @35993 has 1 MA's), (59, 35942), (66, 35873), (70, 35852), (72, 35831), (74, 35813), (101, 35711),

Gene: Slimphazie_43 Start: 34979, Stop: 34599, Start Num: 49

Candidate Starts for Slimphazie_43:

(33, 35015), (Start: 49 @34979 has 90 MA's), (Start: 54 @34943 has 1 MA's), (61, 34883), (96, 34673), (106, 34625),

Gene: Spock_43 Start: 35097, Stop: 34717, Start Num: 49

Candidate Starts for Spock_43:

(33, 35133), (Start: 49 @35097 has 90 MA's), (Start: 54 @35061 has 1 MA's), (61, 35001), (79, 34842), (96, 34791), (106, 34743),

Gene: Stinson_44 Start: 35487, Stop: 35110, Start Num: 49

Candidate Starts for Stinson_44:

(30, 35538), (Start: 49 @35487 has 90 MA's), (Start: 54 @35451 has 1 MA's), (60, 35397), (61, 35391), (89, 35199), (96, 35184), (106, 35136),

Gene: Strobilo_46 Start: 37026, Stop: 36655, Start Num: 49

Candidate Starts for Strobilo_46:

(30, 37080), (Start: 49 @37026 has 90 MA's), (Start: 54 @36990 has 1 MA's), (57, 36975), (61, 36930), (66, 36870), (74, 36810), (77, 36780), (80, 36768), (87, 36738), (105, 36681),

Gene: Sulley_43 Start: 35224, Stop: 34844, Start Num: 49

Candidate Starts for Sulley_43:

(30, 35275), (Start: 49 @35224 has 90 MA's), (Start: 54 @35188 has 1 MA's), (61, 35128), (89, 34933), (96, 34918), (106, 34870),

Gene: Sunflower1121_49 Start: 36097, Stop: 35708, Start Num: 51

Candidate Starts for Sunflower1121_49:

(Start: 51 @36097 has 11 MA's), (Start: 54 @36067 has 1 MA's), (64, 35965), (67, 35944), (75, 35884), (76, 35869), (81, 35833), (104, 35740),

Gene: Syra333_48 Start: 35764, Stop: 35375, Start Num: 52

Candidate Starts for Syra333_48:

(Start: 52 @35764 has 11 MA's), (Start: 54 @35734 has 1 MA's), (64, 35632), (67, 35611), (75, 35551), (76, 35536), (81, 35500), (94, 35464), (104, 35407), (107, 35401),

Gene: TBond007_45 Start: 35156, Stop: 34734, Start Num: 37

Candidate Starts for TBond007_45:

(Start: 37 @35156 has 4 MA's), (Start: 50 @35123 has 2 MA's), (67, 34967), (74, 34910), (76, 34892), (84, 34844), (107, 34760),

Gene: Tachez_43 Start: 34941, Stop: 34561, Start Num: 49

Candidate Starts for Tachez_43:

(33, 34977), (Start: 49 @34941 has 90 MA's), (Start: 54 @34905 has 1 MA's), (61, 34845), (96, 34635), (106, 34587),

Gene: TaiwanKao_45 Start: 35220, Stop: 34843, Start Num: 49

Candidate Starts for TaiwanKao_45:

(30, 35271), (Start: 49 @35220 has 90 MA's), (Start: 54 @35184 has 1 MA's), (57, 35169), (61, 35124), (96, 34917), (106, 34869),

Gene: Taquito_47 Start: 36279, Stop: 35926, Start Num: 48

Candidate Starts for Taquito_47:

(25, 36354), (36, 36309), (Start: 45 @36285 has 13 MA's), (Start: 48 @36279 has 3 MA's), (Start: 54 @36240 has 1 MA's), (59, 36189), (66, 36120), (70, 36099), (72, 36078), (74, 36060), (101, 35958),

Gene: Teejan_41 Start: 37140, Stop: 36742, Start Num: 46

Candidate Starts for Teejan_41:

(32, 37179), (Start: 46 @37140 has 7 MA's), (61, 37044), (97, 36819), (99, 36813),

Gene: Tierra_46 Start: 35645, Stop: 35253, Start Num: 51

Candidate Starts for Tierra_46:

(5, 35855), (6, 35846), (Start: 51 @35645 has 11 MA's), (Start: 54 @35615 has 1 MA's), (67, 35492), (71, 35459), (75, 35432), (76, 35417), (81, 35381), (96, 35330), (102, 35309), (107, 35279),

Gene: TingHuaYa_44 Start: 34216, Stop: 33830, Start Num: 49

Candidate Starts for TingHuaYa_44:

(22, 34297), (24, 34291), (27, 34276), (Start: 49 @34216 has 90 MA's), (61, 34123), (63, 34096), (96, 33925), (109, 33856),

Gene: TiniBug_44 Start: 35873, Stop: 35496, Start Num: 49

Candidate Starts for TiniBug_44:

(30, 35924), (Start: 49 @35873 has 90 MA's), (Start: 54 @35837 has 1 MA's), (61, 35777), (96, 35570), (106, 35522),

Gene: Topper_43 Start: 35096, Stop: 34716, Start Num: 49

Candidate Starts for Topper_43:

(33, 35132), (Start: 49 @35096 has 90 MA's), (Start: 54 @35060 has 1 MA's), (61, 35000), (79, 34841), (96, 34790), (106, 34742),

Gene: Torres_41 Start: 37141, Stop: 36743, Start Num: 46

Candidate Starts for Torres_41:

(32, 37180), (Start: 46 @37141 has 7 MA's), (61, 37045), (97, 36820), (99, 36814),

Gene: TreyKay_44 Start: 35164, Stop: 34787, Start Num: 49

Candidate Starts for TreyKay_44:

(30, 35215), (Start: 49 @35164 has 90 MA's), (Start: 54 @35128 has 1 MA's), (57, 35113), (61, 35068), (96, 34861), (106, 34813),

Gene: TribbleTrouble_43 Start: 35018, Stop: 34626, Start Num: 49

Candidate Starts for TribbleTrouble_43:

(29, 35075), (Start: 49 @35018 has 90 MA's), (Start: 54 @34982 has 1 MA's), (76, 34784), (84, 34736), (107, 34652), (108, 34640), (110, 34631),

Gene: TruffulaTree_43 Start: 34975, Stop: 34595, Start Num: 49

Candidate Starts for TruffulaTree_43:

(33, 35011), (Start: 49 @34975 has 90 MA's), (Start: 54 @34939 has 1 MA's), (61, 34879), (96, 34669), (106, 34621),

Gene: Twitch_43 Start: 35098, Stop: 34718, Start Num: 49

Candidate Starts for Twitch_43:

(33, 35134), (Start: 49 @35098 has 90 MA's), (Start: 54 @35062 has 1 MA's), (61, 35002), (79, 34843), (96, 34792), (106, 34744),

Gene: Unicorn_45 Start: 34877, Stop: 34485, Start Num: 51

Candidate Starts for Unicorn_45:

(1, 35147), (2, 35111), (3, 35096), (5, 35087), (6, 35078), (Start: 51 @34877 has 11 MA's), (Start: 54 @34847 has 1 MA's), (67, 34724), (75, 34664), (76, 34649), (100, 34550), (107, 34511),

Gene: Urkel_44 Start: 35877, Stop: 35500, Start Num: 49

Candidate Starts for Urkel_44:

(30, 35928), (Start: 49 @35877 has 90 MA's), (Start: 54 @35841 has 1 MA's), (61, 35781), (96, 35574), (106, 35526),

Gene: Veliki_43 Start: 35015, Stop: 34635, Start Num: 49

Candidate Starts for Veliki_43:

(33, 35051), (Start: 49 @35015 has 90 MA's), (Start: 54 @34979 has 1 MA's), (61, 34919), (96, 34709), (106, 34661),

Gene: Wintermute_47 Start: 36187, Stop: 35828, Start Num: 45

Candidate Starts for Wintermute_47:

(25, 36256), (36, 36211), (Start: 45 @36187 has 13 MA's), (Start: 48 @36181 has 3 MA's), (Start: 54 @36142 has 1 MA's), (59, 36091), (66, 36022), (70, 36001), (72, 35980), (74, 35962), (101, 35860),

Gene: Ximenita_49 Start: 35950, Stop: 35561, Start Num: 52

Candidate Starts for Ximenita_49:

(20, 36055), (31, 36016), (Start: 52 @35950 has 11 MA's), (Start: 54 @35920 has 1 MA's), (64, 35818), (67, 35797), (68, 35791), (71, 35764), (75, 35737), (76, 35722), (81, 35686), (95, 35641), (104, 35593), (107, 35587), (108, 35575),

Gene: Y10_46 Start: 36100, Stop: 35747, Start Num: 48

Candidate Starts for Y10_46:

(25, 36175), (36, 36130), (Start: 45 @36106 has 13 MA's), (Start: 48 @36100 has 3 MA's), (Start: 54 @36061 has 1 MA's), (59, 36010), (66, 35941), (70, 35920), (72, 35899), (74, 35881), (101, 35779),

Gene: Y2_46 Start: 36100, Stop: 35747, Start Num: 48

Candidate Starts for Y2_46:

(25, 36175), (36, 36130), (Start: 45 @36106 has 13 MA's), (Start: 48 @36100 has 3 MA's), (Start: 54 @36061 has 1 MA's), (59, 36010), (66, 35941), (70, 35920), (72, 35899), (74, 35881), (101, 35779),

Gene: Yuna_49 Start: 36719, Stop: 36363, Start Num: 51

Candidate Starts for Yuna_49:

(Start: 51 @36719 has 11 MA's), (Start: 54 @36689 has 1 MA's), (60, 36635), (61, 36629), (62, 36608), (67, 36566), (75, 36506), (76, 36491), (103, 36404), (107, 36389),

Gene: Yunkel11_46 Start: 34974, Stop: 34585, Start Num: 49

Candidate Starts for Yunkel11_46:

(11, 35112), (13, 35106), (14, 35103), (16, 35094), (19, 35079), (Start: 49 @34974 has 90 MA's), (Start: 52 @34968 has 11 MA's), (61, 34878), (67, 34815), (72, 34776), (76, 34740), (91, 34680), (93, 34674), (110, 34590),

Gene: Zavala_44 Start: 35258, Stop: 34881, Start Num: 49

Candidate Starts for Zavala_44:

(30, 35309), (Start: 49 @35258 has 90 MA's), (Start: 54 @35222 has 1 MA's), (57, 35207), (61, 35162), (96, 34955), (106, 34907),

Gene: ZoeJ_45 Start: 36489, Stop: 36121, Start Num: 49

Candidate Starts for ZoeJ_45:

(30, 36546), (Start: 49 @36489 has 90 MA's), (Start: 54 @36453 has 1 MA's), (56, 36441), (61, 36393), (67, 36330), (74, 36273), (83, 36213), (87, 36201), (105, 36147),