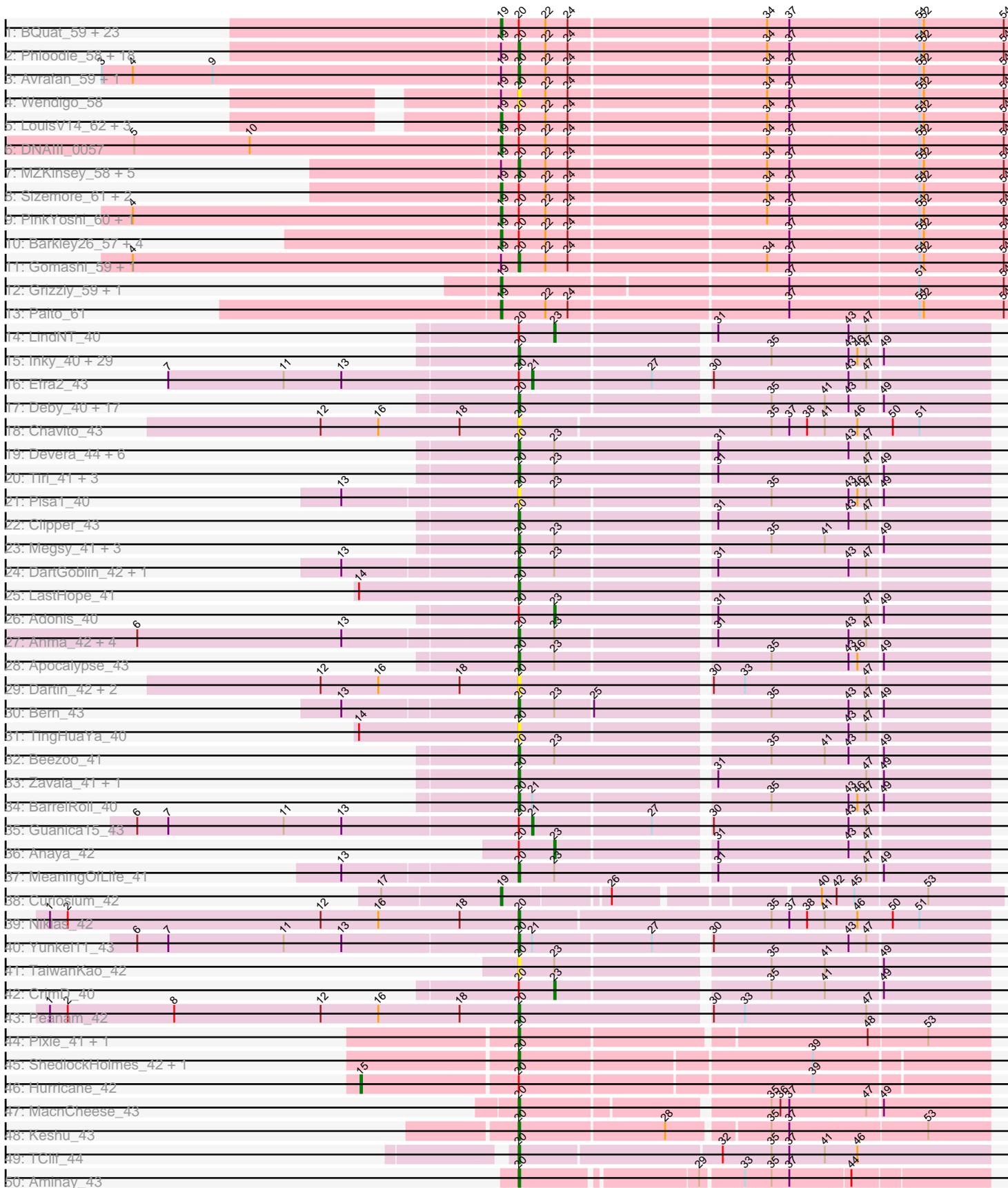


Pham 289122



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 289122 Report

This analysis was run 03/28/26 on database version 641.

Pham number 289122 has 177 members, 20 are drafts.

Phages represented in each track:

- Track 1 : BQuat_59, Gideon_60, Aroostook_60, Jonghyun_58, AzulaCat_61, Phish_59, Marmie_60, CLED96_59, JorRay_61, CassieYates_60, Mowgli_60, Remy19_60, Cherrybomb426_59, ShaboiShabazz_59, Jolene_60, Camri_59, GoldenAsh_58, TinaBug_61, Periodt_60, Plagueis_60, Zombie_60, ECartman_58, TomBrady_60, Chance64_60
- Track 2 : Phloodle_58, Neoh_58, AizenPogi_60, Rattrick_60, Hotshotbaby7_60, Phreak_60, DingDing_58, Schiebel_58, Liefie_57, Crespo_59, Cedasite_60, Halo_61, Ruriko_57, Darionha_60, Jeilious_60, Coleslaw_59, Maliketh_58, Angel_58, Hope_60
- Track 3 : Avrafan_59, Richarlison_60
- Track 4 : Wendigo_58
- Track 5 : LouisV14_62, Renaissance_59, OctaviousRex_59, DMoney_59
- Track 6 : DNAlll_0057
- Track 7 : MZKinsey_58, BPs_60, Kasen3_61, BruceB_60, Sweets_60, Jane_61
- Track 8 : Sizemore_61, ZoMa_59, Kareem_61
- Track 9 : PinkYoshi_60, Annihilator_59
- Track 10 : Barkley26_57, Terror_56, Rabbs_61, Sneeze_60, Taheera_56
- Track 11 : Gomashi_59, Olga_61
- Track 12 : Grizzly_59, Peeb_59
- Track 13 : Paito_61
- Track 14 : LindNT_40
- Track 15 : Inky_40, Spock_40, Slimphazie_40, BGIlluviae_40, Capricorn_40, Peel_40, CREW_40, Jayhawk_41, CallaLilly_40, Topper_40, Tachez_40, Dalmuri_40, Joy99_40, Jeckyll_40, HedwigODU_40, Twitch_40, ActinUp_40, Atiba_40, Padpat_41, Veliki_40, Belladonna_40, Rosmarinus_40, Rapunzel97_40, TruffulaTree_40, Adephagia_40, Llorens_40, Lunahalos_40, Homura_40, Emerson_41, Jarvi_40
- Track 16 : Efra2_43
- Track 17 : Deby_40, QuincyRose_39, CaseJules_41, Sulley_40, Piatt_40, Geraldini_42, Asayake_40, BEEST_40, Angelica_40, Boiii_40, Ganymede_41, AlishaPH_40, Hyperbowlee_40, ShiaSurprise_41, Blizzard_40, Padfoot_40, Durfee_40, YoureAdopted_39
- Track 18 : Chavito_43
- Track 19 : Devera_44, Illumine_43, TreyKay_40, Ageofdapage_42, Prithvi_40, Murucutumbu_41, Dole_43
- Track 20 : Tiri_41, JAWS_40, Ramen_40, Pokerus_39
- Track 21 : Pisa1_40
- Track 22 : Clipper_43

- Track 23 : Megsy_41, CheetoDust_39, LaterM_41, BaghaKamala_39
- Track 24 : DartGoblin_42, Bella96_41
- Track 25 : LastHope_41
- Track 26 : Adonis_40
- Track 27 : Anma_42, Urkel_41, SamuelLPlaqson_41, TiniBug_41, DrHayes_41
- Track 28 : Apocalypse_43
- Track 29 : Dartin_42, McMater_42, Richo_42
- Track 30 : Bern_43
- Track 31 : TingHuaYa_40
- Track 32 : Beezoo_41
- Track 33 : Zavala_41, Mynx_41
- Track 34 : BarrelRoll_40
- Track 35 : Guanica15_43
- Track 36 : Anaya_42
- Track 37 : MeaningOfLife_41
- Track 38 : Curiosium_42
- Track 39 : Niklas_42
- Track 40 : Yunke11_43
- Track 41 : TaiwanKao_42
- Track 42 : CrimD_40
- Track 43 : Peanam_42
- Track 44 : Pixie_41, TBond007_41
- Track 45 : ShedlockHolmes_42, Lea83_42
- Track 46 : Hurricane_42
- Track 47 : MacnCheese_43
- Track 48 : Keshu_43
- Track 49 : TClif_44
- Track 50 : Aminay_43

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

The start number called the most often in the published annotations is 20, it was called in 107 of the 157 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp_40, Adephagia_40, Ageofdapage_42, AizenPogi_60, AlishaPH_40, Aminay_43, Angel_58, Angelica_40, Anma_42, Apocalypse_43, Asayake_40, Atiba_40, Avrafan_59, BEEST_40, BGlluviae_40, BPs_60, BaghaKamala_39, BarrelRoll_40, Beezoo_41, Bella96_41, Belladonna_40, Bern_43, Blizzard_40, Boiiii_40, BruceB_60, CREW_40, CallaLilly_40, Capricorn_40, CaseJules_41, Cedasite_60, Chavito_43, CheetoDust_39, Clipper_43, Coleslaw_59, Crespo_59, Dalmuri_40, Darionha_60, DartGoblin_42, Dartin_42, Deby_40, Devera_44, DingDing_58, Dole_43, DrHayes_41, Durfee_40, Emerson_41, Ganymede_41, Geraldini_42, Gomashi_59, Halo_61, HedwigODU_40, Homura_40, Hope_60, Hotshotbaby7_60, Hyperbowlee_40, Illumine_43, Inky_40, JAWS_40, Jane_61, Jarvi_40, Jayhawk_41, Jeckyll_40, Jeilious_60, Joy99_40, Kasen3_61, Keshu_43, LastHope_41, LaterM_41, Lea83_42, Liefie_57, Llorens_40, Lunahalos_40, MZKinsey_58, MacnCheese_43, Maliketh_58, McMater_42, MeaningOfLife_41, Megsy_41, Murucutumbu_41, Mynx_41, Neoh_58, Niklas_42, Olga_61, Padfoot_40, Padpat_41, Peanam_42, Peel_40, Phloodle_58, Phreak_60, Piatt_40, Pisa1_40,

Pixie_41, Pokerus_39, Prithvi_40, QuincyRose_39, Ramen_40, Rapunzel97_40, Rattrick_60, Richarlison_60, Richo_42, Rosmarinus_40, Ruriko_57, SamuelLPlaqson_41, Schiebel_58, ShedlockHolmes_42, ShiaSurprise_41, Slimphazie_40, Spock_40, Sulley_40, Sweets_60, TBond007_41, TClif_44, Tachez_40, TaiwanKao_42, TingHuaYa_40, TiniBug_41, Tiri_41, Topper_40, TreyKay_40, TruffulaTree_40, Twitch_40, Urkel_41, Veliki_40, Wendigo_58, YoureAdopted_39, Yunkel11_43, Zavala_41,

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

- Adonis_40, Anaya_42, Annihilator_59, Aroostook_60, AzulaCat_61, BQuat_59, Barkley26_57, CLED96_59, Camri_59, CassieYates_60, Chance64_60, Cherrybomb426_59, CrimD_40, DMoney_59, DNAIII_0057, ECartman_58, Efra2_43, Gideon_60, GoldenAsh_58, Guanica15_43, Hurricane_42, Jolene_60, Jonghyun_58, JorRay_61, Kareem_61, LindNT_40, LouisV14_62, Marmie_60, Mowgli_60, OctaviousRex_59, Periodt_60, Phish_59, PinkYoshi_60, Plagueis_60, Rabbs_61, Remy19_60, Renaissance_59, ShaboiShabazz_59, Sizemore_61, Sneeze_60, Taheera_56, Terror_56, TinaBug_61, TomBrady_60, ZoMa_59, Zombie_60,

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

- Curiosium_42, Grizzly_59, Paito_61, Peeb_59,

Summary by start number:

Start 15:

- Found in 1 of 177 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 157
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hurricane_42 (K3),

Start 19:

- Found in 73 of 177 (41.2%) of genes in pham
- Manual Annotations of this start: 43 of 157
- Called 58.9% of time when present
- Phage (with cluster) where this start called: Annihilator_59 (G1), Aroostook_60 (G1), AzulaCat_61 (G1), BQuat_59 (G1), Barkley26_57 (G1), CLED96_59 (G1), Camri_59 (G1), CassieYates_60 (G1), Chance64_60 (G1), Cherrybomb426_59 (G1), Curiosium_42 (K1), DMoney_59 (G1), DNAIII_0057 (G1), ECartman_58 (G1), Gideon_60 (G1), GoldenAsh_58 (G1), Grizzly_59 (G1), Jolene_60 (G1), Jonghyun_58 (G1), JorRay_61 (G1), Kareem_61 (G1), LouisV14_62 (G1), Marmie_60 (G1), Mowgli_60 (G1), OctaviousRex_59 (G1), Paito_61 (G1), Peeb_59 (G1), Periodt_60 (G1), Phish_59 (G1), PinkYoshi_60 (G1), Plagueis_60 (G1), Rabbs_61 (G1), Remy19_60 (G1), Renaissance_59 (G1), ShaboiShabazz_59 (G1), Sizemore_61 (G1), Sneeze_60 (G1), Taheera_56 (G1), Terror_56 (G1), TinaBug_61 (G1), TomBrady_60 (G1), ZoMa_59 (G1), Zombie_60 (G1),

Start 20:

- Found in 173 of 177 (97.7%) of genes in pham
- Manual Annotations of this start: 107 of 157
- Called 73.4% of time when present
- Phage (with cluster) where this start called: ActinUp_40 (K1), Adephegia_40 (K1), Ageofdapage_42 (K1), AizenPogi_60 (G1), AlishaPH_40 (K1), Aminay_43 (K7), Angel_58 (G1), Angelica_40 (K1), Anma_42 (K1), Apocalypse_43 (K1), Asayake_40 (K1), Atiba_40 (K1), Avrafan_59 (G1), BEEST_40 (K1), BGlluviae_40 (K1), BPs_60

(G1), BaghaKamala_39 (K1), BarrelRoll_40 (K1), Beezoo_41 (K1), Bella96_41 (K1), Belladonna_40 (K1), Bern_43 (K1), Blizzard_40 (K1), Boiiii_40 (K1), BruceB_60 (G1), CREW_40 (K1), CallaLilly_40 (K1), Capricorn_40 (K1), CaseJules_41 (K1), Cedasite_60 (G1), Chavito_43 (K1), CheetoDust_39 (K1), Clipper_43 (K1), Coleslaw_59 (G1), Crespo_59 (G1), Dalmuri_40 (K1), Darionha_60 (G1), DartGoblin_42 (K1), Dartin_42 (K1), Deby_40 (K1), Devera_44 (K1), DingDing_58 (G1), Dole_43 (K1), DrHayes_41 (K1), Durfee_40 (K1), Emerson_41 (K1), Ganymede_41 (K1), Geraldini_42 (K1), Gomashi_59 (G1), Halo_61 (G1), HedwigODU_40 (K1), Homura_40 (K1), Hope_60 (G1), Hotshotbaby7_60 (G1), Hyperbowlee_40 (K1), Illumine_43 (K1), Inky_40 (K1), JAWS_40 (K1), Jane_61 (G1), Jarvi_40 (K1), Jayhawk_41 (K1), Jeckyll_40 (K1), Jeilious_60 (G), Joy99_40 (K1), Kasen3_61 (G1), Keshu_43 (K3), LastHope_41 (K1), LaterM_41 (K1), Lea83_42 (K3), Liefie_57 (G1), Llorens_40 (K1), Lunahalos_40 (K1), MZKinsey_58 (G1), MacnCheese_43 (K3), Maliketh_58 (G1), McMater_42 (K1), MeaningOfLife_41 (K1), Megsy_41 (K1), Murucutumbu_41 (K1), Mynx_41 (K1), Neoh_58 (G), Niklas_42 (K1), Olga_61 (G1), Padfoot_40 (K1), Padpat_41 (K1), Peanam_42 (K1), Peel_40 (K1), Phloodle_58 (G1), Phreak_60 (G1), Piatt_40 (K1), Pisa1_40 (K1), Pixie_41 (K3), Pokerus_39 (K1), Prithvi_40 (K1), QuincyRose_39 (K1), Ramen_40 (K1), Rapunzel97_40 (K1), Rattrick_60 (G1), Richarlison_60 (G1), Richo_42 (K1), Rosmarinus_40 (K1), Ruriko_57 (G1), SamuelLPlaqson_41 (K1), Schiebel_58 (G1), ShedlockHolmes_42 (K3), ShiaSurprise_41 (K1), Slimphazie_40 (K1), Spock_40 (K1), Sulley_40 (K1), Sweets_60 (G1), TBond007_41 (K3), TClif_44 (K6), Tachez_40 (K1), TaiwanKao_42 (K1), TingHuaYa_40 (K1), TiniBug_41 (K1), Tiri_41 (K1), Topper_40 (K1), TreyKay_40 (K1), TruffulaTree_40 (K1), Twitch_40 (K1), Urkel_41 (K1), Veliki_40 (K1), Wendigo_58 (G1), YoureAdopted_39 (K1), Yunkel11_43 (K1), Zavala_41 (K1),

Start 21:

- Found in 4 of 177 (2.3%) of genes in pham
- Manual Annotations of this start: 2 of 157
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Efra2_43 (K1), Guanica15_43 (K1),

Start 23:

- Found in 32 of 177 (18.1%) of genes in pham
- Manual Annotations of this start: 4 of 157
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Adonis_40 (K1), Anaya_42 (K1), CrimD_40 (K1), LindNT_40 (K1),

Summary by clusters:

There are 6 clusters represented in this pham: G1, G, K3, K1, K7, K6,

Info for manual annotations of cluster G1:

- Start number 19 was manually annotated 42 times for cluster G1.
- Start number 20 was manually annotated 19 times for cluster G1.

Info for manual annotations of cluster K1:

- Start number 19 was manually annotated 1 time for cluster K1.
- Start number 20 was manually annotated 80 times for cluster K1.
- Start number 21 was manually annotated 2 times for cluster K1.

- Start number 23 was manually annotated 4 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 15 was manually annotated 1 time for cluster K3.
- Start number 20 was manually annotated 6 times for cluster K3.

Info for manual annotations of cluster K6:

- Start number 20 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster K7:

- Start number 20 was manually annotated 1 time for cluster K7.

Gene Information:

Gene: ActinUp_40 Start: 32121, Stop: 31819, Start Num: 20

Candidate Starts for ActinUp_40:

(Start: 20 @32121 has 107 MA's), (35, 31962), (43, 31911), (46, 31905), (47, 31899), (49, 31890),

Gene: Adephagia_40 Start: 32118, Stop: 31816, Start Num: 20

Candidate Starts for Adephagia_40:

(Start: 20 @32118 has 107 MA's), (35, 31959), (43, 31908), (46, 31902), (47, 31896), (49, 31887),

Gene: Adonis_40 Start: 32395, Stop: 32114, Start Num: 23

Candidate Starts for Adonis_40:

(Start: 20 @32419 has 107 MA's), (Start: 23 @32395 has 4 MA's), (31, 32293), (47, 32194), (49, 32185),

Gene: Ageofdapage_42 Start: 33095, Stop: 32793, Start Num: 20

Candidate Starts for Ageofdapage_42:

(Start: 20 @33095 has 107 MA's), (Start: 23 @33071 has 4 MA's), (31, 32972), (43, 32885), (47, 32873),

Gene: AizenPogi_60 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for AizenPogi_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: AlishaPH_40 Start: 32393, Stop: 32091, Start Num: 20

Candidate Starts for AlishaPH_40:

(Start: 20 @32393 has 107 MA's), (35, 32234), (41, 32198), (43, 32183), (49, 32162),

Gene: Aminay_43 Start: 33661, Stop: 33365, Start Num: 20

Candidate Starts for Aminay_43:

(Start: 20 @33661 has 107 MA's), (29, 33550), (33, 33523), (35, 33505), (37, 33493), (44, 33454),

Gene: Anaya_42 Start: 32707, Stop: 32429, Start Num: 23

Candidate Starts for Anaya_42:

(Start: 20 @32731 has 107 MA's), (Start: 23 @32707 has 4 MA's), (31, 32608), (43, 32521), (47, 32509),

Gene: Angel_58 Start: 39977, Stop: 40300, Start Num: 20

Candidate Starts for Angel_58:

(Start: 19 @39965 has 43 MA's), (Start: 20 @39977 has 107 MA's), (22, 39995), (24, 40010), (34, 40139), (37, 40154), (51, 40238), (52, 40241), (54, 40295),

Gene: Angelica_40 Start: 32350, Stop: 32048, Start Num: 20

Candidate Starts for Angelica_40:

(Start: 20 @32350 has 107 MA's), (35, 32191), (41, 32155), (43, 32140), (49, 32119),

Gene: Anma_42 Start: 33019, Stop: 32717, Start Num: 20

Candidate Starts for Anma_42:

(6, 33271), (13, 33133), (Start: 20 @33019 has 107 MA's), (Start: 23 @32995 has 4 MA's), (31, 32896), (43, 32809), (47, 32797),

Gene: Annihilator_59 Start: 40417, Stop: 40752, Start Num: 19

Candidate Starts for Annihilator_59:

(4, 40171), (Start: 19 @40417 has 43 MA's), (Start: 20 @40429 has 107 MA's), (22, 40447), (24, 40462), (34, 40591), (37, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: Apocalypse_43 Start: 33135, Stop: 32833, Start Num: 20

Candidate Starts for Apocalypse_43:

(Start: 20 @33135 has 107 MA's), (Start: 23 @33111 has 4 MA's), (35, 32976), (43, 32925), (46, 32919), (49, 32904),

Gene: Aroostook_60 Start: 40427, Stop: 40762, Start Num: 19

Candidate Starts for Aroostook_60:

(Start: 19 @40427 has 43 MA's), (Start: 20 @40439 has 107 MA's), (22, 40457), (24, 40472), (34, 40601), (37, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Asayake_40 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for Asayake_40:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: Atiba_40 Start: 32081, Stop: 31779, Start Num: 20

Candidate Starts for Atiba_40:

(Start: 20 @32081 has 107 MA's), (35, 31922), (43, 31871), (46, 31865), (47, 31859), (49, 31850),

Gene: Avrafan_59 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for Avrafan_59:

(3, 40158), (4, 40179), (9, 40233), (Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: AzulaCat_61 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for AzulaCat_61:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: BEEST_40 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for BEEST_40:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: BGlluviae_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for BGlluviae_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: BPs_60 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for BPs_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: BQuat_59 Start: 40417, Stop: 40752, Start Num: 19

Candidate Starts for BQuat_59:

(Start: 19 @40417 has 43 MA's), (Start: 20 @40429 has 107 MA's), (22, 40447), (24, 40462), (34, 40591), (37, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: BaghaKamala_39 Start: 31559, Stop: 31257, Start Num: 20

Candidate Starts for BaghaKamala_39:

(Start: 20 @31559 has 107 MA's), (Start: 23 @31535 has 4 MA's), (35, 31400), (41, 31364), (49, 31328),

Gene: Barkley26_57 Start: 39877, Stop: 40212, Start Num: 19

Candidate Starts for Barkley26_57:

(Start: 19 @39877 has 43 MA's), (Start: 20 @39889 has 107 MA's), (22, 39907), (24, 39922), (37, 40066), (51, 40150), (52, 40153), (54, 40207),

Gene: BarrelRoll_40 Start: 32104, Stop: 31802, Start Num: 20

Candidate Starts for BarrelRoll_40:

(Start: 20 @32104 has 107 MA's), (Start: 21 @32095 has 2 MA's), (35, 31945), (43, 31894), (46, 31888), (47, 31882), (49, 31873),

Gene: Beezoo_41 Start: 33084, Stop: 32779, Start Num: 20

Candidate Starts for Beezoo_41:

(Start: 20 @33084 has 107 MA's), (Start: 23 @33060 has 4 MA's), (35, 32922), (41, 32886), (43, 32871), (49, 32850),

Gene: Bella96_41 Start: 32976, Stop: 32674, Start Num: 20

Candidate Starts for Bella96_41:

(13, 33090), (Start: 20 @32976 has 107 MA's), (Start: 23 @32952 has 4 MA's), (31, 32853), (43, 32766), (47, 32754),

Gene: Belladonna_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Belladonna_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: Bern_43 Start: 33663, Stop: 33361, Start Num: 20

Candidate Starts for Bern_43:

(13, 33777), (Start: 20 @33663 has 107 MA's), (Start: 23 @33639 has 4 MA's), (25, 33615), (35, 33504), (43, 33453), (47, 33441), (49, 33432),

Gene: Blizzard_40 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for Blizzard_40:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: Boiiii_40 Start: 32436, Stop: 32134, Start Num: 20

Candidate Starts for Boiiii_40:

(Start: 20 @32436 has 107 MA's), (35, 32277), (41, 32241), (43, 32226), (49, 32205),

Gene: BruceB_60 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for BruceB_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: CLED96_59 Start: 39980, Stop: 40315, Start Num: 19

Candidate Starts for CLED96_59:

(Start: 19 @39980 has 43 MA's), (Start: 20 @39992 has 107 MA's), (22, 40010), (24, 40025), (34, 40154), (37, 40169), (51, 40253), (52, 40256), (54, 40310),

Gene: CREW_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for CREW_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: CallaLilly_40 Start: 32160, Stop: 31858, Start Num: 20

Candidate Starts for CallaLilly_40:

(Start: 20 @32160 has 107 MA's), (35, 32001), (43, 31950), (46, 31944), (47, 31938), (49, 31929),

Gene: Camri_59 Start: 39980, Stop: 40315, Start Num: 19

Candidate Starts for Camri_59:

(Start: 19 @39980 has 43 MA's), (Start: 20 @39992 has 107 MA's), (22, 40010), (24, 40025), (34, 40154), (37, 40169), (51, 40253), (52, 40256), (54, 40310),

Gene: Capricorn_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Capricorn_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: CaseJules_41 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for CaseJules_41:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: CassieYates_60 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for CassieYates_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Cedasite_60 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for Cedasite_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Chance64_60 Start: 40427, Stop: 40762, Start Num: 19

Candidate Starts for Chance64_60:

(Start: 19 @40427 has 43 MA's), (Start: 20 @40439 has 107 MA's), (22, 40457), (24, 40472), (34, 40601), (37, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Chavito_43 Start: 33312, Stop: 32998, Start Num: 20

Candidate Starts for Chavito_43:

(12, 33444), (16, 33405), (18, 33351), (Start: 20 @33312 has 107 MA's), (35, 33144), (37, 33132), (38, 33120), (41, 33108), (46, 33087), (50, 33063), (51, 33045),

Gene: CheetoDust_39 Start: 31609, Stop: 31307, Start Num: 20

Candidate Starts for CheetoDust_39:

(Start: 20 @31609 has 107 MA's), (Start: 23 @31585 has 4 MA's), (35, 31450), (41, 31414), (49, 31378),

Gene: Cherrybomb426_59 Start: 39980, Stop: 40315, Start Num: 19

Candidate Starts for Cherrybomb426_59:

(Start: 19 @39980 has 43 MA's), (Start: 20 @39992 has 107 MA's), (22, 40010), (24, 40025), (34, 40154), (37, 40169), (51, 40253), (52, 40256), (54, 40310),

Gene: Clipper_43 Start: 32756, Stop: 32454, Start Num: 20

Candidate Starts for Clipper_43:

(Start: 20 @32756 has 107 MA's), (31, 32633), (43, 32546), (47, 32534),

Gene: Coleslaw_59 Start: 40429, Stop: 40752, Start Num: 20

Candidate Starts for Coleslaw_59:

(Start: 19 @40417 has 43 MA's), (Start: 20 @40429 has 107 MA's), (22, 40447), (24, 40462), (34, 40591), (37, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: Crespo_59 Start: 40438, Stop: 40761, Start Num: 20

Candidate Starts for Crespo_59:

(Start: 19 @40426 has 43 MA's), (Start: 20 @40438 has 107 MA's), (22, 40456), (24, 40471), (34, 40600), (37, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: CrimD_40 Start: 32341, Stop: 32063, Start Num: 23

Candidate Starts for CrimD_40:

(Start: 20 @32365 has 107 MA's), (Start: 23 @32341 has 4 MA's), (35, 32206), (41, 32170), (49, 32134),

Gene: Curiosium_42 Start: 30899, Stop: 30588, Start Num: 19

Candidate Starts for Curiosium_42:

(17, 30977), (Start: 19 @30899 has 43 MA's), (26, 30833), (40, 30707), (42, 30698), (45, 30686), (53, 30638),

Gene: DMoney_59 Start: 40404, Stop: 40739, Start Num: 19

Candidate Starts for DMoney_59:

(Start: 19 @40404 has 43 MA's), (Start: 20 @40416 has 107 MA's), (22, 40434), (24, 40449), (34, 40578), (37, 40593), (51, 40677), (52, 40680), (54, 40734),

Gene: DNAIII_0057 Start: 38054, Stop: 38389, Start Num: 19

Candidate Starts for DNAIII_0057:

(5, 37808), (10, 37886), (Start: 19 @38054 has 43 MA's), (Start: 20 @38066 has 107 MA's), (22, 38084), (24, 38099), (34, 38228), (37, 38243), (51, 38327), (52, 38330), (54, 38384),

Gene: Dalmuri_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Dalmuri_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: Darionha_60 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for Darionha_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: DartGoblin_42 Start: 32970, Stop: 32668, Start Num: 20

Candidate Starts for DartGoblin_42:

(13, 33084), (Start: 20 @32970 has 107 MA's), (Start: 23 @32946 has 4 MA's), (31, 32847), (43, 32760), (47, 32748),

Gene: Dartin_42 Start: 32677, Stop: 32372, Start Num: 20

Candidate Starts for Dartin_42:

(12, 32809), (16, 32770), (18, 32716), (Start: 20 @32677 has 107 MA's), (30, 32554), (33, 32533), (47, 32452),

Gene: Deby_40 Start: 32368, Stop: 32066, Start Num: 20

Candidate Starts for Deby_40:

(Start: 20 @32368 has 107 MA's), (35, 32209), (41, 32173), (43, 32158), (49, 32137),

Gene: Devera_44 Start: 32903, Stop: 32601, Start Num: 20

Candidate Starts for Devera_44:

(Start: 20 @32903 has 107 MA's), (Start: 23 @32879 has 4 MA's), (31, 32780), (43, 32693), (47, 32681),

Gene: DingDing_58 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for DingDing_58:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Dole_43 Start: 32905, Stop: 32603, Start Num: 20

Candidate Starts for Dole_43:

(Start: 20 @32905 has 107 MA's), (Start: 23 @32881 has 4 MA's), (31, 32782), (43, 32695), (47, 32683),

Gene: DrHayes_41 Start: 33019, Stop: 32717, Start Num: 20

Candidate Starts for DrHayes_41:

(6, 33271), (13, 33133), (Start: 20 @33019 has 107 MA's), (Start: 23 @32995 has 4 MA's), (31, 32896), (43, 32809), (47, 32797),

Gene: Durfee_40 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for Durfee_40:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: ECartman_58 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for ECartman_58:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Efra2_43 Start: 32200, Stop: 31907, Start Num: 21

Candidate Starts for Efra2_43:

(7, 32443), (11, 32365), (13, 32326), (Start: 20 @32209 has 107 MA's), (Start: 21 @32200 has 2 MA's), (27, 32122), (30, 32089), (43, 31999), (47, 31987),

Gene: Emerson_41 Start: 32112, Stop: 31810, Start Num: 20

Candidate Starts for Emerson_41:

(Start: 20 @32112 has 107 MA's), (35, 31953), (43, 31902), (46, 31896), (47, 31890), (49, 31881),

Gene: Ganymede_41 Start: 32423, Stop: 32121, Start Num: 20

Candidate Starts for Ganymede_41:

(Start: 20 @32423 has 107 MA's), (35, 32264), (41, 32228), (43, 32213), (49, 32192),

Gene: Geraldini_42 Start: 33169, Stop: 32864, Start Num: 20

Candidate Starts for Geraldini_42:

(Start: 20 @33169 has 107 MA's), (35, 33007), (41, 32971), (43, 32956), (49, 32935),

Gene: Gideon_60 Start: 40427, Stop: 40762, Start Num: 19

Candidate Starts for Gideon_60:

(Start: 19 @40427 has 43 MA's), (Start: 20 @40439 has 107 MA's), (22, 40457), (24, 40472), (34, 40601), (37, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: GoldenAsh_58 Start: 39965, Stop: 40300, Start Num: 19

Candidate Starts for GoldenAsh_58:

(Start: 19 @39965 has 43 MA's), (Start: 20 @39977 has 107 MA's), (22, 39995), (24, 40010), (34, 40139), (37, 40154), (51, 40238), (52, 40241), (54, 40295),

Gene: Gomashi_59 Start: 40439, Stop: 40762, Start Num: 20

Candidate Starts for Gomashi_59:

(4, 40181), (Start: 19 @40427 has 43 MA's), (Start: 20 @40439 has 107 MA's), (22, 40457), (24, 40472), (34, 40601), (37, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Grizzly_59 Start: 40279, Stop: 40611, Start Num: 19

Candidate Starts for Grizzly_59:

(Start: 19 @40279 has 43 MA's), (37, 40465), (51, 40549), (54, 40606),

Gene: Guanica15_43 Start: 32157, Stop: 31864, Start Num: 21

Candidate Starts for Guanica15_43:

(6, 32421), (7, 32400), (11, 32322), (13, 32283), (Start: 20 @32166 has 107 MA's), (Start: 21 @32157 has 2 MA's), (27, 32079), (30, 32046), (43, 31956), (47, 31944),

Gene: Halo_61 Start: 40985, Stop: 41308, Start Num: 20

Candidate Starts for Halo_61:

(Start: 19 @40973 has 43 MA's), (Start: 20 @40985 has 107 MA's), (22, 41003), (24, 41018), (34, 41147), (37, 41162), (51, 41246), (52, 41249), (54, 41303),

Gene: HedwigODU_40 Start: 32121, Stop: 31819, Start Num: 20

Candidate Starts for HedwigODU_40:

(Start: 20 @32121 has 107 MA's), (35, 31962), (43, 31911), (46, 31905), (47, 31899), (49, 31890),

Gene: Homura_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Homura_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: Hope_60 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for Hope_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Hotshotbaby7_60 Start: 40439, Stop: 40762, Start Num: 20

Candidate Starts for Hotshotbaby7_60:

(Start: 19 @40427 has 43 MA's), (Start: 20 @40439 has 107 MA's), (22, 40457), (24, 40472), (34, 40601), (37, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Hurricane_42 Start: 32320, Stop: 31916, Start Num: 15

Candidate Starts for Hurricane_42:

(Start: 15 @32320 has 1 MA's), (Start: 20 @32218 has 107 MA's), (39, 32029),

Gene: Hyperbowlee_40 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for Hyperbowlee_40:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: Illumine_43 Start: 32905, Stop: 32603, Start Num: 20

Candidate Starts for Illumine_43:

(Start: 20 @32905 has 107 MA's), (Start: 23 @32881 has 4 MA's), (31, 32782), (43, 32695), (47, 32683),

Gene: Inky_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Inky_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: JAWS_40 Start: 32111, Stop: 31806, Start Num: 20

Candidate Starts for JAWS_40:

(Start: 20 @32111 has 107 MA's), (Start: 23 @32087 has 4 MA's), (31, 31985), (47, 31886), (49, 31877),

Gene: Jane_61 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for Jane_61:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Jarvi_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Jarvi_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: Jayhawk_41 Start: 32119, Stop: 31817, Start Num: 20

Candidate Starts for Jayhawk_41:

(Start: 20 @32119 has 107 MA's), (35, 31960), (43, 31909), (46, 31903), (47, 31897), (49, 31888),

Gene: Jeckyll_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Jeckyll_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: Jeilious_60 Start: 40436, Stop: 40759, Start Num: 20

Candidate Starts for Jeilious_60:

(Start: 19 @40424 has 43 MA's), (Start: 20 @40436 has 107 MA's), (22, 40454), (24, 40469), (34, 40598), (37, 40613), (51, 40697), (52, 40700), (54, 40754),

Gene: Jolene_60 Start: 40829, Stop: 41164, Start Num: 19

Candidate Starts for Jolene_60:

(Start: 19 @40829 has 43 MA's), (Start: 20 @40841 has 107 MA's), (22, 40859), (24, 40874), (34, 41003), (37, 41018), (51, 41102), (52, 41105), (54, 41159),

Gene: Jonghyun_58 Start: 40428, Stop: 40763, Start Num: 19

Candidate Starts for Jonghyun_58:

(Start: 19 @40428 has 43 MA's), (Start: 20 @40440 has 107 MA's), (22, 40458), (24, 40473), (34, 40602), (37, 40617), (51, 40701), (52, 40704), (54, 40758),

Gene: JorRay_61 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for JorRay_61:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Joy99_40 Start: 32166, Stop: 31864, Start Num: 20

Candidate Starts for Joy99_40:

(Start: 20 @32166 has 107 MA's), (35, 32007), (43, 31956), (46, 31950), (47, 31944), (49, 31935),

Gene: Kareem_61 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for Kareem_61:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Kasen3_61 Start: 40426, Stop: 40749, Start Num: 20

Candidate Starts for Kasen3_61:

(Start: 19 @40414 has 43 MA's), (Start: 20 @40426 has 107 MA's), (22, 40444), (24, 40459), (34, 40588), (37, 40603), (51, 40687), (52, 40690), (54, 40744),

Gene: Keshu_43 Start: 32282, Stop: 31980, Start Num: 20

Candidate Starts for Keshu_43:

(Start: 20 @32282 has 107 MA's), (28, 32186), (35, 32123), (37, 32111), (53, 32021),

Gene: LastHope_41 Start: 31193, Stop: 30891, Start Num: 20

Candidate Starts for LastHope_41:

(14, 31301), (Start: 20 @31193 has 107 MA's),

Gene: LaterM_41 Start: 33018, Stop: 32716, Start Num: 20

Candidate Starts for LaterM_41:

(Start: 20 @33018 has 107 MA's), (Start: 23 @32994 has 4 MA's), (35, 32859), (41, 32823), (49, 32787),

Gene: Lea83_42 Start: 32247, Stop: 31945, Start Num: 20

Candidate Starts for Lea83_42:

(Start: 20 @32247 has 107 MA's), (39, 32058),

Gene: Liefie_57 Start: 40076, Stop: 40399, Start Num: 20

Candidate Starts for Liefie_57:

(Start: 19 @40064 has 43 MA's), (Start: 20 @40076 has 107 MA's), (22, 40094), (24, 40109), (34, 40238), (37, 40253), (51, 40337), (52, 40340), (54, 40394),

Gene: LindNT_40 Start: 32283, Stop: 32005, Start Num: 23

Candidate Starts for LindNT_40:

(Start: 20 @32307 has 107 MA's), (Start: 23 @32283 has 4 MA's), (31, 32184), (43, 32097), (47, 32085),

Gene: Llorens_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Llorens_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: LouisV14_62 Start: 42669, Stop: 43004, Start Num: 19

Candidate Starts for LouisV14_62:

(Start: 19 @42669 has 43 MA's), (Start: 20 @42681 has 107 MA's), (22, 42699), (24, 42714), (34, 42843), (37, 42858), (51, 42942), (52, 42945), (54, 42999),

Gene: Lunahalos_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Lunahalos_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: MZKinsey_58 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for MZKinsey_58:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: MacnCheese_43 Start: 33155, Stop: 32856, Start Num: 20

Candidate Starts for MacnCheese_43:

(Start: 20 @33155 has 107 MA's), (35, 32999), (36, 32993), (37, 32987), (47, 32936), (49, 32927),

Gene: Maliketh_58 Start: 40437, Stop: 40760, Start Num: 20

Candidate Starts for Maliketh_58:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Marmie_60 Start: 40426, Stop: 40761, Start Num: 19

Candidate Starts for Marmie_60:

(Start: 19 @40426 has 43 MA's), (Start: 20 @40438 has 107 MA's), (22, 40456), (24, 40471), (34, 40600), (37, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: McMater_42 Start: 32677, Stop: 32372, Start Num: 20

Candidate Starts for McMater_42:

(12, 32809), (16, 32770), (18, 32716), (Start: 20 @32677 has 107 MA's), (30, 32554), (33, 32533), (47, 32452),

Gene: MeaningOfLife_41 Start: 33052, Stop: 32747, Start Num: 20

Candidate Starts for MeaningOfLife_41:

(13, 33166), (Start: 20 @33052 has 107 MA's), (Start: 23 @33028 has 4 MA's), (31, 32926), (47, 32827), (49, 32818),

Gene: Megsy_41 Start: 32366, Stop: 32064, Start Num: 20

Candidate Starts for Megsy_41:

(Start: 20 @32366 has 107 MA's), (Start: 23 @32342 has 4 MA's), (35, 32207), (41, 32171), (49, 32135),

Gene: Mowgli_60 Start: 40426, Stop: 40761, Start Num: 19

Candidate Starts for Mowgli_60:

(Start: 19 @40426 has 43 MA's), (Start: 20 @40438 has 107 MA's), (22, 40456), (24, 40471), (34, 40600), (37, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: Murucutumbu_41 Start: 33111, Stop: 32809, Start Num: 20

Candidate Starts for Murucutumbu_41:

(Start: 20 @33111 has 107 MA's), (Start: 23 @33087 has 4 MA's), (31, 32988), (43, 32901), (47, 32889),

Gene: Mynx_41 Start: 32441, Stop: 32136, Start Num: 20

Candidate Starts for Mynx_41:

(Start: 20 @32441 has 107 MA's), (31, 32315), (47, 32216), (49, 32207),

Gene: Neoh_58 Start: 40430, Stop: 40753, Start Num: 20

Candidate Starts for Neoh_58:

(Start: 19 @40418 has 43 MA's), (Start: 20 @40430 has 107 MA's), (22, 40448), (24, 40463), (34, 40592), (37, 40607), (51, 40691), (52, 40694), (54, 40748),

Gene: Niklas_42 Start: 32703, Stop: 32389, Start Num: 20

Candidate Starts for Niklas_42:

(1, 33018), (2, 33006), (12, 32835), (16, 32796), (18, 32742), (Start: 20 @32703 has 107 MA's), (35, 32535), (37, 32523), (38, 32511), (41, 32499), (46, 32478), (50, 32454), (51, 32436),

Gene: OctaviousRex_59 Start: 40404, Stop: 40739, Start Num: 19

Candidate Starts for OctaviousRex_59:

(Start: 19 @40404 has 43 MA's), (Start: 20 @40416 has 107 MA's), (22, 40434), (24, 40449), (34, 40578), (37, 40593), (51, 40677), (52, 40680), (54, 40734),

Gene: Olga_61 Start: 40438, Stop: 40761, Start Num: 20

Candidate Starts for Olga_61:

(4, 40180), (Start: 19 @40426 has 43 MA's), (Start: 20 @40438 has 107 MA's), (22, 40456), (24, 40471), (34, 40600), (37, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: Padfoot_40 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for Padfoot_40:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: Padpat_41 Start: 32112, Stop: 31810, Start Num: 20

Candidate Starts for Padpat_41:

(Start: 20 @32112 has 107 MA's), (35, 31953), (43, 31902), (46, 31896), (47, 31890), (49, 31881),

Gene: Paito_61 Start: 40051, Stop: 40386, Start Num: 19

Candidate Starts for Paito_61:

(Start: 19 @40051 has 43 MA's), (22, 40081), (24, 40096), (37, 40240), (51, 40324), (52, 40327), (54, 40381),

Gene: Peanam_42 Start: 32677, Stop: 32372, Start Num: 20

Candidate Starts for Peanam_42:

(1, 32992), (2, 32980), (8, 32908), (12, 32809), (16, 32770), (18, 32716), (Start: 20 @32677 has 107 MA's), (30, 32554), (33, 32533), (47, 32452),

Gene: Peeb_59 Start: 40403, Stop: 40735, Start Num: 19

Candidate Starts for Peeb_59:

(Start: 19 @40403 has 43 MA's), (37, 40589), (51, 40673), (54, 40730),

Gene: Peel_40 Start: 32239, Stop: 31937, Start Num: 20

Candidate Starts for Peel_40:

(Start: 20 @32239 has 107 MA's), (35, 32080), (43, 32029), (46, 32023), (47, 32017), (49, 32008),

Gene: Periodt_60 Start: 40818, Stop: 41153, Start Num: 19

Candidate Starts for Periodt_60:

(Start: 19 @40818 has 43 MA's), (Start: 20 @40830 has 107 MA's), (22, 40848), (24, 40863), (34, 40992), (37, 41007), (51, 41091), (52, 41094), (54, 41148),

Gene: Phish_59 Start: 40425, Stop: 40760, Start Num: 19
Candidate Starts for Phish_59:
(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Phloodle_58 Start: 40453, Stop: 40776, Start Num: 20
Candidate Starts for Phloodle_58:
(Start: 19 @40441 has 43 MA's), (Start: 20 @40453 has 107 MA's), (22, 40471), (24, 40486), (34, 40615), (37, 40630), (51, 40714), (52, 40717), (54, 40771),

Gene: Phreak_60 Start: 40437, Stop: 40760, Start Num: 20
Candidate Starts for Phreak_60:
(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Piatt_40 Start: 32434, Stop: 32132, Start Num: 20
Candidate Starts for Piatt_40:
(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: PinkYoshi_60 Start: 40417, Stop: 40752, Start Num: 19
Candidate Starts for PinkYoshi_60:
(4, 40171), (Start: 19 @40417 has 43 MA's), (Start: 20 @40429 has 107 MA's), (22, 40447), (24, 40462), (34, 40591), (37, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: Pisa1_40 Start: 33411, Stop: 33109, Start Num: 20
Candidate Starts for Pisa1_40:
(13, 33525), (Start: 20 @33411 has 107 MA's), (Start: 23 @33387 has 4 MA's), (35, 33252), (43, 33201), (46, 33195), (47, 33189), (49, 33180),

Gene: Pixie_41 Start: 31717, Stop: 31415, Start Num: 20
Candidate Starts for Pixie_41:
(Start: 20 @31717 has 107 MA's), (48, 31495), (53, 31456),

Gene: Plagueis_60 Start: 40246, Stop: 40581, Start Num: 19
Candidate Starts for Plagueis_60:
(Start: 19 @40246 has 43 MA's), (Start: 20 @40258 has 107 MA's), (22, 40276), (24, 40291), (34, 40420), (37, 40435), (51, 40519), (52, 40522), (54, 40576),

Gene: Pokerus_39 Start: 32158, Stop: 31853, Start Num: 20
Candidate Starts for Pokerus_39:
(Start: 20 @32158 has 107 MA's), (Start: 23 @32134 has 4 MA's), (31, 32032), (47, 31933), (49, 31924),

Gene: Prithvi_40 Start: 32307, Stop: 32005, Start Num: 20
Candidate Starts for Prithvi_40:
(Start: 20 @32307 has 107 MA's), (Start: 23 @32283 has 4 MA's), (31, 32184), (43, 32097), (47, 32085),

Gene: QuincyRose_39 Start: 32423, Stop: 32121, Start Num: 20
Candidate Starts for QuincyRose_39:
(Start: 20 @32423 has 107 MA's), (35, 32264), (41, 32228), (43, 32213), (49, 32192),

Gene: Rabbs_61 Start: 40507, Stop: 40842, Start Num: 19

Candidate Starts for Rabbs_61:

(Start: 19 @40507 has 43 MA's), (Start: 20 @40519 has 107 MA's), (22, 40537), (24, 40552), (37, 40696), (51, 40780), (52, 40783), (54, 40837),

Gene: Ramen_40 Start: 32123, Stop: 31818, Start Num: 20

Candidate Starts for Ramen_40:

(Start: 20 @32123 has 107 MA's), (Start: 23 @32099 has 4 MA's), (31, 31997), (47, 31898), (49, 31889),

Gene: Rapunzel97_40 Start: 32119, Stop: 31817, Start Num: 20

Candidate Starts for Rapunzel97_40:

(Start: 20 @32119 has 107 MA's), (35, 31960), (43, 31909), (46, 31903), (47, 31897), (49, 31888),

Gene: Rattrick_60 Start: 40830, Stop: 41153, Start Num: 20

Candidate Starts for Rattrick_60:

(Start: 19 @40818 has 43 MA's), (Start: 20 @40830 has 107 MA's), (22, 40848), (24, 40863), (34, 40992), (37, 41007), (51, 41091), (52, 41094), (54, 41148),

Gene: Remy19_60 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for Remy19_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Renaissance_59 Start: 40403, Stop: 40738, Start Num: 19

Candidate Starts for Renaissance_59:

(Start: 19 @40403 has 43 MA's), (Start: 20 @40415 has 107 MA's), (22, 40433), (24, 40448), (34, 40577), (37, 40592), (51, 40676), (52, 40679), (54, 40733),

Gene: Richarlison_60 Start: 40422, Stop: 40745, Start Num: 20

Candidate Starts for Richarlison_60:

(3, 40143), (4, 40164), (9, 40218), (Start: 19 @40410 has 43 MA's), (Start: 20 @40422 has 107 MA's), (22, 40440), (24, 40455), (34, 40584), (37, 40599), (51, 40683), (52, 40686), (54, 40740),

Gene: Richo_42 Start: 32677, Stop: 32372, Start Num: 20

Candidate Starts for Richo_42:

(12, 32809), (16, 32770), (18, 32716), (Start: 20 @32677 has 107 MA's), (30, 32554), (33, 32533), (47, 32452),

Gene: Rosmarinus_40 Start: 32225, Stop: 31923, Start Num: 20

Candidate Starts for Rosmarinus_40:

(Start: 20 @32225 has 107 MA's), (35, 32066), (43, 32015), (46, 32009), (47, 32003), (49, 31994),

Gene: Ruriko_57 Start: 40439, Stop: 40762, Start Num: 20

Candidate Starts for Ruriko_57:

(Start: 19 @40427 has 43 MA's), (Start: 20 @40439 has 107 MA's), (22, 40457), (24, 40472), (34, 40601), (37, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: SamuelLPlaqson_41 Start: 33019, Stop: 32717, Start Num: 20

Candidate Starts for SamuelLPlaqson_41:

(6, 33271), (13, 33133), (Start: 20 @33019 has 107 MA's), (Start: 23 @32995 has 4 MA's), (31, 32896), (43, 32809), (47, 32797),

Gene: Schiebel_58 Start: 39977, Stop: 40300, Start Num: 20

Candidate Starts for Schiebel_58:

(Start: 19 @39965 has 43 MA's), (Start: 20 @39977 has 107 MA's), (22, 39995), (24, 40010), (34, 40139), (37, 40154), (51, 40238), (52, 40241), (54, 40295),

Gene: ShaboiShabazz_59 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for ShaboiShabazz_59:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: ShedlockHolmes_42 Start: 32251, Stop: 31949, Start Num: 20

Candidate Starts for ShedlockHolmes_42:

(Start: 20 @32251 has 107 MA's), (39, 32062),

Gene: ShiaSurprise_41 Start: 32434, Stop: 32132, Start Num: 20

Candidate Starts for ShiaSurprise_41:

(Start: 20 @32434 has 107 MA's), (35, 32275), (41, 32239), (43, 32224), (49, 32203),

Gene: Sizemore_61 Start: 40414, Stop: 40749, Start Num: 19

Candidate Starts for Sizemore_61:

(Start: 19 @40414 has 43 MA's), (Start: 20 @40426 has 107 MA's), (22, 40444), (24, 40459), (34, 40588), (37, 40603), (51, 40687), (52, 40690), (54, 40744),

Gene: Slimphazie_40 Start: 32119, Stop: 31817, Start Num: 20

Candidate Starts for Slimphazie_40:

(Start: 20 @32119 has 107 MA's), (35, 31960), (43, 31909), (46, 31903), (47, 31897), (49, 31888),

Gene: Sneeze_60 Start: 40506, Stop: 40841, Start Num: 19

Candidate Starts for Sneeze_60:

(Start: 19 @40506 has 43 MA's), (Start: 20 @40518 has 107 MA's), (22, 40536), (24, 40551), (37, 40695), (51, 40779), (52, 40782), (54, 40836),

Gene: Spock_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Spock_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: Sulley_40 Start: 32367, Stop: 32065, Start Num: 20

Candidate Starts for Sulley_40:

(Start: 20 @32367 has 107 MA's), (35, 32208), (41, 32172), (43, 32157), (49, 32136),

Gene: Sweets_60 Start: 40432, Stop: 40755, Start Num: 20

Candidate Starts for Sweets_60:

(Start: 19 @40420 has 43 MA's), (Start: 20 @40432 has 107 MA's), (22, 40450), (24, 40465), (34, 40594), (37, 40609), (51, 40693), (52, 40696), (54, 40750),

Gene: TBond007_41 Start: 31716, Stop: 31414, Start Num: 20

Candidate Starts for TBond007_41:

(Start: 20 @31716 has 107 MA's), (48, 31494), (53, 31455),

Gene: TClif_44 Start: 33159, Stop: 32848, Start Num: 20

Candidate Starts for TClif_44:

(Start: 20 @33159 has 107 MA's), (32, 33027), (35, 32994), (37, 32982), (41, 32958), (46, 32937),

Gene: Tachez_40 Start: 32081, Stop: 31779, Start Num: 20

Candidate Starts for Tachez_40:

(Start: 20 @32081 has 107 MA's), (35, 31922), (43, 31871), (46, 31865), (47, 31859), (49, 31850),

Gene: Taheera_56 Start: 39404, Stop: 39739, Start Num: 19

Candidate Starts for Taheera_56:

(Start: 19 @39404 has 43 MA's), (Start: 20 @39416 has 107 MA's), (22, 39434), (24, 39449), (37, 39593), (51, 39677), (52, 39680), (54, 39734),

Gene: TaiwanKao_42 Start: 32363, Stop: 32061, Start Num: 20

Candidate Starts for TaiwanKao_42:

(Start: 20 @32363 has 107 MA's), (Start: 23 @32339 has 4 MA's), (35, 32204), (41, 32168), (49, 32132),

Gene: Terror_56 Start: 39404, Stop: 39739, Start Num: 19

Candidate Starts for Terror_56:

(Start: 19 @39404 has 43 MA's), (Start: 20 @39416 has 107 MA's), (22, 39434), (24, 39449), (37, 39593), (51, 39677), (52, 39680), (54, 39734),

Gene: TinaBug_61 Start: 40973, Stop: 41308, Start Num: 19

Candidate Starts for TinaBug_61:

(Start: 19 @40973 has 43 MA's), (Start: 20 @40985 has 107 MA's), (22, 41003), (24, 41018), (34, 41147), (37, 41162), (51, 41246), (52, 41249), (54, 41303),

Gene: TingHuaYa_40 Start: 30975, Stop: 30673, Start Num: 20

Candidate Starts for TingHuaYa_40:

(14, 31083), (Start: 20 @30975 has 107 MA's), (43, 30765), (47, 30753),

Gene: TiniBug_41 Start: 33015, Stop: 32713, Start Num: 20

Candidate Starts for TiniBug_41:

(6, 33267), (13, 33129), (Start: 20 @33015 has 107 MA's), (Start: 23 @32991 has 4 MA's), (31, 32892), (43, 32805), (47, 32793),

Gene: Tiri_41 Start: 32417, Stop: 32112, Start Num: 20

Candidate Starts for Tiri_41:

(Start: 20 @32417 has 107 MA's), (Start: 23 @32393 has 4 MA's), (31, 32291), (47, 32192), (49, 32183),

Gene: TomBrady_60 Start: 40426, Stop: 40761, Start Num: 19

Candidate Starts for TomBrady_60:

(Start: 19 @40426 has 43 MA's), (Start: 20 @40438 has 107 MA's), (22, 40456), (24, 40471), (34, 40600), (37, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: Topper_40 Start: 32237, Stop: 31935, Start Num: 20

Candidate Starts for Topper_40:

(Start: 20 @32237 has 107 MA's), (35, 32078), (43, 32027), (46, 32021), (47, 32015), (49, 32006),

Gene: TreyKay_40 Start: 32307, Stop: 32005, Start Num: 20

Candidate Starts for TreyKay_40:

(Start: 20 @32307 has 107 MA's), (Start: 23 @32283 has 4 MA's), (31, 32184), (43, 32097), (47, 32085),

Gene: TruffulaTree_40 Start: 32115, Stop: 31813, Start Num: 20

Candidate Starts for TruffulaTree_40:

(Start: 20 @32115 has 107 MA's), (35, 31956), (43, 31905), (46, 31899), (47, 31893), (49, 31884),

Gene: Twitch_40 Start: 32239, Stop: 31937, Start Num: 20

Candidate Starts for Twitch_40:

(Start: 20 @32239 has 107 MA's), (35, 32080), (43, 32029), (46, 32023), (47, 32017), (49, 32008),

Gene: Urkel_41 Start: 33019, Stop: 32717, Start Num: 20

Candidate Starts for Urkel_41:

(6, 33271), (13, 33133), (Start: 20 @33019 has 107 MA's), (Start: 23 @32995 has 4 MA's), (31, 32896), (43, 32809), (47, 32797),

Gene: Veliki_40 Start: 32155, Stop: 31853, Start Num: 20

Candidate Starts for Veliki_40:

(Start: 20 @32155 has 107 MA's), (35, 31996), (43, 31945), (46, 31939), (47, 31933), (49, 31924),

Gene: Wendigo_58 Start: 40416, Stop: 40739, Start Num: 20

Candidate Starts for Wendigo_58:

(Start: 19 @40404 has 43 MA's), (Start: 20 @40416 has 107 MA's), (22, 40434), (24, 40449), (34, 40578), (37, 40593), (51, 40677), (52, 40680), (54, 40734),

Gene: YoureAdopted_39 Start: 32324, Stop: 32019, Start Num: 20

Candidate Starts for YoureAdopted_39:

(Start: 20 @32324 has 107 MA's), (35, 32162), (41, 32126), (43, 32111), (49, 32090),

Gene: Yunkel11_43 Start: 32165, Stop: 31863, Start Num: 20

Candidate Starts for Yunkel11_43:

(6, 32420), (7, 32399), (11, 32321), (13, 32282), (Start: 20 @32165 has 107 MA's), (Start: 21 @32156 has 2 MA's), (27, 32078), (30, 32045), (43, 31955), (47, 31943),

Gene: Zavala_41 Start: 32401, Stop: 32096, Start Num: 20

Candidate Starts for Zavala_41:

(Start: 20 @32401 has 107 MA's), (31, 32275), (47, 32176), (49, 32167),

Gene: ZoMa_59 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for ZoMa_59:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Zombie_60 Start: 40425, Stop: 40760, Start Num: 19

Candidate Starts for Zombie_60:

(Start: 19 @40425 has 43 MA's), (Start: 20 @40437 has 107 MA's), (22, 40455), (24, 40470), (34, 40599), (37, 40614), (51, 40698), (52, 40701), (54, 40755),