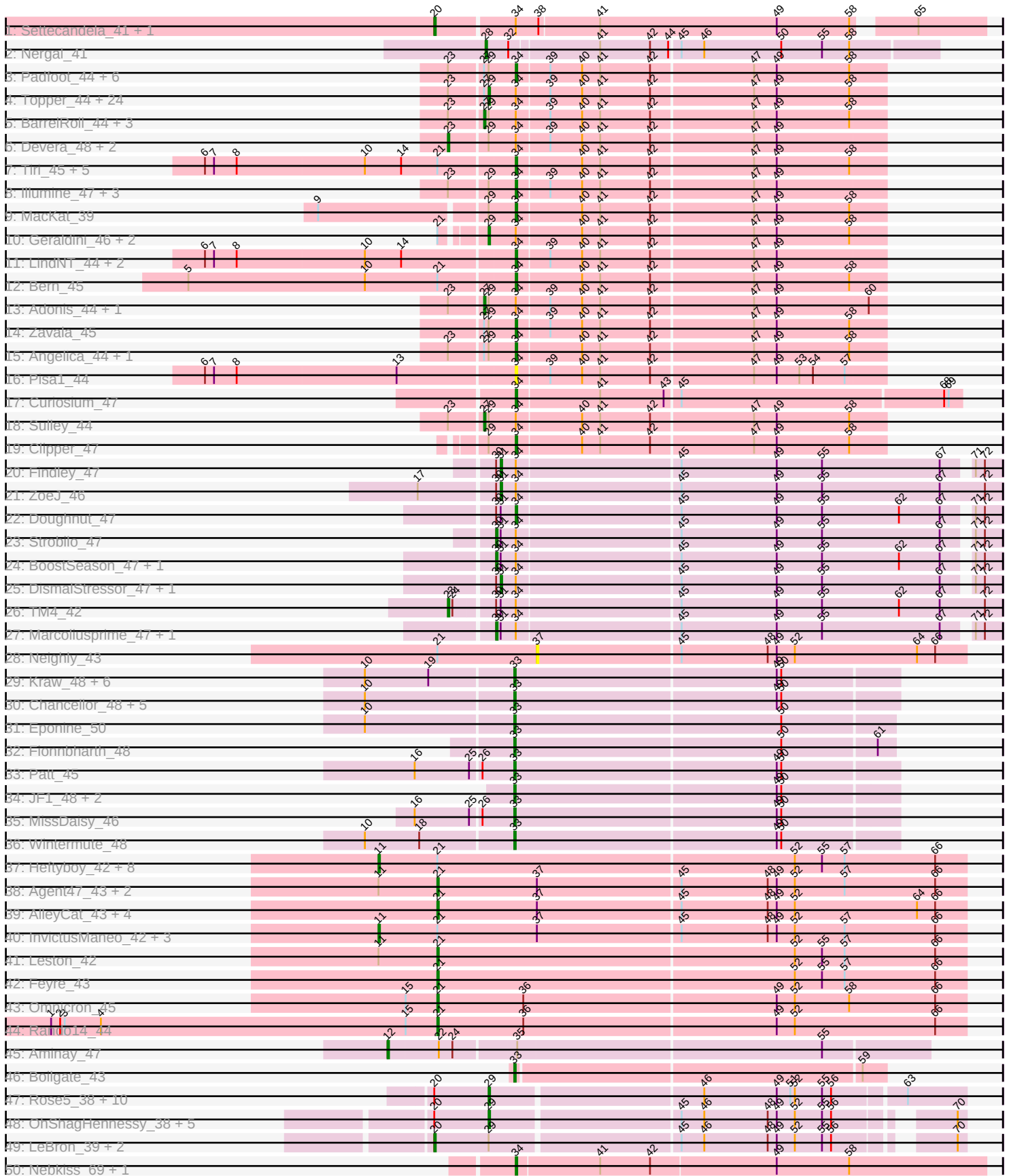


Pham 330568



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 330568 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330568 has 151 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Settecandela_41, Phrappuccino_41
- Track 2 : Nergal_41
- Track 3 : Padfoot_44, BEEST_44, Jayhawk_45, Asayake_44, Mynx_45, Padpat_45, ShiaSurprise_45
- Track 4 : Topper_44, Llorens_44, Slimphazie_44, Dalmuri_44, Jeckyll_44, Rosmarinus_44, CREW_44, TruffulaTree_44, Boiii_44, BGlluviae_44, CallaLilly_44, Belladonna_44, Veliki_44, Jarvi_44, Rapunzel97_44, Homura_44, Inky_44, Spock_44, Lunahalos_44, Capricorn_44, HedwigODU_44, YoureAdopted_43, Emerson_45, Twitch_44, Peel_44
- Track 5 : BarrelRoll_44, Adephagia_44, JAWS_44, Tachez_44
- Track 6 : Devera_48, Ageofdapage_46, Murucutumbu_45
- Track 7 : Tiri_45, Megsy_45, MeaningOfLife_45, Ganymede_45, QuincyRose_43, CrimD_44
- Track 8 : Illumine_47, LaterM_45, Stinson_45, Dole_47
- Track 9 : MacKat_39
- Track 10 : Geraldini_46, BaghaKamala_43, Pokerus_43
- Track 11 : LindNT_44, TreyKay_45, Prithvi_45
- Track 12 : Bern_45
- Track 13 : Adonis_44, Anaya_46
- Track 14 : Zavala_45
- Track 15 : Angelica_44, Deby_44
- Track 16 : Pisa1_44
- Track 17 : Curiosium_47
- Track 18 : Sulley_44
- Track 19 : Clipper_47
- Track 20 : Findley_47
- Track 21 : ZoeJ_46
- Track 22 : Doughnut_47
- Track 23 : Strobilo_47
- Track 24 : BoostSeason_47, Mufasa_47
- Track 25 : DismalStressor_47, Milly_47
- Track 26 : TM4_42
- Track 27 : Marcoliusprime_47, DismalFunk_47
- Track 28 : Neighly_43
- Track 29 : Kraw_48, Bobquesha_50, Juliette_50, YasnayaPolyana_48, Reptar3000_46, OmniCritical_47, Malthus_49

- Track 30 : Chancellor_48, Qhanda_50, Slarp_48, Cheetobro_48, Taquito_48, Mitti_48
- Track 31 : Eponine_50
- Track 32 : Fionnbharth_48
- Track 33 : Patt_45
- Track 34 : JF1_48, Y10_47, Y2_47
- Track 35 : MissDaisy_46
- Track 36 : Wintermute_48
- Track 37 : Heftyboy_42, Guillsminger_43, Gengar_42, OkiRoe_42, Waterfoul_43, Paola_42, Thyatira_44, Miryou_44, SoSeph_42
- Track 38 : Agent47_43, BananenDer11_43, LilDirt_42
- Track 39 : AlleyCat_43, Edugator_42, Psycho_43, Larva_43, Dadosky_43
- Track 40 : InvictusManeo_42, ViviJ_42, Collard_42, Kratio_41
- Track 41 : Leston_42
- Track 42 : Feyre_43
- Track 43 : Omnicron_45
- Track 44 : Rando14_44
- Track 45 : Aminay_47
- Track 46 : Boilgate_43
- Track 47 : Rose5_38, Calm_39, Tyson_38, Halena_38, CicholasNage_39, Wyatt2_39, MAckerman_39, Acquire49_39, Zaria_39, AvadaKedavra_39, Silverleaf_38
- Track 48 : OhShagHennessey_38, Wamburgrxpress_39, Enceladus_38, Appletree2_38, Poochiewood_38, DirkDirk_38
- Track 49 : LeBron_39, UPIE_39, JoeDirt_38
- Track 50 : Nebkiss_69, Gaia_69

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

The start number called the most often in the published annotations is 29, it was called in 44 of the 146 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_39, Appletree2_38, AvadaKedavra_39, BGlluviae_44, BaghaKamala_43, Belladonna_44, Boiii_44, CREW_44, CallaLilly_44, Calm_39, Capricorn_44, CicholasNage_39, Dalmuri_44, DirkDirk_38, Emerson_45, Enceladus_38, Geraldini_46, Halena_38, HedwigODU_44, Homura_44, Inky_44, Jarvi_44, Jeckyll_44, Llorens_44, Lunahalos_44, MAckerman_39, OhShagHennessey_38, Peel_44, Pokerus_43, Poochiewood_38, Rapunzel97_44, Rose5_38, Rosmarinus_44, Silverleaf_38, Slimphazie_44, Spock_44, Topper_44, TruffulaTree_44, Twitch_44, Tyson_38, Veliki_44, Wamburgrxpress_39, Wyatt2_39, YoureAdopted_43, Zaria_39,

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

- Adephagia_44, Adonis_44, Ageofdapage_46, Anaya_46, Angelica_44, Asayake_44, BEEST_44, BarrelRoll_44, Clipper_47, Deby_44, Devera_48, Dole_47, Illumine_47, JAWS_44, Jayhawk_45, JoeDirt_38, LaterM_45, LeBron_39, MacKat_39, Murucutumbu_45, Mynx_45, Padfoot_44, Padpat_45, ShiaSurprise_45, Stinson_45, Sulley_44, Tachez_44, UPIE_39, Zavala_45,

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

• Agent47_43, AlleyCat_43, Aminay_47, BananenDer11_43, Bern_45, Bobquesha_50, Boilgate_43, BoostSeason_47, Chancellor_48, Cheetobro_48, Collard_42, CrimD_44, Curiosium_47, Dadosky_43, DismalFunk_47, DismalStressor_47, Doughnut_47, Edugator_42, Eponine_50, Feyre_43, Findley_47, Fionnbharth_48, Gaia_69, Ganymede_45, Gengar_42, Guillsminger_43, Heftyboy_42, InvictusManeo_42, JF1_48, Juliette_50, Kratio_41, Kraw_48, Larva_43, Leston_42, LilDirt_42, LindNT_44, Malthus_49, Marcoliusprime_47, MeaningOfLife_45, Megsy_45, Milly_47, Miryou_44, MissDaisy_46, Mitti_48, Mufasa_47, Nebkiss_69, Neighly_43, Nergal_41, OkiRoe_42, OmniCritical_47, Omnicron_45, Paola_42, Patt_45, Phrappuccino_41, Pisa1_44, Prithvi_45, Psycho_43, Qhanda_50, QuincyRose_43, Rando14_44, Reptar3000_46, Settecandela_41, Slarp_48, SoSeph_42, Strobilo_47, TM4_42, Taquito_48, Thyatira_44, Tiri_45, TreyKay_45, ViviJ_42, Waterfoul_43, Wintermute_48, Y10_47, Y2_47, YasnayaPolyana_48, ZoeJ_46,

Summary by start number:

Start 11:

- Found in 17 of 151 (11.3%) of genes in pham
- Manual Annotations of this start: 13 of 146
- Called 76.5% of time when present
- Phage (with cluster) where this start called: Collard_42 (K5), Gengar_42 (K5), Guillsminger_43 (K5), Heftyboy_42 (K5), InvictusManeo_42 (K5), Kratio_41 (K5), Miryou_44 (K5), OkiRoe_42 (K5), Paola_42 (K5), SoSeph_42 (K5), Thyatira_44 (K5), ViviJ_42 (K5), Waterfoul_43 (K5),

Start 12:

- Found in 1 of 151 (0.7%) 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: Aminay_47 (K7),

Start 20:

- Found in 22 of 151 (14.6%) of genes in pham
- Manual Annotations of this start: 5 of 146
- Called 22.7% of time when present
- Phage (with cluster) where this start called: JoeDirt_38 (L1), LeBron_39 (L1), Phrappuccino_41 (AA), Settecandela_41 (AA), UPIE_39 (L1),

Start 21:

- Found in 36 of 151 (23.8%) of genes in pham
- Manual Annotations of this start: 12 of 146
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Agent47_43 (K5), AlleyCat_43 (K5), BananenDer11_43 (K5), Dadosky_43 (K5), Edugator_42 (K5), Feyre_43 (K5), Larva_43 (K5), Leston_42 (K5), LilDirt_42 (K5), Omnicron_45 (K5), Psycho_43 (K5), Rando14_44 (K5),

Start 23:

- Found in 49 of 151 (32.5%) of genes in pham
- Manual Annotations of this start: 4 of 146
- Called 8.2% of time when present

- Phage (with cluster) where this start called: Ageofdapage_46 (K1), Devera_48 (K1), Murucutumbu_45 (K1), TM4_42 (K2),

Start 27:

- Found in 42 of 151 (27.8%) of genes in pham
- Manual Annotations of this start: 7 of 146
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Adephagia_44 (K1), Adonis_44 (K1), Anaya_46 (K1), BarrelRoll_44 (K1), JAWS_44 (K1), Sulley_44 (K1), Tachez_44 (K1),

Start 28:

- Found in 1 of 151 (0.7%) 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: Nergal_41 (AG),

Start 29:

- Found in 74 of 151 (49.0%) of genes in pham
- Manual Annotations of this start: 44 of 146
- Called 60.8% of time when present
- Phage (with cluster) where this start called: Acquire49_39 (L1), Appletree2_38 (L1), AvadaKedavra_39 (L1), BGlluviae_44 (K1), BaghaKamala_43 (K1), Belladonna_44 (K1), Boiii_44 (K1), CREW_44 (K1), CallaLilly_44 (K1), Calm_39 (L1), Capricorn_44 (K1), CicholasNage_39 (L1), Dalmuri_44 (K1), DirkDirk_38 (L1), Emerson_45 (K1), Enceladus_38 (L1), Geraldini_46 (K1), Halena_38 (L1), HedwigODU_44 (K1), Homura_44 (K1), Inky_44 (K1), Jarvi_44 (K1), Jeckyll_44 (K1), Llorens_44 (K1), Lunahalos_44 (K1), MÄckerman_39 (L1), OhShagHennessy_38 (L1), Peel_44 (K1), Pokerus_43 (K1), Poochiewood_38 (L1), Rapunzel97_44 (K1), Rose5_38 (L1), Rosmarinus_44 (K1), Silverleaf_38 (L1), Slimphazie_44 (K1), Spock_44 (K1), Topper_44 (K1), TruffulaTree_44 (K1), Twitch_44 (K1), Tyson_38 (L1), Veliki_44 (K1), Wamburggrxpress_39 (L1), Wyatt2_39 (L1), YoureAdopted_43 (K1), Zaria_39 (L1),

Start 30:

- Found in 11 of 151 (7.3%) of genes in pham
- Manual Annotations of this start: 5 of 146
- Called 45.5% of time when present
- Phage (with cluster) where this start called: BoostSeason_47 (K2), DismalFunk_47 (K2), Marcoliusprime_47 (K2), Mufasa_47 (K2), Strobilo_47 (K2),

Start 31:

- Found in 11 of 151 (7.3%) of genes in pham
- Manual Annotations of this start: 4 of 146
- Called 36.4% of time when present
- Phage (with cluster) where this start called: DismalStressor_47 (K2), Findley_47 (K2), Milly_47 (K2), ZoeJ_46 (K2),

Start 33:

- Found in 22 of 151 (14.6%) of genes in pham
- Manual Annotations of this start: 20 of 146
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bobquesha_50 (K4), Boilgate_43 (K8), Chancellor_48 (K4), Cheetobro_48 (K4), Eponine_50 (K4), Fionnbharth_48 (K4),

JF1_48 (K4), Juliette_50 (K4), Kraw_48 (K4), Malthus_49 (K4), MissDaisy_46 (K4), Mitti_48 (K4), OmniCritical_47 (K4), Patt_45 (K4), Qhanda_50 (K4), Reptar3000_46 (K4), Slarp_48 (K4), Taquito_48 (K4), Wintermute_48 (K4), Y10_47 (K4), Y2_47 (K4), YasnayaPolyana_48 (K4),

Start 34:

- Found in 81 of 151 (53.6%) of genes in pham
- Manual Annotations of this start: 30 of 146
- Called 38.3% of time when present
- Phage (with cluster) where this start called: Angelica_44 (K1), Asayake_44 (K1), BEEST_44 (K1), Bern_45 (K1), Clipper_47 (K1), CrimD_44 (K1), Curiosium_47 (K1), Deby_44 (K1), Dole_47 (K1), Doughnut_47 (K2), Gaia_69 (X), Ganymede_45 (K1), Illumine_47 (K1), Jayhawk_45 (K1), LaterM_45 (K1), LindNT_44 (K1), MacKat_39 (K1), MeaningOfLife_45 (K1), Megsy_45 (K1), Mynx_45 (K1), Nebkiss_69 (X), Padfoot_44 (K1), Padpat_45 (K1), Pisa1_44 (K1), Prithvi_45 (K1), QuincyRose_43 (K1), ShiaSurprise_45 (K1), Stinson_45 (K1), Tiri_45 (K1), TreyKay_45 (K1), Zavala_45 (K1),

Start 37:

- Found in 13 of 151 (8.6%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Neighly_43 (K3),

Summary by clusters:

There are 11 clusters represented in this pham: AA, AG, L1, K3, K2, K1, K7, K5, K4, X, K8,

Info for manual annotations of cluster AA:

- Start number 20 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AG:

- Start number 28 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K1:

- Start number 23 was manually annotated 3 times for cluster K1.
- Start number 27 was manually annotated 7 times for cluster K1.
- Start number 29 was manually annotated 28 times for cluster K1.
- Start number 34 was manually annotated 27 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 23 was manually annotated 1 time for cluster K2.
- Start number 30 was manually annotated 5 times for cluster K2.
- Start number 31 was manually annotated 4 times for cluster K2.
- Start number 34 was manually annotated 1 time for cluster K2.

Info for manual annotations of cluster K4:

- Start number 33 was manually annotated 19 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 11 was manually annotated 13 times for cluster K5.

- Start number 21 was manually annotated 12 times for cluster K5.

Info for manual annotations of cluster K7:

- Start number 12 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 33 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L1:

- Start number 20 was manually annotated 3 times for cluster L1.
- Start number 29 was manually annotated 16 times for cluster L1.

Info for manual annotations of cluster X:

- Start number 34 was manually annotated 2 times for cluster X.

Gene Information:

Gene: Acquire49_39 Start: 33043, Stop: 33345, Start Num: 29

Candidate Starts for Acquire49_39:

(Start: 20 @33007 has 5 MA's), (Start: 29 @33043 has 44 MA's), (46, 33178), (49, 33226), (51, 33235), (52, 33238), (55, 33256), (56, 33262), (63, 33307),

Gene: Adephagia_44 Start: 35138, Stop: 35398, Start Num: 27

Candidate Starts for Adephagia_44:

(Start: 23 @35117 has 4 MA's), (Start: 27 @35138 has 7 MA's), (Start: 29 @35141 has 44 MA's), (Start: 34 @35159 has 30 MA's), (39, 35180), (40, 35201), (41, 35213), (42, 35246), (47, 35312), (49, 35327), (58, 35375),

Gene: Adonis_44 Start: 35436, Stop: 35696, Start Num: 27

Candidate Starts for Adonis_44:

(Start: 23 @35415 has 4 MA's), (Start: 27 @35436 has 7 MA's), (Start: 29 @35439 has 44 MA's), (Start: 34 @35457 has 30 MA's), (39, 35478), (40, 35499), (41, 35511), (42, 35544), (47, 35610), (49, 35625), (60, 35685),

Gene: Agent47_43 Start: 34663, Stop: 35010, Start Num: 21

Candidate Starts for Agent47_43:

(Start: 11 @34624 has 13 MA's), (Start: 21 @34663 has 12 MA's), (37, 34729), (45, 34822), (48, 34879), (49, 34885), (52, 34897), (57, 34930), (66, 34990),

Gene: Ageofdapage_46 Start: 36088, Stop: 36369, Start Num: 23

Candidate Starts for Ageofdapage_46:

(Start: 23 @36088 has 4 MA's), (Start: 29 @36112 has 44 MA's), (Start: 34 @36130 has 30 MA's), (39, 36151), (40, 36172), (41, 36184), (42, 36217), (47, 36283), (49, 36298),

Gene: AlleyCat_43 Start: 34517, Stop: 34864, Start Num: 21

Candidate Starts for AlleyCat_43:

(Start: 21 @34517 has 12 MA's), (37, 34583), (45, 34676), (48, 34733), (49, 34739), (52, 34751), (64, 34832), (66, 34844),

Gene: Aminay_47 Start: 36566, Stop: 36913, Start Num: 12

Candidate Starts for Aminay_47:

(Start: 12 @36566 has 1 MA's), (22, 36599), (24, 36608), (35, 36647), (55, 36845),

Gene: Anaya_46 Start: 35748, Stop: 36008, Start Num: 27

Candidate Starts for Anaya_46:

(Start: 23 @35727 has 4 MA's), (Start: 27 @35748 has 7 MA's), (Start: 29 @35751 has 44 MA's),
(Start: 34 @35769 has 30 MA's), (39, 35790), (40, 35811), (41, 35823), (42, 35856), (47, 35922), (49,
35937), (60, 35997),

Gene: Angelica_44 Start: 35389, Stop: 35628, Start Num: 34

Candidate Starts for Angelica_44:

(Start: 23 @35347 has 4 MA's), (Start: 27 @35368 has 7 MA's), (Start: 29 @35371 has 44 MA's),
(Start: 34 @35389 has 30 MA's), (40, 35431), (41, 35443), (42, 35476), (47, 35542), (49, 35557), (58,
35605),

Gene: Appletree2_38 Start: 32985, Stop: 33272, Start Num: 29

Candidate Starts for Appletree2_38:

(Start: 20 @32949 has 5 MA's), (Start: 29 @32985 has 44 MA's), (45, 33105), (46, 33120), (48, 33162),
(49, 33168), (52, 33180), (55, 33198), (56, 33204), (70, 33267),

Gene: Asayake_44 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for Asayake_44:

(Start: 23 @35432 has 4 MA's), (Start: 27 @35453 has 7 MA's), (Start: 29 @35456 has 44 MA's),
(Start: 34 @35474 has 30 MA's), (39, 35495), (40, 35516), (41, 35528), (42, 35561), (47, 35627), (49,
35642), (58, 35690),

Gene: AvadaKedavra_39 Start: 33052, Stop: 33354, Start Num: 29

Candidate Starts for AvadaKedavra_39:

(Start: 20 @33016 has 5 MA's), (Start: 29 @33052 has 44 MA's), (46, 33187), (49, 33235), (51, 33244),
(52, 33247), (55, 33265), (56, 33271), (63, 33316),

Gene: BEEST_44 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for BEEST_44:

(Start: 23 @35432 has 4 MA's), (Start: 27 @35453 has 7 MA's), (Start: 29 @35456 has 44 MA's),
(Start: 34 @35474 has 30 MA's), (39, 35495), (40, 35516), (41, 35528), (42, 35561), (47, 35627), (49,
35642), (58, 35690),

Gene: BGlluviae_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for BGlluviae_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: BaghaKamala_43 Start: 34579, Stop: 34836, Start Num: 29

Candidate Starts for BaghaKamala_43:

(Start: 21 @34555 has 12 MA's), (Start: 29 @34579 has 44 MA's), (Start: 34 @34597 has 30 MA's),
(40, 34639), (41, 34651), (42, 34684), (47, 34750), (49, 34765), (58, 34813),

Gene: BananenDer11_43 Start: 34624, Stop: 34971, Start Num: 21

Candidate Starts for BananenDer11_43:

(Start: 11 @34585 has 13 MA's), (Start: 21 @34624 has 12 MA's), (37, 34690), (45, 34783), (48,
34840), (49, 34846), (52, 34858), (57, 34891), (66, 34951),

Gene: BarrelRoll_44 Start: 35124, Stop: 35384, Start Num: 27

Candidate Starts for BarrelRoll_44:

(Start: 23 @35103 has 4 MA's), (Start: 27 @35124 has 7 MA's), (Start: 29 @35127 has 44 MA's),
(Start: 34 @35145 has 30 MA's), (39, 35166), (40, 35187), (41, 35199), (42, 35232), (47, 35298), (49,
35313), (58, 35361),

Gene: Belladonna_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Belladonna_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: Bern_45 Start: 34192, Stop: 34431, Start Num: 34

Candidate Starts for Bern_45:

(5, 33979), (10, 34096), (Start: 21 @34144 has 12 MA's), (Start: 34 @34192 has 30 MA's), (40, 34234),
(41, 34246), (42, 34279), (47, 34345), (49, 34360), (58, 34408),

Gene: Bobquesha_50 Start: 35544, Stop: 35792, Start Num: 33

Candidate Starts for Bobquesha_50:

(10, 35448), (19, 35490), (Start: 33 @35544 has 20 MA's), (49, 35715), (50, 35718),

Gene: Boiiii_44 Start: 35458, Stop: 35715, Start Num: 29

Candidate Starts for Boiiii_44:

(Start: 23 @35434 has 4 MA's), (Start: 27 @35455 has 7 MA's), (Start: 29 @35458 has 44 MA's),
(Start: 34 @35476 has 30 MA's), (39, 35497), (40, 35518), (41, 35530), (42, 35563), (47, 35629), (49,
35644), (58, 35692),

Gene: Boilgate_43 Start: 36328, Stop: 36564, Start Num: 33

Candidate Starts for Boilgate_43:

(Start: 33 @36328 has 20 MA's), (59, 36550),

Gene: BoostSeason_47 Start: 36788, Stop: 37108, Start Num: 30

Candidate Starts for BoostSeason_47:

(Start: 30 @36788 has 5 MA's), (Start: 31 @36791 has 4 MA's), (Start: 34 @36800 has 30 MA's), (45,
36905), (49, 36968), (55, 36998), (62, 37049), (67, 37076), (71, 37091), (72, 37097),

Gene: CREW_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for CREW_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: CallaLilly_44 Start: 35182, Stop: 35439, Start Num: 29

Candidate Starts for CallaLilly_44:

(Start: 23 @35158 has 4 MA's), (Start: 27 @35179 has 7 MA's), (Start: 29 @35182 has 44 MA's),
(Start: 34 @35200 has 30 MA's), (39, 35221), (40, 35242), (41, 35254), (42, 35287), (47, 35353), (49,
35368), (58, 35416),

Gene: Calm_39 Start: 33058, Stop: 33360, Start Num: 29

Candidate Starts for Calm_39:

(Start: 20 @33022 has 5 MA's), (Start: 29 @33058 has 44 MA's), (46, 33193), (49, 33241), (51, 33250),
(52, 33253), (55, 33271), (56, 33277), (63, 33322),

Gene: Capricorn_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Capricorn_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: Chancellor_48 Start: 36169, Stop: 36417, Start Num: 33

Candidate Starts for Chancellor_48:

(10, 36073), (Start: 33 @36169 has 20 MA's), (49, 36340), (50, 36343),

Gene: Cheetobro_48 Start: 36166, Stop: 36414, Start Num: 33

Candidate Starts for Cheetobro_48:

(10, 36070), (Start: 33 @36166 has 20 MA's), (49, 36337), (50, 36340),

Gene: CicholasNage_39 Start: 33079, Stop: 33381, Start Num: 29

Candidate Starts for CicholasNage_39:

(Start: 20 @33043 has 5 MA's), (Start: 29 @33079 has 44 MA's), (46, 33214), (49, 33262), (51, 33271),
(52, 33274), (55, 33292), (56, 33298), (63, 33343),

Gene: Clipper_47 Start: 35793, Stop: 36032, Start Num: 34

Candidate Starts for Clipper_47:

(Start: 29 @35775 has 44 MA's), (Start: 34 @35793 has 30 MA's), (40, 35835), (41, 35847), (42,
35880), (47, 35946), (49, 35961), (58, 36009),

Gene: Collard_42 Start: 34585, Stop: 34971, Start Num: 11

Candidate Starts for Collard_42:

(Start: 11 @34585 has 13 MA's), (Start: 21 @34624 has 12 MA's), (37, 34690), (45, 34783), (48,
34840), (49, 34846), (52, 34858), (57, 34891), (66, 34951),

Gene: CrimD_44 Start: 35400, Stop: 35639, Start Num: 34

Candidate Starts for CrimD_44:

(6, 35199), (7, 35205), (8, 35220), (10, 35304), (14, 35328), (Start: 21 @35352 has 12 MA's), (Start: 34
@35400 has 30 MA's), (40, 35442), (41, 35454), (42, 35487), (47, 35553), (49, 35568), (58, 35616),

Gene: Curiosium_47 Start: 34347, Stop: 34634, Start Num: 34

Candidate Starts for Curiosium_47:

(Start: 34 @34347 has 30 MA's), (41, 34401), (43, 34443), (45, 34452), (68, 34623), (69, 34626),

Gene: Dadosky_43 Start: 34519, Stop: 34866, Start Num: 21

Candidate Starts for Dadosky_43:

(Start: 21 @34519 has 12 MA's), (37, 34585), (45, 34678), (48, 34735), (49, 34741), (52, 34753), (64,
34834), (66, 34846),

Gene: Dalmuri_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Dalmuri_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: Deby_44 Start: 35405, Stop: 35644, Start Num: 34

Candidate Starts for Deby_44:

(Start: 23 @35363 has 4 MA's), (Start: 27 @35384 has 7 MA's), (Start: 29 @35387 has 44 MA's),
(Start: 34 @35405 has 30 MA's), (40, 35447), (41, 35459), (42, 35492), (47, 35558), (49, 35573), (58,
35621),

Gene: Devera_48 Start: 35896, Stop: 36177, Start Num: 23

Candidate Starts for Devera_48:

(Start: 23 @35896 has 4 MA's), (Start: 29 @35920 has 44 MA's), (Start: 34 @35938 has 30 MA's), (39, 35959), (40, 35980), (41, 35992), (42, 36025), (47, 36091), (49, 36106),

Gene: DirkDirk_38 Start: 33045, Stop: 33332, Start Num: 29

Candidate Starts for DirkDirk_38:

(Start: 20 @33009 has 5 MA's), (Start: 29 @33045 has 44 MA's), (45, 33165), (46, 33180), (48, 33222), (49, 33228), (52, 33240), (55, 33258), (56, 33264), (70, 33327),

Gene: DismalFunk_47 Start: 37222, Stop: 37542, Start Num: 30

Candidate Starts for DismalFunk_47:

(Start: 30 @37222 has 5 MA's), (Start: 31 @37225 has 4 MA's), (Start: 34 @37234 has 30 MA's), (45, 37339), (49, 37402), (55, 37432), (67, 37510), (71, 37525), (72, 37531),

Gene: DismalStressor_47 Start: 37225, Stop: 37542, Start Num: 31

Candidate Starts for DismalStressor_47:

(Start: 30 @37222 has 5 MA's), (Start: 31 @37225 has 4 MA's), (Start: 34 @37234 has 30 MA's), (45, 37339), (49, 37402), (55, 37432), (67, 37510), (71, 37525), (72, 37531),

Gene: Dole_47 Start: 35940, Stop: 36179, Start Num: 34

Candidate Starts for Dole_47:

(Start: 23 @35898 has 4 MA's), (Start: 29 @35922 has 44 MA's), (Start: 34 @35940 has 30 MA's), (39, 35961), (40, 35982), (41, 35994), (42, 36027), (47, 36093), (49, 36108),

Gene: Doughnut_47 Start: 36847, Stop: 37155, Start Num: 34

Candidate Starts for Doughnut_47:

(Start: 30 @36835 has 5 MA's), (Start: 31 @36838 has 4 MA's), (Start: 34 @36847 has 30 MA's), (45, 36952), (49, 37015), (55, 37045), (62, 37096), (67, 37123), (71, 37138), (72, 37144),

Gene: Edugator_42 Start: 34944, Stop: 35291, Start Num: 21

Candidate Starts for Edugator_42:

(Start: 21 @34944 has 12 MA's), (37, 35010), (45, 35103), (48, 35160), (49, 35166), (52, 35178), (64, 35259), (66, 35271),

Gene: Emerson_45 Start: 35135, Stop: 35392, Start Num: 29

Candidate Starts for Emerson_45:

(Start: 23 @35111 has 4 MA's), (Start: 27 @35132 has 7 MA's), (Start: 29 @35135 has 44 MA's), (Start: 34 @35153 has 30 MA's), (39, 35174), (40, 35195), (41, 35207), (42, 35240), (47, 35306), (49, 35321), (58, 35369),

Gene: Enceladus_38 Start: 33028, Stop: 33315, Start Num: 29

Candidate Starts for Enceladus_38:

(Start: 20 @32992 has 5 MA's), (Start: 29 @33028 has 44 MA's), (45, 33148), (46, 33163), (48, 33205), (49, 33211), (52, 33223), (55, 33241), (56, 33247), (70, 33310),

Gene: Eponine_50 Start: 36922, Stop: 37167, Start Num: 33

Candidate Starts for Eponine_50:

(10, 36826), (Start: 33 @36922 has 20 MA's), (50, 37096),

Gene: Feyre_43 Start: 35869, Stop: 36216, Start Num: 21

Candidate Starts for Feyre_43:

(Start: 21 @35869 has 12 MA's), (52, 36103), (55, 36121), (57, 36136), (66, 36196),

Gene: Findley_47 Start: 37218, Stop: 37535, Start Num: 31

Candidate Starts for Findley_47:

(Start: 30 @37215 has 5 MA's), (Start: 31 @37218 has 4 MA's), (Start: 34 @37227 has 30 MA's), (45, 37332), (49, 37395), (55, 37425), (67, 37503), (71, 37518), (72, 37524),

Gene: Fionnbharth_48 Start: 36320, Stop: 36565, Start Num: 33

Candidate Starts for Fionnbharth_48:

(Start: 33 @36320 has 20 MA's), (50, 36494), (61, 36554),

Gene: Gaia_69 Start: 45400, Stop: 45705, Start Num: 34

Candidate Starts for Gaia_69:

(Start: 34 @45400 has 30 MA's), (41, 45454), (42, 45487), (49, 45568), (58, 45616),

Gene: Ganymede_45 Start: 35592, Stop: 35831, Start Num: 34

Candidate Starts for Ganymede_45:

(6, 35391), (7, 35397), (8, 35412), (10, 35496), (14, 35520), (Start: 21 @35544 has 12 MA's), (Start: 34 @35592 has 30 MA's), (40, 35634), (41, 35646), (42, 35679), (47, 35745), (49, 35760), (58, 35808),

Gene: Gengar_42 Start: 34445, Stop: 34831, Start Num: 11

Candidate Starts for Gengar_42:

(Start: 11 @34445 has 13 MA's), (Start: 21 @34484 has 12 MA's), (52, 34718), (55, 34736), (57, 34751), (66, 34811),

Gene: Geraldini_46 Start: 36191, Stop: 36448, Start Num: 29

Candidate Starts for Geraldini_46:

(Start: 21 @36167 has 12 MA's), (Start: 29 @36191 has 44 MA's), (Start: 34 @36209 has 30 MA's), (40, 36251), (41, 36263), (42, 36296), (47, 36362), (49, 36377), (58, 36425),

Gene: Guillsminger_43 Start: 34416, Stop: 34802, Start Num: 11

Candidate Starts for Guillsminger_43:

(Start: 11 @34416 has 13 MA's), (Start: 21 @34455 has 12 MA's), (52, 34689), (55, 34707), (57, 34722), (66, 34782),

Gene: Halena_38 Start: 33054, Stop: 33356, Start Num: 29

Candidate Starts for Halena_38:

(Start: 20 @33018 has 5 MA's), (Start: 29 @33054 has 44 MA's), (46, 33189), (49, 33237), (51, 33246), (52, 33249), (55, 33267), (56, 33273), (63, 33318),

Gene: HedwigODU_44 Start: 35144, Stop: 35401, Start Num: 29

Candidate Starts for HedwigODU_44:

(Start: 23 @35120 has 4 MA's), (Start: 27 @35141 has 7 MA's), (Start: 29 @35144 has 44 MA's), (Start: 34 @35162 has 30 MA's), (39, 35183), (40, 35204), (41, 35216), (42, 35249), (47, 35315), (49, 35330), (58, 35378),

Gene: Heftyboy_42 Start: 34566, Stop: 34952, Start Num: 11

Candidate Starts for Heftyboy_42:

(Start: 11 @34566 has 13 MA's), (Start: 21 @34605 has 12 MA's), (52, 34839), (55, 34857), (57, 34872), (66, 34932),

Gene: Homura_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Homura_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: Illumine_47 Start: 35940, Stop: 36179, Start Num: 34

Candidate Starts for Illumine_47:

(Start: 23 @35898 has 4 MA's), (Start: 29 @35922 has 44 MA's), (Start: 34 @35940 has 30 MA's), (39,
35961), (40, 35982), (41, 35994), (42, 36027), (47, 36093), (49, 36108),

Gene: Inky_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Inky_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: InvictusManeo_42 Start: 34628, Stop: 35014, Start Num: 11

Candidate Starts for InvictusManeo_42:

(Start: 11 @34628 has 13 MA's), (Start: 21 @34667 has 12 MA's), (37, 34733), (45, 34826), (48,
34883), (49, 34889), (52, 34901), (57, 34934), (66, 34994),

Gene: JAWS_44 Start: 35130, Stop: 35390, Start Num: 27

Candidate Starts for JAWS_44:

(Start: 23 @35109 has 4 MA's), (Start: 27 @35130 has 7 MA's), (Start: 29 @35133 has 44 MA's),
(Start: 34 @35151 has 30 MA's), (39, 35172), (40, 35193), (41, 35205), (42, 35238), (47, 35304), (49,
35319), (58, 35367),

Gene: JF1_48 Start: 36237, Stop: 36485, Start Num: 33

Candidate Starts for JF1_48:

(Start: 33 @36237 has 20 MA's), (49, 36408), (50, 36411),

Gene: Jarvi_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Jarvi_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: Jayhawk_45 Start: 35160, Stop: 35399, Start Num: 34

Candidate Starts for Jayhawk_45:

(Start: 23 @35118 has 4 MA's), (Start: 27 @35139 has 7 MA's), (Start: 29 @35142 has 44 MA's),
(Start: 34 @35160 has 30 MA's), (39, 35181), (40, 35202), (41, 35214), (42, 35247), (47, 35313), (49,
35328), (58, 35376),

Gene: Jeckyll_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Jeckyll_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's),
(Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,
35445), (58, 35493),

Gene: JoeDirt_38 Start: 32990, Stop: 33313, Start Num: 20

Candidate Starts for JoeDirt_38:

(Start: 20 @32990 has 5 MA's), (Start: 29 @33026 has 44 MA's), (45, 33146), (46, 33161), (48, 33203),
(49, 33209), (52, 33221), (55, 33239), (56, 33245), (70, 33308),

Gene: Juliette_50 Start: 36393, Stop: 36641, Start Num: 33

Candidate Starts for Juliette_50:

(10, 36297), (19, 36339), (Start: 33 @36393 has 20 MA's), (49, 36564), (50, 36567),

Gene: Kratio_41 Start: 34179, Stop: 34565, Start Num: 11

Candidate Starts for Kratio_41:

(Start: 11 @34179 has 13 MA's), (Start: 21 @34218 has 12 MA's), (37, 34284), (45, 34377), (48, 34434), (49, 34440), (52, 34452), (57, 34485), (66, 34545),

Gene: Kraw_48 Start: 36081, Stop: 36329, Start Num: 33

Candidate Starts for Kraw_48:

(10, 35985), (19, 36027), (Start: 33 @36081 has 20 MA's), (49, 36252), (50, 36255),

Gene: Larva_43 Start: 34386, Stop: 34733, Start Num: 21

Candidate Starts for Larva_43:

(Start: 21 @34386 has 12 MA's), (37, 34452), (45, 34545), (48, 34602), (49, 34608), (52, 34620), (64, 34701), (66, 34713),

Gene: LaterM_45 Start: 36054, Stop: 36293, Start Num: 34

Candidate Starts for LaterM_45:

(Start: 23 @36012 has 4 MA's), (Start: 29 @36036 has 44 MA's), (Start: 34 @36054 has 30 MA's), (39, 36075), (40, 36096), (41, 36108), (42, 36141), (47, 36207), (49, 36222),

Gene: LeBron_39 Start: 33034, Stop: 33357, Start Num: 20

Candidate Starts for LeBron_39:

(Start: 20 @33034 has 5 MA's), (Start: 29 @33070 has 44 MA's), (45, 33190), (46, 33205), (48, 33247), (49, 33253), (52, 33265), (55, 33283), (56, 33289), (70, 33352),

Gene: Leston_42 Start: 34584, Stop: 34931, Start Num: 21

Candidate Starts for Leston_42:

(Start: 11 @34545 has 13 MA's), (Start: 21 @34584 has 12 MA's), (52, 34818), (55, 34836), (57, 34851), (66, 34911),

Gene: LilDirt_42 Start: 34425, Stop: 34772, Start Num: 21

Candidate Starts for LilDirt_42:

(Start: 11 @34386 has 13 MA's), (Start: 21 @34425 has 12 MA's), (37, 34491), (45, 34584), (48, 34641), (49, 34647), (52, 34659), (57, 34692), (66, 34752),

Gene: LindNT_44 Start: 35343, Stop: 35582, Start Num: 34

Candidate Starts for LindNT_44:

(6, 35142), (7, 35148), (8, 35163), (10, 35247), (14, 35271), (Start: 34 @35343 has 30 MA's), (39, 35364), (40, 35385), (41, 35397), (42, 35430), (47, 35496), (49, 35511),

Gene: Llorens_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Llorens_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's), (Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49, 35445), (58, 35493),

Gene: Lunahalos_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Lunahalos_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's), (Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49,

35445), (58, 35493),

Gene: MAckerman_39 Start: 33048, Stop: 33350, Start Num: 29

Candidate Starts for MAckerman_39:

(Start: 20 @33012 has 5 MA's), (Start: 29 @33048 has 44 MA's), (46, 33183), (49, 33231), (51, 33240), (52, 33243), (55, 33261), (56, 33267), (63, 33312),

Gene: MacKat_39 Start: 30677, Stop: 30916, Start Num: 34

Candidate Starts for MacKat_39:

(9, 30554), (Start: 29 @30659 has 44 MA's), (Start: 34 @30677 has 30 MA's), (40, 30719), (41, 30731), (42, 30764), (47, 30830), (49, 30845), (58, 30893),

Gene: Malthus_49 Start: 36081, Stop: 36329, Start Num: 33

Candidate Starts for Malthus_49:

(10, 35985), (19, 36027), (Start: 33 @36081 has 20 MA's), (49, 36252), (50, 36255),

Gene: Marcoliusprime_47 Start: 37222, Stop: 37542, Start Num: 30

Candidate Starts for Marcoliusprime_47:

(Start: 30 @37222 has 5 MA's), (Start: 31 @37225 has 4 MA's), (Start: 34 @37234 has 30 MA's), (45, 37339), (49, 37402), (55, 37432), (67, 37510), (71, 37525), (72, 37531),

Gene: MeaningOfLife_45 Start: 36086, Stop: 36325, Start Num: 34

Candidate Starts for MeaningOfLife_45:

(6, 35885), (7, 35891), (8, 35906), (10, 35990), (14, 36014), (Start: 21 @36038 has 12 MA's), (Start: 34 @36086 has 30 MA's), (40, 36128), (41, 36140), (42, 36173), (47, 36239), (49, 36254), (58, 36302),

Gene: Megsy_45 Start: 35402, Stop: 35641, Start Num: 34

Candidate Starts for Megsy_45:

(6, 35201), (7, 35207), (8, 35222), (10, 35306), (14, 35330), (Start: 21 @35354 has 12 MA's), (Start: 34 @35402 has 30 MA's), (40, 35444), (41, 35456), (42, 35489), (47, 35555), (49, 35570), (58, 35618),

Gene: Milly_47 Start: 37198, Stop: 37515, Start Num: 31

Candidate Starts for Milly_47:

(Start: 30 @37195 has 5 MA's), (Start: 31 @37198 has 4 MA's), (Start: 34 @37207 has 30 MA's), (45, 37312), (49, 37375), (55, 37405), (67, 37483), (71, 37498), (72, 37504),

Gene: Miryou_44 Start: 36748, Stop: 37134, Start Num: 11

Candidate Starts for Miryou_44:

(Start: 11 @36748 has 13 MA's), (Start: 21 @36787 has 12 MA's), (52, 37021), (55, 37039), (57, 37054), (66, 37114),

Gene: MissDaisy_46 Start: 35556, Stop: 35804, Start Num: 33

Candidate Starts for MissDaisy_46:

(16, 35493), (25, 35529), (26, 35535), (Start: 33 @35556 has 20 MA's), (49, 35727), (50, 35730),

Gene: Mitti_48 Start: 36257, Stop: 36505, Start Num: 33

Candidate Starts for Mitti_48:

(10, 36161), (Start: 33 @36257 has 20 MA's), (49, 36428), (50, 36431),

Gene: Mufasa_47 Start: 36779, Stop: 37099, Start Num: 30

Candidate Starts for Mufasa_47:

(Start: 30 @36779 has 5 MA's), (Start: 31 @36782 has 4 MA's), (Start: 34 @36791 has 30 MA's), (45, 36896), (49, 36959), (55, 36989), (62, 37040), (67, 37067), (71, 37082), (72, 37088),

Gene: Murucutumbu_45 Start: 36105, Stop: 36386, Start Num: 23

Candidate Starts for Murucutumbu_45:

(Start: 23 @36105 has 4 MA's), (Start: 29 @36129 has 44 MA's), (Start: 34 @36147 has 30 MA's), (39, 36168), (40, 36189), (41, 36201), (42, 36234), (47, 36300), (49, 36315),

Gene: Mynx_45 Start: 35478, Stop: 35717, Start Num: 34

Candidate Starts for Mynx_45:

(Start: 23 @35436 has 4 MA's), (Start: 27 @35457 has 7 MA's), (Start: 29 @35460 has 44 MA's), (Start: 34 @35478 has 30 MA's), (39, 35499), (40, 35520), (41, 35532), (42, 35565), (47, 35631), (49, 35646), (58, 35694),

Gene: Nebkiss_69 Start: 44011, Stop: 44316, Start Num: 34

Candidate Starts for Nebkiss_69:

(Start: 34 @44011 has 30 MA's), (41, 44065), (42, 44098), (49, 44179), (58, 44227),

Gene: Neighly_43 Start: 34451, Stop: 34732, Start Num: 37

Candidate Starts for Neighly_43:

(Start: 21 @34385 has 12 MA's), (37, 34451), (45, 34544), (48, 34601), (49, 34607), (52, 34619), (64, 34700), (66, 34712),

Gene: Nergal_41 Start: 33794, Stop: 34084, Start Num: 28

Candidate Starts for Nergal_41:

(Start: 28 @33794 has 1 MA's), (32, 33809), (41, 33866), (42, 33899), (44, 33911), (45, 33917), (46, 33932), (50, 33983), (55, 34010), (58, 34028),

Gene: OhShagHennessy_38 Start: 33016, Stop: 33303, Start Num: 29

Candidate Starts for OhShagHennessy_38:

(Start: 20 @32980 has 5 MA's), (Start: 29 @33016 has 44 MA's), (45, 33136), (46, 33151), (48, 33193), (49, 33199), (52, 33211), (55, 33229), (56, 33235), (70, 33298),

Gene: OkiRoe_42 Start: 34418, Stop: 34804, Start Num: 11

Candidate Starts for OkiRoe_42:

(Start: 11 @34418 has 13 MA's), (Start: 21 @34457 has 12 MA's), (52, 34691), (55, 34709), (57, 34724), (66, 34784),

Gene: OmniCritical_47 Start: 36066, Stop: 36314, Start Num: 33

Candidate Starts for OmniCritical_47:

(10, 35970), (19, 36012), (Start: 33 @36066 has 20 MA's), (49, 36237), (50, 36240),

Gene: Omnicron_45 Start: 34067, Stop: 34414, Start Num: 21

Candidate Starts for Omnicron_45:

(15, 34046), (Start: 21 @34067 has 12 MA's), (36, 34124), (49, 34289), (52, 34301), (58, 34337), (66, 34394),

Gene: Padfoot_44 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for Padfoot_44:

(Start: 23 @35432 has 4 MA's), (Start: 27 @35453 has 7 MA's), (Start: 29 @35456 has 44 MA's), (Start: 34 @35474 has 30 MA's), (39, 35495), (40, 35516), (41, 35528), (42, 35561), (47, 35627), (49, 35642), (58, 35690),

Gene: Padpat_45 Start: 35153, Stop: 35392, Start Num: 34

Candidate Starts for Padpat_45:

(Start: 23 @35111 has 4 MA's), (Start: 27 @35132 has 7 MA's), (Start: 29 @35135 has 44 MA's),
(Start: 34 @35153 has 30 MA's), (39, 35174), (40, 35195), (41, 35207), (42, 35240), (47, 35306), (49,
35321), (58, 35369),

Gene: Paola_42 Start: 34416, Stop: 34802, Start Num: 11

Candidate Starts for Paola_42:

(Start: 11 @34416 has 13 MA's), (Start: 21 @34455 has 12 MA's), (52, 34689), (55, 34707), (57,
34722), (66, 34782),

Gene: Patt_45 Start: 35280, Stop: 35528, Start Num: 33

Candidate Starts for Patt_45:

(16, 35217), (25, 35253), (26, 35259), (Start: 33 @35280 has 20 MA's), (49, 35451), (50, 35454),

Gene: Peel_44 Start: 35261, Stop: 35518, Start Num: 29

Candidate Starts for Peel_44:

(Start: 23 @35237 has 4 MA's), (Start: 27 @35258 has 7 MA's), (Start: 29 @35261 has 44 MA's),
(Start: 34 @35279 has 30 MA's), (39, 35300), (40, 35321), (41, 35333), (42, 35366), (47, 35432), (49,
35447), (58, 35495),

Gene: Phrappuccino_41 Start: 23047, Stop: 23388, Start Num: 20

Candidate Starts for Phrappuccino_41:

(Start: 20 @23047 has 5 MA's), (Start: 34 @23095 has 30 MA's), (38, 23110), (41, 23149), (49, 23266),
(58, 23314), (65, 23344),

Gene: Pisa1_44 Start: 36447, Stop: 36686, Start Num: 34

Candidate Starts for Pisa1_44:

(6, 36246), (7, 36252), (8, 36267), (13, 36372), (Start: 34 @36447 has 30 MA's), (39, 36468), (40,
36489), (41, 36501), (42, 36534), (47, 36600), (49, 36615), (53, 36630), (54, 36639), (57, 36660),

Gene: Pokerus_43 Start: 35182, Stop: 35439, Start Num: 29

Candidate Starts for Pokerus_43:

(Start: 21 @35158 has 12 MA's), (Start: 29 @35182 has 44 MA's), (Start: 34 @35200 has 30 MA's),
(40, 35242), (41, 35254), (42, 35287), (47, 35353), (49, 35368), (58, 35416),

Gene: Poochiewood_38 Start: 33044, Stop: 33331, Start Num: 29

Candidate Starts for Poochiewood_38:

(Start: 20 @33008 has 5 MA's), (Start: 29 @33044 has 44 MA's), (45, 33164), (46, 33179), (48, 33221),
(49, 33227), (52, 33239), (55, 33257), (56, 33263), (70, 33326),

Gene: Prithvi_45 Start: 35343, Stop: 35582, Start Num: 34

Candidate Starts for Prithvi_45:

(6, 35142), (7, 35148), (8, 35163), (10, 35247), (14, 35271), (Start: 34 @35343 has 30 MA's), (39,
35364), (40, 35385), (41, 35397), (42, 35430), (47, 35496), (49, 35511),

Gene: Psycho_43 Start: 34516, Stop: 34863, Start Num: 21

Candidate Starts for Psycho_43:

(Start: 21 @34516 has 12 MA's), (37, 34582), (45, 34675), (48, 34732), (49, 34738), (52, 34750), (64,
34831), (66, 34843),

Gene: Qhanda_50 Start: 36178, Stop: 36426, Start Num: 33

Candidate Starts for Qhanda_50:

(10, 36082), (Start: 33 @36178 has 20 MA's), (49, 36349), (50, 36352),

Gene: QuincyRose_43 Start: 35592, Stop: 35831, Start Num: 34

Candidate Starts for QuincyRose_43:

(6, 35391), (7, 35397), (8, 35412), (10, 35496), (14, 35520), (Start: 21 @35544 has 12 MA's), (Start: 34 @35592 has 30 MA's), (40, 35634), (41, 35646), (42, 35679), (47, 35745), (49, 35760), (58, 35808),

Gene: Rando14_44 Start: 33637, Stop: 33984, Start Num: 21

Candidate Starts for Rando14_44:

(1, 33382), (2, 33388), (3, 33391), (4, 33415), (15, 33616), (Start: 21 @33637 has 12 MA's), (36, 33694), (49, 33859), (52, 33871), (66, 33964),

Gene: Rapunzel97_44 Start: 35142, Stop: 35399, Start Num: 29

Candidate Starts for Rapunzel97_44:

(Start: 23 @35118 has 4 MA's), (Start: 27 @35139 has 7 MA's), (Start: 29 @35142 has 44 MA's), (Start: 34 @35160 has 30 MA's), (39, 35181), (40, 35202), (41, 35214), (42, 35247), (47, 35313), (49, 35328), (58, 35376),

Gene: Reptar3000_46 Start: 35271, Stop: 35519, Start Num: 33

Candidate Starts for Reptar3000_46:

(10, 35175), (19, 35217), (Start: 33 @35271 has 20 MA's), (49, 35442), (50, 35445),

Gene: Rose5_38 Start: 33043, Stop: 33345, Start Num: 29

Candidate Starts for Rose5_38:

(Start: 20 @33007 has 5 MA's), (Start: 29 @33043 has 44 MA's), (46, 33178), (49, 33226), (51, 33235), (52, 33238), (55, 33256), (56, 33262), (63, 33307),

Gene: Rosmarinus_44 Start: 35247, Stop: 35504, Start Num: 29

Candidate Starts for Rosmarinus_44:

(Start: 23 @35223 has 4 MA's), (Start: 27 @35244 has 7 MA's), (Start: 29 @35247 has 44 MA's), (Start: 34 @35265 has 30 MA's), (39, 35286), (40, 35307), (41, 35319), (42, 35352), (47, 35418), (49, 35433), (58, 35481),

Gene: Settecandela_41 Start: 23047, Stop: 23388, Start Num: 20

Candidate Starts for Settecandela_41:

(Start: 20 @23047 has 5 MA's), (Start: 34 @23095 has 30 MA's), (38, 23110), (41, 23149), (49, 23266), (58, 23314), (65, 23344),

Gene: ShiaSurprise_45 Start: 35474, Stop: 35713, Start Num: 34

Candidate Starts for ShiaSurprise_45:

(Start: 23 @35432 has 4 MA's), (Start: 27 @35453 has 7 MA's), (Start: 29 @35456 has 44 MA's), (Start: 34 @35474 has 30 MA's), (39, 35495), (40, 35516), (41, 35528), (42, 35561), (47, 35627), (49, 35642), (58, 35690),

Gene: Silverleaf_38 Start: 33043, Stop: 33345, Start Num: 29

Candidate Starts for Silverleaf_38:

(Start: 20 @33007 has 5 MA's), (Start: 29 @33043 has 44 MA's), (46, 33178), (49, 33226), (51, 33235), (52, 33238), (55, 33256), (56, 33262), (63, 33307),

Gene: Slarp_48 Start: 36169, Stop: 36417, Start Num: 33

Candidate Starts for Slarp_48:

(10, 36073), (Start: 33 @36169 has 20 MA's), (49, 36340), (50, 36343),

Gene: Slimphazie_44 Start: 35142, Stop: 35399, Start Num: 29

Candidate Starts for Slimphazie_44:

(Start: 23 @35118 has 4 MA's), (Start: 27 @35139 has 7 MA's), (Start: 29 @35142 has 44 MA's),
(Start: 34 @35160 has 30 MA's), (39, 35181), (40, 35202), (41, 35214), (42, 35247), (47, 35313), (49,
35328), (58, 35376),

Gene: SoSeph_42 Start: 34566, Stop: 34952, Start Num: 11

Candidate Starts for SoSeph_42:

(Start: 11 @34566 has 13 MA's), (Start: 21 @34605 has 12 MA's), (52, 34839), (55, 34857), (57,
34872), (66, 34932),

Gene: Spock_44 Start: 35260, Stop: 35517, Start Num: 29

Candidate Starts for Spock_44:

(Start: 23 @35236 has 4 MA's), (Start: 27 @35257 has 7 MA's), (Start: 29 @35260 has 44 MA's),
(Start: 34 @35278 has 30 MA's), (39, 35299), (40, 35320), (41, 35332), (42, 35365), (47, 35431), (49,
35446), (58, 35494),

Gene: Stinson_45 Start: 35667, Stop: 35906, Start Num: 34

Candidate Starts for Stinson_45:

(Start: 23 @35625 has 4 MA's), (Start: 29 @35649 has 44 MA's), (Start: 34 @35667 has 30 MA's), (39,
35688), (40, 35709), (41, 35721), (42, 35754), (47, 35820), (49, 35835),

Gene: Strobilo_47 Start: 37197, Stop: 37517, Start Num: 30

Candidate Starts for Strobilo_47:

(Start: 30 @37197 has 5 MA's), (Start: 31 @37200 has 4 MA's), (Start: 34 @37209 has 30 MA's), (45,
37314), (49, 37377), (55, 37407), (67, 37485), (71, 37500), (72, 37506),

Gene: Sulley_44 Start: 35383, Stop: 35643, Start Num: 27

Candidate Starts for Sulley_44:

(Start: 23 @35362 has 4 MA's), (Start: 27 @35383 has 7 MA's), (Start: 29 @35386 has 44 MA's),
(Start: 34 @35404 has 30 MA's), (40, 35446), (41, 35458), (42, 35491), (47, 35557), (49, 35572), (58,
35620),

Gene: TM4_42 Start: 31544, Stop: 31900, Start Num: 23

Candidate Starts for TM4_42:

(Start: 23 @31544 has 4 MA's), (24, 31547), (Start: 30 @31571 has 5 MA's), (Start: 31 @31574 has 4
MA's), (Start: 34 @31583 has 30 MA's), (45, 31688), (49, 31751), (55, 31781), (62, 31832), (67,
31859), (72, 31889),

Gene: Tachez_44 Start: 35101, Stop: 35361, Start Num: 27

Candidate Starts for Tachez_44:

(Start: 23 @35080 has 4 MA's), (Start: 27 @35101 has 7 MA's), (Start: 29 @35104 has 44 MA's),
(Start: 34 @35122 has 30 MA's), (39, 35143), (40, 35164), (41, 35176), (42, 35209), (47, 35275), (49,
35290), (58, 35338),

Gene: Taquito_48 Start: 36416, Stop: 36664, Start Num: 33

Candidate Starts for Taquito_48:

(10, 36320), (Start: 33 @36416 has 20 MA's), (49, 36587), (50, 36590),

Gene: Thyatira_44 Start: 36765, Stop: 37151, Start Num: 11

Candidate Starts for Thyatira_44:

(Start: 11 @36765 has 13 MA's), (Start: 21 @36804 has 12 MA's), (52, 37038), (55, 37056), (57,
37071), (66, 37131),

Gene: Tiri_45 Start: 35452, Stop: 35691, Start Num: 34

Candidate Starts for Tiri_45:

(6, 35251), (7, 35257), (8, 35272), (10, 35356), (14, 35380), (Start: 21 @35404 has 12 MA's), (Start: 34 @35452 has 30 MA's), (40, 35494), (41, 35506), (42, 35539), (47, 35605), (49, 35620), (58, 35668),

Gene: Topper_44 Start: 35259, Stop: 35516, Start Num: 29

Candidate Starts for Topper_44:

(Start: 23 @35235 has 4 MA's), (Start: 27 @35256 has 7 MA's), (Start: 29 @35259 has 44 MA's), (Start: 34 @35277 has 30 MA's), (39, 35298), (40, 35319), (41, 35331), (42, 35364), (47, 35430), (49, 35445), (58, 35493),

Gene: TreyKay_45 Start: 35343, Stop: 35582, Start Num: 34

Candidate Starts for TreyKay_45:

(6, 35142), (7, 35148), (8, 35163), (10, 35247), (14, 35271), (Start: 34 @35343 has 30 MA's), (39, 35364), (40, 35385), (41, 35397), (42, 35430), (47, 35496), (49, 35511),

Gene: TruffulaTree_44 Start: 35138, Stop: 35395, Start Num: 29

Candidate Starts for TruffulaTree_44:

(Start: 23 @35114 has 4 MA's), (Start: 27 @35135 has 7 MA's), (Start: 29 @35138 has 44 MA's), (Start: 34 @35156 has 30 MA's), (39, 35177), (40, 35198), (41, 35210), (42, 35243), (47, 35309), (49, 35324), (58, 35372),

Gene: Twitch_44 Start: 35261, Stop: 35518, Start Num: 29

Candidate Starts for Twitch_44:

(Start: 23 @35237 has 4 MA's), (Start: 27 @35258 has 7 MA's), (Start: 29 @35261 has 44 MA's), (Start: 34 @35279 has 30 MA's), (39, 35300), (40, 35321), (41, 35333), (42, 35366), (47, 35432), (49, 35447), (58, 35495),

Gene: Tyson_38 Start: 33044, Stop: 33346, Start Num: 29

Candidate Starts for Tyson_38:

(Start: 20 @33008 has 5 MA's), (Start: 29 @33044 has 44 MA's), (46, 33179), (49, 33227), (51, 33236), (52, 33239), (55, 33257), (56, 33263), (63, 33308),

Gene: UPIE_39 Start: 33006, Stop: 33329, Start Num: 20

Candidate Starts for UPIE_39:

(Start: 20 @33006 has 5 MA's), (Start: 29 @33042 has 44 MA's), (45, 33162), (46, 33177), (48, 33219), (49, 33225), (52, 33237), (55, 33255), (56, 33261), (70, 33324),

Gene: Veliki_44 Start: 35178, Stop: 35435, Start Num: 29

Candidate Starts for Veliki_44:

(Start: 23 @35154 has 4 MA's), (Start: 27 @35175 has 7 MA's), (Start: 29 @35178 has 44 MA's), (Start: 34 @35196 has 30 MA's), (39, 35217), (40, 35238), (41, 35250), (42, 35283), (47, 35349), (49, 35364), (58, 35412),

Gene: ViviJ_42 Start: 34385, Stop: 34771, Start Num: 11

Candidate Starts for ViviJ_42:

(Start: 11 @34385 has 13 MA's), (Start: 21 @34424 has 12 MA's), (37, 34490), (45, 34583), (48, 34640), (49, 34646), (52, 34658), (57, 34691), (66, 34751),

Gene: Wamburgrxpress_39 Start: 33057, Stop: 33344, Start Num: 29

Candidate Starts for Wamburgrxpress_39:

(Start: 20 @33021 has 5 MA's), (Start: 29 @33057 has 44 MA's), (45, 33177), (46, 33192), (48, 33234), (49, 33240), (52, 33252), (55, 33270), (56, 33276), (70, 33339),

Gene: Waterfoul_43 Start: 34659, Stop: 35045, Start Num: 11

Candidate Starts for Waterfoul_43:

(Start: 11 @34659 has 13 MA's), (Start: 21 @34698 has 12 MA's), (52, 34932), (55, 34950), (57, 34965), (66, 35025),

Gene: Wintermute_48 Start: 36318, Stop: 36566, Start Num: 33

Candidate Starts for Wintermute_48:

(10, 36222), (18, 36258), (Start: 33 @36318 has 20 MA's), (49, 36489), (50, 36492),

Gene: Wyatt2_39 Start: 33043, Stop: 33345, Start Num: 29

Candidate Starts for Wyatt2_39:

(Start: 20 @33007 has 5 MA's), (Start: 29 @33043 has 44 MA's), (46, 33178), (49, 33226), (51, 33235), (52, 33238), (55, 33256), (56, 33262), (63, 33307),

Gene: Y10_47 Start: 36237, Stop: 36485, Start Num: 33

Candidate Starts for Y10_47:

(Start: 33 @36237 has 20 MA's), (49, 36408), (50, 36411),

Gene: Y2_47 Start: 36237, Stop: 36485, Start Num: 33

Candidate Starts for Y2_47:

(Start: 33 @36237 has 20 MA's), (49, 36408), (50, 36411),

Gene: YasnayaPolyana_48 Start: 36168, Stop: 36416, Start Num: 33

Candidate Starts for YasnayaPolyana_48:

(10, 36072), (19, 36114), (Start: 33 @36168 has 20 MA's), (49, 36339), (50, 36342),

Gene: YoureAdopted_43 Start: 35343, Stop: 35600, Start Num: 29

Candidate Starts for YoureAdopted_43:

(Start: 23 @35319 has 4 MA's), (Start: 27 @35340 has 7 MA's), (Start: 29 @35343 has 44 MA's), (Start: 34 @35361 has 30 MA's), (39, 35382), (40, 35403), (41, 35415), (42, 35448), (47, 35514), (49, 35529), (58, 35577),

Gene: Zaria_39 Start: 33058, Stop: 33360, Start Num: 29

Candidate Starts for Zaria_39:

(Start: 20 @33022 has 5 MA's), (Start: 29 @33058 has 44 MA's), (46, 33193), (49, 33241), (51, 33250), (52, 33253), (55, 33271), (56, 33277), (63, 33322),

Gene: Zavala_45 Start: 35438, Stop: 35677, Start Num: 34

Candidate Starts for Zavala_45:

(Start: 27 @35417 has 7 MA's), (Start: 29 @35420 has 44 MA's), (Start: 34 @35438 has 30 MA's), (39, 35459), (40, 35480), (41, 35492), (42, 35525), (47, 35591), (49, 35606), (58, 35654),

Gene: ZoeJ_46 Start: 36666, Stop: 36992, Start Num: 31

Candidate Starts for ZoeJ_46:

(17, 36615), (Start: 30 @36663 has 5 MA's), (Start: 31 @36666 has 4 MA's), (Start: 34 @36675 has 30 MA's), (45, 36780), (49, 36843), (55, 36873), (67, 36951), (72, 36981),