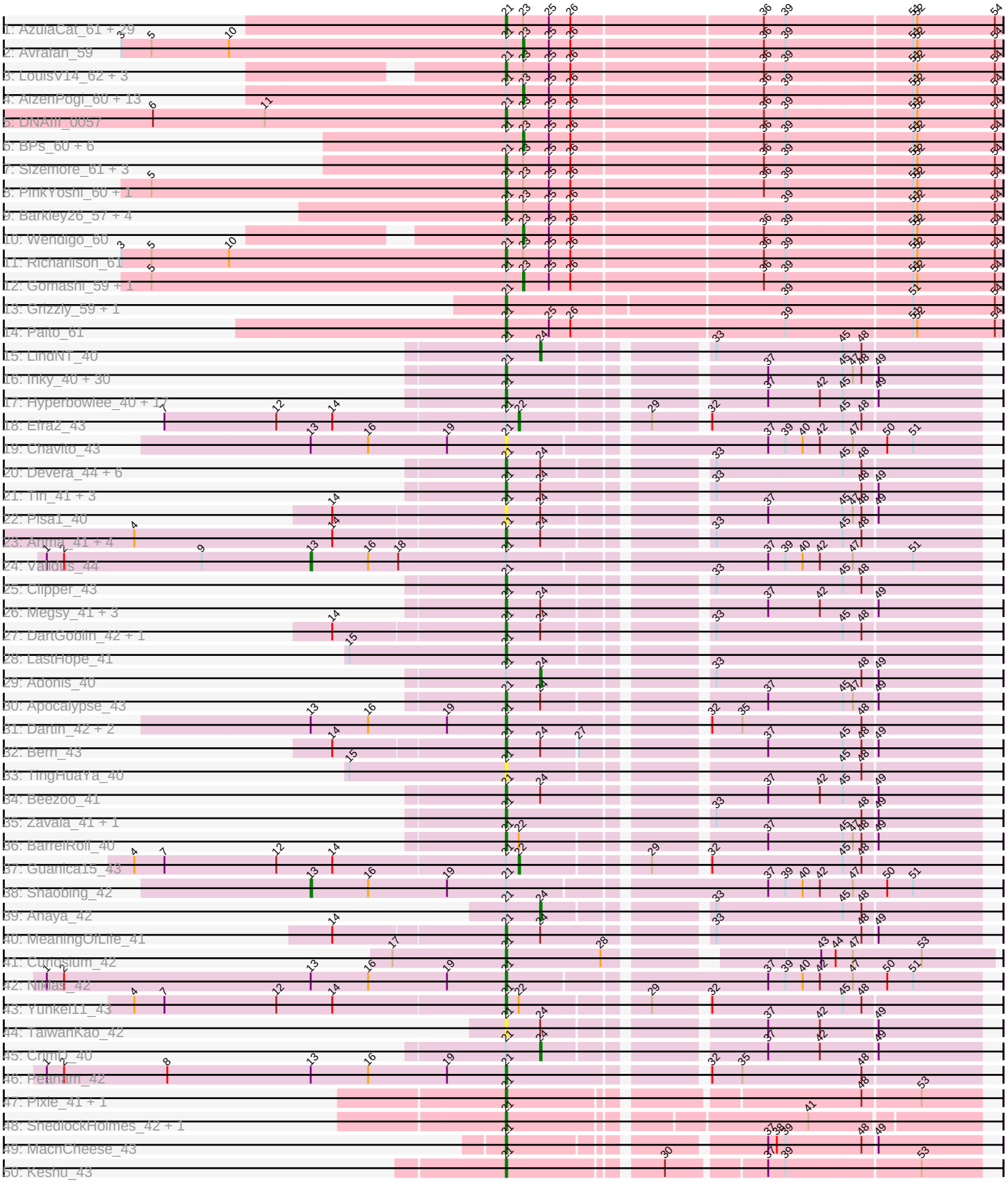
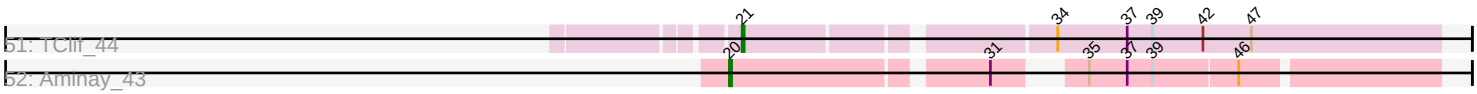
Pham 341816


1: AzulaCat_61 + 29
2: Avratan_59
3: LouisV14_62 + 3
4: AizenPogi_60 + 13
5: DNAffi_0057
6: BPs_60 + 6
7: Sizemore_61 + 3
8: PinkYoshi_60 + 1
9: Barkley26_57 + 4
10: Wendigo_60
11: Richarrison_61
12: Gomashi_59 + 1
13: Grizzly_59 + 1
14: Palto_61
15: LindNT_40
16: Inky_40 + 30
17: Hyperbowlee_40 + 17
18: Elra2_43
19: Chavito_43
20: Devera_44 + 6
21: Tin_41 + 3
22: Pisa1_40
23: Anima_41 + 4
24: Validus_44
25: Clipper_43
26: Megsy_41 + 3
27: DartGoblin_42 + 1
28: LastHope_41
29: Adonis_40
30: Apocalypse_43
31: Dartin_42 + 2
32: Bem_43
33: TingHuaYa_40
34: Beezoo_41
35: Zavala_41 + 1
36: BarrelRoll_40
37: Guanica15_43
38: Shaobing_42
39: Anaya_42
40: MeaningOfLife_41
41: Curiosium_42
42: Ninias_42
43: Yunkel11_43
44: TaiwanKao_42
45: Crumb_40
46: Petnam_42
47: Pixie_41 + 1
48: ShedlockHolmes_42 + 1
49: MacnCheese_43
50: Keshu_43

Pham 341816



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 341816 Report

This analysis was run 11/14/26 on database version 672.

Pham number 341816 has 182 members, 9 are drafts.

Phages represented in each track:
• Track 1 : AzulaCat_61, BQuat_59, Gideon_60, Aroostook_60, Jonghyun_58, ECartman_58, Phish_59, Marmie_60, CLED96_59, Ruriko_60, JorRay_61, Mowgli_60, Remy19_60, Cherrybomb426_59, DingDing_61, ForeverHowLong_58, ShaboiShabazz_59, Jolene_60, Camri_59, GoldenAsh_58, TinaBug_61, Jeilious_60, Periodt_60, Neoh_60, Plagueis_60, Maliketh_60, Zombie_60, CassieYates_60, TomBrady_60, Chance64_60
• Track 2 : Avrafan_59
• Track 3 : LouisV14_62, Renaissance_59, OctaviousRex_59, DMoney_59
• Track 4 : AizenPogi_60, Rattrick_60, Hotshotbaby7_60, Phreak_60, Schiebel_58, Liefie_57, Crespo_59, Cedasite_60, Halo_61, Darionha_60, Coleslaw_59, Angel_58, Hope_60, Phloodle_61
• Track 5 : DNAIII_0057
• Track 6 : BPs_60, Kasen3_61, Primanti_58, BruceB_60, Sweets_60, Terralys_57, Jane_61
• Track 7 : Sizemore_61, ZoMa_59, Kareem_61, MZKinsey_61
• Track 8 : PinkYoshi_60, Annihilator_59
• Track 9 : Barkley26_57, Terror_56, Rabbs_61, Sneeze_60, Taheera_56
• Track 10 : Wendigo_60
• Track 11 : Richarlison_61
• Track 12 : Gomashi_59, Olga_61
• Track 13 : Grizzly_59, Peeb_59
• Track 14 : Paito_61
• Track 15 : LindNT_40
• Track 16 : Inky_40, Spock_40, Slimphazie_40, Belladonna_40, BGlluviae_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, Rosmarinus_40, Jarvi_40, Rapunzel97_40, TruffulaTree_40, Adephagia_40, Llorens_40, Lunahalos_40, Homura_40, Emerson_41, Lokum_41
• Track 17 : Hyperbowlee_40, Deby_40, QuincyRose_39, CaseJules_41, Sulley_40, Piatt_40, Geraldini_42, Asayake_40, Durfee_40, BEEST_40, Angelica_40, Boiiii_40, Ganymede_41, AlishaPH_40, ShiaSurprise_41, Blizzard_40, Padfoot_40, YoureAdopted_39
• Track 18 : Efra2_43
• Track 19 : Chavito_43
• Track 20 : Devera_44, Illumine_43, TreyKay_40, Ageofdapage_42, Prithvi_40, Murucutumbu_41, Dole_43

• Track 21 : Tiri_41, JAWS_40, Ramen_40, Pokerus_39
• Track 22 : Pisa1_40
• Track 23 : Anma_41, Urkel_41, TiniBug_41, SamuelLPlaqson_41, DrHayes_41
• Track 24 : Validus_44
• Track 25 : Clipper_43
• Track 26 : Megsy_41, CheetoDust_39, LaterM_41, BaghaKamala_39
• Track 27 : DartGoblin_42, Bella96_41
• Track 28 : LastHope_41
• Track 29 : Adonis_40
• Track 30 : Apocalypse_43
• Track 31 : Dartin_42, McMater_42, Richo_42
• Track 32 : Bern_43
• Track 33 : TingHuaYa_40
• Track 34 : Beezoo_41
• Track 35 : Zavala_41, Mynx_41
• Track 36 : BarrelRoll_40
• Track 37 : Guanica15_43
• Track 38 : Shaobing_42
• Track 39 : Anaya_42
• Track 40 : MeaningOfLife_41
• Track 41 : Curiosium_42
• Track 42 : Niklas_42
• Track 43 : Yunkel11_43
• Track 44 : TaiwanKao_42
• Track 45 : CrimD_40
• Track 46 : Peanam_42
• Track 47 : Pixie_41, TBond007_41
• Track 48 : ShedlockHolmes_42, Lea83_42
• Track 49 : MacnCheese_43
• Track 50 : Keshu_43
• Track 51 : TClif_44
• Track 52 : 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 21, it was called in 142 of the 173 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ActinUp_40, Adephagia_40, Ageofdapage_42, AlishaPH_40, Angelica_40, Anma_41, Annihilator_59, Apocalypse_43, Aroostook_60, Asayake_40, Atiba_40, AzulaCat_61, BEEST_40, BGlluviae_40, BQuat_59, BaghaKamala_39, Barkley26_57, BarrelRoll_40, Beezoo_41, Bella96_41, Belladonna_40, Bern_43, Blizzard_40, Boiiii_40, CLED96_59, CREW_40, CallaLilly_40, Camri_59, Capricorn_40, CaseJules_41, CassieYates_60, Chance64_60, Chavito_43, CheetoDust_39, Cherrybomb426_59, Clipper_43, Curiosium_42, DMoney_59, DNAIII_0057, Dalmuri_40, DartGoblin_42, Dartin_42, Deby_40, Devera_44, DingDing_61, Dole_43, DrHayes_41, Durfee_40, ECartman_58, Emerson_41, ForeverHowLong_58, Ganymede_41, Geraldini_42, Gideon_60, GoldenAsh_58, Grizzly_59, HedwigODU_40, Homura_40, Hyperbowlee_40, Illumine_43, Inky_40,

JAWS_40, Jarvi_40, Jayhawk_41, Jeckyll_40, Jeilious_60, Jolene_60, Jonghyun_58, JorRay_61, Joy99_40, Kareem_61, Keshu_43, LastHope_41, LaterM_41, Lea83_42, Llorens_40, Lokum_41, LouisV14_62, Lunahalos_40, MZKinsey_61, MacnCheese_43, Maliketh_60, Marmie_60, McMater_42, MeaningOfLife_41, Megsy_41, Mowgli_60, Murucutumbu_41, Mynx_41, Neoh_60, Niklas_42, OctaviousRex_59, Padfoot_40, Padpat_41, Paito_61, Peanam_42, Peeb_59, Peel_40, Periodt_60, Phish_59, Piatt_40, PinkYoshi_60, Pisa1_40, Pixie_41, Plagueis_60, Pokerus_39, Prithvi_40, QuincyRose_39, Rabbs_61, Ramen_40, Rapunzel97_40, Remy19_60, Renaissance_59, Richarlison_61, Richo_42, Rosmarinus_40, Ruriko_60, SamuelLPlaqson_41, ShaboiShabazz_59, ShedlockHolmes_42, ShiaSurprise_41, Sizemore_61, Slimphazie_40, Sneeze_60, Spock_40, Sulley_40, TBond007_41, TClif_44, Tachez_40, Taheera_56, TaiwanKao_42, Terror_56, TinaBug_61, TingHuaYa_40, TiniBug_41, Tiri_41, TomBrady_60, Topper_40, TreyKay_40, TruffulaTree_40, Twitch_40, Urkel_41, Veliki_40, YoureAdopted_39, Yunkel11_43, Zavala_41, ZoMa_59, Zombie_60,

Genes that have the "Most Annotated" start but do not call it:
• Adonis_40, AizenPogi_60, Anaya_42, Angel_58, Avrafan_59, BPs_60, BruceB_60, Cedasite_60, Coleslaw_59, Crespo_59, CrimD_40, Darionha_60, Efra2_43, Gomashi_59, Guanica15_43, Halo_61, Hope_60, Hotshotbaby7_60, Jane_61, Kasen3_61, Liefie_57, LindNT_40, Olga_61, Phloodle_61, Phreak_60, Primanti_58, Rattrick_60, Schiebel_58, Shaobing_42, Sweets_60, Terralys_57, Validus_44, Wendigo_60,

Genes that do not have the "Most Annotated" start:
• Aminay_43,

Summary by start number:

Start 13:
• Found in 8 of 182 (4.4%) of genes in pham
• Manual Annotations of this start: 2 of 173
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Shaobing_42 (K1), Validus_44 (K1),

Start 20:
• Found in 1 of 182 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 173
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aminay_43 (K7),

Start 21:
• Found in 181 of 182 (99.5%) of genes in pham
• Manual Annotations of this start: 142 of 173
• Called 81.8% of time when present
• Phage (with cluster) where this start called: ActinUp_40 (K1), Adephagia_40 (K1), Ageofdapage_42 (K1), AlishaPH_40 (K1), Angelica_40 (K1), Anma_41 (K1), Annihilator_59 (G1), Apocalypse_43 (K1), Aroostook_60 (G1), Asayake_40 (K1), Atiba_40 (K1), AzulaCat_61 (G1), BEEST_40 (K1), BGlluviae_40 (K1), BQuat_59 (G1), BaghaKamala_39 (K1), Barkley26_57 (G1), BarrelRoll_40 (K1), Beezoo_41 (K1), Bella96_41 (K1), Belladonna_40 (K1), Bern_43 (K1), Blizzard_40 (K1), Boiiii_40 (K1), CLED96_59 (G1), CREW_40 (K1), CallaLilly_40 (K1), Camri_59 (G1), Capricorn_40 (K1), CaseJules_41 (K1), CassieYates_60 (G1), Chance64_60 (G1),

Chavito_43 (K1), CheetoDust_39 (K1), Cherrybomb426_59 (G1), Clipper_43 (K1), Curiosium_42 (K1), DMoney_59 (G1), DNAIII_0057 (G1), Dalmuri_40 (K1), DartGoblin_42 (K1), Dartin_42 (K1), Deby_40 (K1), Devera_44 (K1), DingDing_61 (G1), Dole_43 (K1), DrHayes_41 (K1), Durfee_40 (K1), ECartman_58 (G1), Emerson_41 (K1), ForeverHowLong_58 (G1), Ganymede_41 (K1), Geraldini_42 (K1), Gideon_60 (G1), GoldenAsh_58 (G1), Grizzly_59 (G1), HedwigODU_40 (K1), Homura_40 (K1), Hyperbowlee_40 (K1), Illumine_43 (K1), Inky_40 (K1), JAWS_40 (K1), Jarvi_40 (K1), Jayhawk_41 (K1), Jeckyll_40 (K1), Jeilious_60 (G), Jolene_60 (G1), Jonghyun_58 (G1), JorRay_61 (G1), Joy99_40 (K1), Kareem_61 (G1), Keshu_43 (K3), LastHope_41 (K1), LaterM_41 (K1), Lea83_42 (K3), Llorens_40 (K1), Lokum_41 (K1), LouisV14_62 (G1), Lunahalos_40 (K1), MZKinsey_61 (G1), MacnCheese_43 (K3), Maliketh_60 (G1), Marmie_60 (G1), McMater_42 (K1), MeaningOfLife_41 (K1), Megsy_41 (K1), Mowgli_60 (G1), Murucutumbu_41 (K1), Mynx_41 (K1), Neoh_60 (G), Niklas_42 (K1), OctaviousRex_59 (G1), Padfoot_40 (K1), Padpat_41 (K1), Paito_61 (G1), Peanam_42 (K1), Peeb_59 (G1), Peel_40 (K1), Periodt_60 (G1), Phish_59 (G1), Piatt_40 (K1), PinkYoshi_60 (G1), Pisa1_40 (K1), Pixie_41 (K3), Plagueis_60 (G1), Pokerus_39 (K1), Prithvi_40 (K1), QuincyRose_39 (K1), Rabbs_61 (G1), Ramen_40 (K1), Rapunzel97_40 (K1), Remy19_60 (G1), Renaissance_59 (G1), Richarlison_61 (G1), Richo_42 (K1), Rosmarinus_40 (K1), Ruriko_60 (G1), SamuelLPlaqson_41 (K1), ShaboiShabazz_59 (G1), ShedlockHolmes_42 (K3), ShiaSurprise_41 (K1), Sizemore_61 (G1), Slimphazie_40 (K1), Sneeze_60 (G1), Spock_40 (K1), Sulley_40 (K1), TBond007_41 (K3), TClif_44 (K6), Tachez_40 (K1), Taheera_56 (G1), TaiwanKao_42 (K1), Terror_56 (G1), TinaBug_61 (G1), TingHuaYa_40 (K1), TiniBug_41 (K1), Tiri_41 (K1), TomBrady_60 (G1), Topper_40 (K1), TreyKay_40 (K1), TruffulaTree_40 (K1), Twitch_40 (K1), Urkel_41 (K1), Veliki_40 (K1), YoureAdopted_39 (K1), Yunkel11_43 (K1), Zavala_41 (K1), ZoMa_59 (G1), Zombie_60 (G1),

Start 22:
• Found in 4 of 182 (2.2%) of genes in pham
• Manual Annotations of this start: 2 of 173
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Efra2_43 (K1), Guanica15_43 (K1),

Start 23:
• Found in 72 of 182 (39.6%) of genes in pham
• Manual Annotations of this start: 22 of 173
• Called 34.7% of time when present
• Phage (with cluster) where this start called: AizenPogi_60 (G1), Angel_58 (G1), Avrafan_59 (G1), BPs_60 (G1), BruceB_60 (G1), Cedasite_60 (G1), Coleslaw_59 (G1), Crespo_59 (G1), Darionha_60 (G1), Gomashi_59 (G1), Halo_61 (G1), Hope_60 (G1), Hotshotbaby7_60 (G1), Jane_61 (G1), Kasen3_61 (G1), Liefie_57 (G1), Olga_61 (G1), Phloodle_61 (G1), Phreak_60 (G1), Primanti_58 (G1), Rattrick_60 (G1), Schiebel_58 (G1), Sweets_60 (G1), Terralys_57 (G1), Wendigo_60 (G1),

Start 24:
• Found in 32 of 182 (17.6%) of genes in pham
• Manual Annotations of this start: 4 of 173
• 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 G:
•Start number 21 was manually annotated 2 times for cluster G.

Info for manual annotations of cluster G1:
•Start number 21 was manually annotated 47 times for cluster G1.
•Start number 23 was manually annotated 22 times for cluster G1.

Info for manual annotations of cluster K1:
•Start number 13 was manually annotated 2 times for cluster K1.
•Start number 21 was manually annotated 86 times for cluster K1.
•Start number 22 was manually annotated 2 times for cluster K1.
•Start number 24 was manually annotated 4 times for cluster K1.

Info for manual annotations of cluster K3:
•Start number 21 was manually annotated 6 times for cluster K3.

Info for manual annotations of cluster K6:
•Start number 21 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: 21
Candidate Starts for ActinUp_40:
(Start: 21 @32121 has 142 MA's), (37, 31962), (45, 31911), (47, 31905), (48, 31899), (49, 31890),

Gene: Adephagia_40 Start: 32118, Stop: 31816, Start Num: 21
Candidate Starts for Adephagia_40:
(Start: 21 @32118 has 142 MA's), (37, 31959), (45, 31908), (47, 31902), (48, 31896), (49, 31887),

Gene: Adonis_40 Start: 32395, Stop: 32114, Start Num: 24
Candidate Starts for Adonis_40:
(Start: 21 @32419 has 142 MA's), (Start: 24 @32395 has 4 MA's), (33, 32293), (48, 32194), (49, 32185),

Gene: Ageofdapage_42 Start: 33095, Stop: 32793, Start Num: 21
Candidate Starts for Ageofdapage_42:
(Start: 21 @33095 has 142 MA's), (Start: 24 @33071 has 4 MA's), (33, 32972), (45, 32885), (48, 32873),

Gene: AizenPogi_60 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for AizenPogi_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: AlishaPH_40 Start: 32393, Stop: 32091, Start Num: 21

Candidate Starts for AlishaPH_40:
(Start: 21 @32393 has 142 MA's), (37, 32234), (42, 32198), (45, 32183), (49, 32162),

Gene: Aminay_43 Start: 33661, Stop: 33365, Start Num: 20
Candidate Starts for Aminay_43:
(Start: 20 @33661 has 1 MA's), (31, 33550), (35, 33523), (37, 33505), (39, 33493), (46, 33454),

Gene: Anaya_42 Start: 32707, Stop: 32429, Start Num: 24
Candidate Starts for Anaya_42:
(Start: 21 @32731 has 142 MA's), (Start: 24 @32707 has 4 MA's), (33, 32608), (45, 32521), (48, 32509),

Gene: Angel_58 Start: 39977, Stop: 40300, Start Num: 23
Candidate Starts for Angel_58:
(Start: 21 @39965 has 142 MA's), (Start: 23 @39977 has 22 MA's), (25, 39995), (26, 40010), (36, 40139), (39, 40154), (51, 40238), (52, 40241), (54, 40295),

Gene: Angelica_40 Start: 32350, Stop: 32048, Start Num: 21
Candidate Starts for Angelica_40:
(Start: 21 @32350 has 142 MA's), (37, 32191), (42, 32155), (45, 32140), (49, 32119),

Gene: Anma_41 Start: 33019, Stop: 32717, Start Num: 21
Candidate Starts for Anma_41:
(4, 33271), (14, 33133), (Start: 21 @33019 has 142 MA's), (Start: 24 @32995 has 4 MA's), (33, 32896), (45, 32809), (48, 32797),

Gene: Annihilator_59 Start: 40417, Stop: 40752, Start Num: 21
Candidate Starts for Annihilator_59:
(5, 40171), (Start: 21 @40417 has 142 MA's), (Start: 23 @40429 has 22 MA's), (25, 40447), (26, 40462), (36, 40591), (39, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: Apocalypse_43 Start: 33135, Stop: 32833, Start Num: 21
Candidate Starts for Apocalypse_43:
(Start: 21 @33135 has 142 MA's), (Start: 24 @33111 has 4 MA's), (37, 32976), (45, 32925), (47, 32919), (49, 32904),

Gene: Aroostook_60 Start: 40427, Stop: 40762, Start Num: 21
Candidate Starts for Aroostook_60:
(Start: 21 @40427 has 142 MA's), (Start: 23 @40439 has 22 MA's), (25, 40457), (26, 40472), (36, 40601), (39, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Asayake_40 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for Asayake_40:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: Atiba_40 Start: 32081, Stop: 31779, Start Num: 21
Candidate Starts for Atiba_40:
(Start: 21 @32081 has 142 MA's), (37, 31922), (45, 31871), (47, 31865), (48, 31859), (49, 31850),

Gene: Avrafan_59 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for Avrafan_59:
(3, 40158), (5, 40179), (10, 40233), (Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: AzulaCat_61 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for AzulaCat_61:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: BEEST_40 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for BEEST_40:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: BGlluviae_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for BGlluviae_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: BPs_60 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for BPs_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: BQuat_59 Start: 40417, Stop: 40752, Start Num: 21
Candidate Starts for BQuat_59:
(Start: 21 @40417 has 142 MA's), (Start: 23 @40429 has 22 MA's), (25, 40447), (26, 40462), (36, 40591), (39, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: BaghaKamala_39 Start: 31559, Stop: 31257, Start Num: 21
Candidate Starts for BaghaKamala_39:
(Start: 21 @31559 has 142 MA's), (Start: 24 @31535 has 4 MA's), (37, 31400), (42, 31364), (49, 31328),

Gene: Barkley26_57 Start: 39877, Stop: 40212, Start Num: 21
Candidate Starts for Barkley26_57:
(Start: 21 @39877 has 142 MA's), (Start: 23 @39889 has 22 MA's), (25, 39907), (26, 39922), (39, 40066), (51, 40150), (52, 40153), (54, 40207),

Gene: BarrelRoll_40 Start: 32104, Stop: 31802, Start Num: 21
Candidate Starts for BarrelRoll_40:
(Start: 21 @32104 has 142 MA's), (Start: 22 @32095 has 2 MA's), (37, 31945), (45, 31894), (47, 31888), (48, 31882), (49, 31873),

Gene: Beezoo_41 Start: 33084, Stop: 32779, Start Num: 21
Candidate Starts for Beezoo_41:
(Start: 21 @33084 has 142 MA's), (Start: 24 @33060 has 4 MA's), (37, 32922), (42, 32886), (45, 32871), (49, 32850),

Gene: Bella96_41 Start: 32976, Stop: 32674, Start Num: 21
Candidate Starts for Bella96_41:
(14, 33090), (Start: 21 @32976 has 142 MA's), (Start: 24 @32952 has 4 MA's), (33, 32853), (45, 32766), (48, 32754),

Gene: Belladonna_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Belladonna_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: Bern_43 Start: 33663, Stop: 33361, Start Num: 21
Candidate Starts for Bern_43:
(14, 33777), (Start: 21 @33663 has 142 MA's), (Start: 24 @33639 has 4 MA's), (27, 33615), (37, 33504), (45, 33453), (48, 33441), (49, 33432),

Gene: Blizzard_40 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for Blizzard_40:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: Boiiii_40 Start: 32436, Stop: 32134, Start Num: 21
Candidate Starts for Boiiii_40:
(Start: 21 @32436 has 142 MA's), (37, 32277), (42, 32241), (45, 32226), (49, 32205),

Gene: BruceB_60 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for BruceB_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: CLED96_59 Start: 39980, Stop: 40315, Start Num: 21
Candidate Starts for CLED96_59:
(Start: 21 @39980 has 142 MA's), (Start: 23 @39992 has 22 MA's), (25, 40010), (26, 40025), (36, 40154), (39, 40169), (51, 40253), (52, 40256), (54, 40310),

Gene: CREW_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for CREW_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: CallaLilly_40 Start: 32160, Stop: 31858, Start Num: 21
Candidate Starts for CallaLilly_40:
(Start: 21 @32160 has 142 MA's), (37, 32001), (45, 31950), (47, 31944), (48, 31938), (49, 31929),

Gene: Camri_59 Start: 39980, Stop: 40315, Start Num: 21
Candidate Starts for Camri_59:
(Start: 21 @39980 has 142 MA's), (Start: 23 @39992 has 22 MA's), (25, 40010), (26, 40025), (36, 40154), (39, 40169), (51, 40253), (52, 40256), (54, 40310),

Gene: Capricorn_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Capricorn_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: CaseJules_41 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for CaseJules_41:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: CassieYates_60 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for CassieYates_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Cedasite_60 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for Cedasite_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Chance64_60 Start: 40427, Stop: 40762, Start Num: 21
Candidate Starts for Chance64_60:
(Start: 21 @40427 has 142 MA's), (Start: 23 @40439 has 22 MA's), (25, 40457), (26, 40472), (36, 40601), (39, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Chavito_43 Start: 33312, Stop: 32998, Start Num: 21
Candidate Starts for Chavito_43:
(Start: 13 @33444 has 2 MA's), (16, 33405), (19, 33351), (Start: 21 @33312 has 142 MA's), (37, 33144), (39, 33132), (40, 33120), (42, 33108), (47, 33087), (50, 33063), (51, 33045),

Gene: CheetoDust_39 Start: 31609, Stop: 31307, Start Num: 21
Candidate Starts for CheetoDust_39:
(Start: 21 @31609 has 142 MA's), (Start: 24 @31585 has 4 MA's), (37, 31450), (42, 31414), (49, 31378),

Gene: Cherrybomb426_59 Start: 39980, Stop: 40315, Start Num: 21
Candidate Starts for Cherrybomb426_59:
(Start: 21 @39980 has 142 MA's), (Start: 23 @39992 has 22 MA's), (25, 40010), (26, 40025), (36, 40154), (39, 40169), (51, 40253), (52, 40256), (54, 40310),

Gene: Clipper_43 Start: 32756, Stop: 32454, Start Num: 21
Candidate Starts for Clipper_43:
(Start: 21 @32756 has 142 MA's), (33, 32633), (45, 32546), (48, 32534),

Gene: Coleslaw_59 Start: 40429, Stop: 40752, Start Num: 23
Candidate Starts for Coleslaw_59:
(Start: 21 @40417 has 142 MA's), (Start: 23 @40429 has 22 MA's), (25, 40447), (26, 40462), (36, 40591), (39, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: Crespo_59 Start: 40438, Stop: 40761, Start Num: 23
Candidate Starts for Crespo_59:
(Start: 21 @40426 has 142 MA's), (Start: 23 @40438 has 22 MA's), (25, 40456), (26, 40471), (36, 40600), (39, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: CrimD_40 Start: 32341, Stop: 32063, Start Num: 24
Candidate Starts for CrimD_40:
(Start: 21 @32365 has 142 MA's), (Start: 24 @32341 has 4 MA's), (37, 32206), (42, 32170), (49, 32134),

Gene: Curiosium_42 Start: 30899, Stop: 30588, Start Num: 21
Candidate Starts for Curiosium_42:
(17, 30977), (Start: 21 @30899 has 142 MA's), (28, 30833), (43, 30707), (44, 30698), (47, 30686), (53, 30638),

Gene: DMoney_59 Start: 40404, Stop: 40739, Start Num: 21
Candidate Starts for DMoney_59:
(Start: 21 @40404 has 142 MA's), (Start: 23 @40416 has 22 MA's), (25, 40434), (26, 40449), (36, 40578), (39, 40593), (51, 40677), (52, 40680), (54, 40734),

Gene: DNAIII_0057 Start: 38054, Stop: 38389, Start Num: 21
Candidate Starts for DNAIII_0057:

(6, 37808), (11, 37886), (Start: 21 @38054 has 142 MA's), (Start: 23 @38066 has 22 MA's), (25, 38084), (26, 38099), (36, 38228), (39, 38243), (51, 38327), (52, 38330), (54, 38384),

Gene: Dalmuri_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Dalmuri_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: Darionha_60 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for Darionha_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: DartGoblin_42 Start: 32970, Stop: 32668, Start Num: 21
Candidate Starts for DartGoblin_42:
(14, 33084), (Start: 21 @32970 has 142 MA's), (Start: 24 @32946 has 4 MA's), (33, 32847), (45, 32760), (48, 32748),

Gene: Dartin_42 Start: 32677, Stop: 32372, Start Num: 21
Candidate Starts for Dartin_42:
(Start: 13 @32809 has 2 MA's), (16, 32770), (19, 32716), (Start: 21 @32677 has 142 MA's), (32, 32554), (35, 32533), (48, 32452),

Gene: Deby_40 Start: 32368, Stop: 32066, Start Num: 21
Candidate Starts for Deby_40:
(Start: 21 @32368 has 142 MA's), (37, 32209), (42, 32173), (45, 32158), (49, 32137),

Gene: Devera_44 Start: 32903, Stop: 32601, Start Num: 21
Candidate Starts for Devera_44:
(Start: 21 @32903 has 142 MA's), (Start: 24 @32879 has 4 MA's), (33, 32780), (45, 32693), (48, 32681),

Gene: DingDing_61 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for DingDing_61:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Dole_43 Start: 32905, Stop: 32603, Start Num: 21
Candidate Starts for Dole_43:
(Start: 21 @32905 has 142 MA's), (Start: 24 @32881 has 4 MA's), (33, 32782), (45, 32695), (48, 32683),

Gene: DrHayes_41 Start: 33019, Stop: 32717, Start Num: 21
Candidate Starts for DrHayes_41:
(4, 33271), (14, 33133), (Start: 21 @33019 has 142 MA's), (Start: 24 @32995 has 4 MA's), (33, 32896), (45, 32809), (48, 32797),

Gene: Durfee_40 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for Durfee_40:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: ECartman_58 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for ECartman_58:

(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Efra2_43 Start: 32200, Stop: 31907, Start Num: 22
Candidate Starts for Efra2_43:
(7, 32443), (12, 32365), (14, 32326), (Start: 21 @32209 has 142 MA's), (Start: 22 @32200 has 2 MA's), (29, 32122), (32, 32089), (45, 31999), (48, 31987),

Gene: Emerson_41 Start: 32112, Stop: 31810, Start Num: 21
Candidate Starts for Emerson_41:
(Start: 21 @32112 has 142 MA's), (37, 31953), (45, 31902), (47, 31896), (48, 31890), (49, 31881),

Gene: ForeverHowLong_58 Start: 40973, Stop: 41308, Start Num: 21
Candidate Starts for ForeverHowLong_58:
(Start: 21 @40973 has 142 MA's), (Start: 23 @40985 has 22 MA's), (25, 41003), (26, 41018), (36, 41147), (39, 41162), (51, 41246), (52, 41249), (54, 41303),

Gene: Ganymede_41 Start: 32423, Stop: 32121, Start Num: 21
Candidate Starts for Ganymede_41:
(Start: 21 @32423 has 142 MA's), (37, 32264), (42, 32228), (45, 32213), (49, 32192),

Gene: Geraldini_42 Start: 33169, Stop: 32864, Start Num: 21
Candidate Starts for Geraldini_42:
(Start: 21 @33169 has 142 MA's), (37, 33007), (42, 32971), (45, 32956), (49, 32935),

Gene: Gideon_60 Start: 40427, Stop: 40762, Start Num: 21
Candidate Starts for Gideon_60:
(Start: 21 @40427 has 142 MA's), (Start: 23 @40439 has 22 MA's), (25, 40457), (26, 40472), (36, 40601), (39, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: GoldenAsh_58 Start: 39965, Stop: 40300, Start Num: 21
Candidate Starts for GoldenAsh_58:
(Start: 21 @39965 has 142 MA's), (Start: 23 @39977 has 22 MA's), (25, 39995), (26, 40010), (36, 40139), (39, 40154), (51, 40238), (52, 40241), (54, 40295),

Gene: Gomashi_59 Start: 40439, Stop: 40762, Start Num: 23
Candidate Starts for Gomashi_59:
(5, 40181), (Start: 21 @40427 has 142 MA's), (Start: 23 @40439 has 22 MA's), (25, 40457), (26, 40472), (36, 40601), (39, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Grizzly_59 Start: 40279, Stop: 40611, Start Num: 21
Candidate Starts for Grizzly_59:
(Start: 21 @40279 has 142 MA's), (39, 40465), (51, 40549), (54, 40606),

Gene: Guanica15_43 Start: 32157, Stop: 31864, Start Num: 22
Candidate Starts for Guanica15_43:
(4, 32421), (7, 32400), (12, 32322), (14, 32283), (Start: 21 @32166 has 142 MA's), (Start: 22 @32157 has 2 MA's), (29, 32079), (32, 32046), (45, 31956), (48, 31944),

Gene: Halo_61 Start: 40985, Stop: 41308, Start Num: 23
Candidate Starts for Halo_61:
(Start: 21 @40973 has 142 MA's), (Start: 23 @40985 has 22 MA's), (25, 41003), (26, 41018), (36, 41147), (39, 41162), (51, 41246), (52, 41249), (54, 41303),

Gene: HedwigODU_40 Start: 32121, Stop: 31819, Start Num: 21
Candidate Starts for HedwigODU_40:
(Start: 21 @32121 has 142 MA's), (37, 31962), (45, 31911), (47, 31905), (48, 31899), (49, 31890),

Gene: Homura_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Homura_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: Hope_60 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for Hope_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Hotshotbaby7_60 Start: 40439, Stop: 40762, Start Num: 23
Candidate Starts for Hotshotbaby7_60:
(Start: 21 @40427 has 142 MA's), (Start: 23 @40439 has 22 MA's), (25, 40457), (26, 40472), (36, 40601), (39, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: Hyperbowlee_40 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for Hyperbowlee_40:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: Illumine_43 Start: 32905, Stop: 32603, Start Num: 21
Candidate Starts for Illumine_43:
(Start: 21 @32905 has 142 MA's), (Start: 24 @32881 has 4 MA's), (33, 32782), (45, 32695), (48, 32683),

Gene: Inky_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Inky_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: JAWS_40 Start: 32111, Stop: 31806, Start Num: 21
Candidate Starts for JAWS_40:
(Start: 21 @32111 has 142 MA's), (Start: 24 @32087 has 4 MA's), (33, 31985), (48, 31886), (49, 31877),

Gene: Jane_61 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for Jane_61:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Jarvi_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Jarvi_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: Jayhawk_41 Start: 32119, Stop: 31817, Start Num: 21
Candidate Starts for Jayhawk_41:
(Start: 21 @32119 has 142 MA's), (37, 31960), (45, 31909), (47, 31903), (48, 31897), (49, 31888),

Gene: Jeckyll_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Jeckyll_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: Jeilious_60 Start: 40424, Stop: 40759, Start Num: 21
Candidate Starts for Jeilious_60:
(Start: 21 @40424 has 142 MA's), (Start: 23 @40436 has 22 MA's), (25, 40454), (26, 40469), (36, 40598), (39, 40613), (51, 40697), (52, 40700), (54, 40754),

Gene: Jolene_60 Start: 40829, Stop: 41164, Start Num: 21
Candidate Starts for Jolene_60:
(Start: 21 @40829 has 142 MA's), (Start: 23 @40841 has 22 MA's), (25, 40859), (26, 40874), (36, 41003), (39, 41018), (51, 41102), (52, 41105), (54, 41159),

Gene: Jonghyun_58 Start: 40428, Stop: 40763, Start Num: 21
Candidate Starts for Jonghyun_58:
(Start: 21 @40428 has 142 MA's), (Start: 23 @40440 has 22 MA's), (25, 40458), (26, 40473), (36, 40602), (39, 40617), (51, 40701), (52, 40704), (54, 40758),

Gene: JorRay_61 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for JorRay_61:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Joy99_40 Start: 32166, Stop: 31864, Start Num: 21
Candidate Starts for Joy99_40:
(Start: 21 @32166 has 142 MA's), (37, 32007), (45, 31956), (47, 31950), (48, 31944), (49, 31935),

Gene: Kareem_61 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for Kareem_61:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Kasen3_61 Start: 40426, Stop: 40749, Start Num: 23
Candidate Starts for Kasen3_61:
(Start: 21 @40414 has 142 MA's), (Start: 23 @40426 has 22 MA's), (25, 40444), (26, 40459), (36, 40588), (39, 40603), (51, 40687), (52, 40690), (54, 40744),

Gene: Keshu_43 Start: 32282, Stop: 31980, Start Num: 21
Candidate Starts for Keshu_43:
(Start: 21 @32282 has 142 MA's), (30, 32186), (37, 32123), (39, 32111), (53, 32021),

Gene: LastHope_41 Start: 31193, Stop: 30891, Start Num: 21
Candidate Starts for LastHope_41:
(15, 31301), (Start: 21 @31193 has 142 MA's),

Gene: LaterM_41 Start: 33018, Stop: 32716, Start Num: 21
Candidate Starts for LaterM_41:
(Start: 21 @33018 has 142 MA's), (Start: 24 @32994 has 4 MA's), (37, 32859), (42, 32823), (49, 32787),

Gene: Lea83_42 Start: 32247, Stop: 31945, Start Num: 21
Candidate Starts for Lea83_42:
(Start: 21 @32247 has 142 MA's), (41, 32058),

Gene: Liefie_57 Start: 40076, Stop: 40399, Start Num: 23

Candidate Starts for Liefie_57:
(Start: 21 @40064 has 142 MA's), (Start: 23 @40076 has 22 MA's), (25, 40094), (26, 40109), (36, 40238), (39, 40253), (51, 40337), (52, 40340), (54, 40394),

Gene: LindNT_40 Start: 32283, Stop: 32005, Start Num: 24
Candidate Starts for LindNT_40:
(Start: 21 @32307 has 142 MA's), (Start: 24 @32283 has 4 MA's), (33, 32184), (45, 32097), (48, 32085),

Gene: Llorens_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Llorens_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: Lokum_41 Start: 32238, Stop: 31936, Start Num: 21
Candidate Starts for Lokum_41:
(Start: 21 @32238 has 142 MA's), (37, 32079), (45, 32028), (47, 32022), (48, 32016), (49, 32007),

Gene: LouisV14_62 Start: 42669, Stop: 43004, Start Num: 21
Candidate Starts for LouisV14_62:
(Start: 21 @42669 has 142 MA's), (Start: 23 @42681 has 22 MA's), (25, 42699), (26, 42714), (36, 42843), (39, 42858), (51, 42942), (52, 42945), (54, 42999),

Gene: Lunahalos_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Lunahalos_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: MZKinsey_61 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for MZKinsey_61:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: MacnCheese_43 Start: 33155, Stop: 32856, Start Num: 21
Candidate Starts for MacnCheese_43:
(Start: 21 @33155 has 142 MA's), (37, 32999), (38, 32993), (39, 32987), (48, 32936), (49, 32927),

Gene: Maliketh_60 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for Maliketh_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Marmie_60 Start: 40426, Stop: 40761, Start Num: 21
Candidate Starts for Marmie_60:
(Start: 21 @40426 has 142 MA's), (Start: 23 @40438 has 22 MA's), (25, 40456), (26, 40471), (36, 40600), (39, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: McMater_42 Start: 32677, Stop: 32372, Start Num: 21
Candidate Starts for McMater_42:
(Start: 13 @32809 has 2 MA's), (16, 32770), (19, 32716), (Start: 21 @32677 has 142 MA's), (32, 32554), (35, 32533), (48, 32452),

Gene: MeaningOfLife_41 Start: 33052, Stop: 32747, Start Num: 21
Candidate Starts for MeaningOfLife_41:

(14, 33166), (Start: 21 @33052 has 142 MA's), (Start: 24 @33028 has 4 MA's), (33, 32926), (48, 32827), (49, 32818),

Gene: Megsy_41 Start: 32366, Stop: 32064, Start Num: 21
Candidate Starts for Megsy_41:
(Start: 21 @32366 has 142 MA's), (Start: 24 @32342 has 4 MA's), (37, 32207), (42, 32171), (49, 32135),

Gene: Mowgli_60 Start: 40426, Stop: 40761, Start Num: 21
Candidate Starts for Mowgli_60:
(Start: 21 @40426 has 142 MA's), (Start: 23 @40438 has 22 MA's), (25, 40456), (26, 40471), (36, 40600), (39, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: Murucutumbu_41 Start: 33111, Stop: 32809, Start Num: 21
Candidate Starts for Murucutumbu_41:
(Start: 21 @33111 has 142 MA's), (Start: 24 @33087 has 4 MA's), (33, 32988), (45, 32901), (48, 32889),

Gene: Mynx_41 Start: 32441, Stop: 32136, Start Num: 21
Candidate Starts for Mynx_41:
(Start: 21 @32441 has 142 MA's), (33, 32315), (48, 32216), (49, 32207),

Gene: Neoh_60 Start: 40418, Stop: 40753, Start Num: 21
Candidate Starts for Neoh_60:
(Start: 21 @40418 has 142 MA's), (Start: 23 @40430 has 22 MA's), (25, 40448), (26, 40463), (36, 40592), (39, 40607), (51, 40691), (52, 40694), (54, 40748),

Gene: Niklas_42 Start: 32703, Stop: 32389, Start Num: 21
Candidate Starts for Niklas_42:
(1, 33018), (2, 33006), (Start: 13 @32835 has 2 MA's), (16, 32796), (19, 32742), (Start: 21 @32703 has 142 MA's), (37, 32535), (39, 32523), (40, 32511), (42, 32499), (47, 32478), (50, 32454), (51, 32436),

Gene: OctaviousRex_59 Start: 40404, Stop: 40739, Start Num: 21
Candidate Starts for OctaviousRex_59:
(Start: 21 @40404 has 142 MA's), (Start: 23 @40416 has 22 MA's), (25, 40434), (26, 40449), (36, 40578), (39, 40593), (51, 40677), (52, 40680), (54, 40734),

Gene: Olga_61 Start: 40438, Stop: 40761, Start Num: 23
Candidate Starts for Olga_61:
(5, 40180), (Start: 21 @40426 has 142 MA's), (Start: 23 @40438 has 22 MA's), (25, 40456), (26, 40471), (36, 40600), (39, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: Padfoot_40 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for Padfoot_40:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: Padpat_41 Start: 32112, Stop: 31810, Start Num: 21
Candidate Starts for Padpat_41:
(Start: 21 @32112 has 142 MA's), (37, 31953), (45, 31902), (47, 31896), (48, 31890), (49, 31881),

Gene: Paito_61 Start: 40051, Stop: 40386, Start Num: 21
Candidate Starts for Paito_61:

(Start: 21 @40051 has 142 MA's), (25, 40081), (26, 40096), (39, 40240), (51, 40324), (52, 40327), (54, 40381),

Gene: Peanam_42 Start: 32677, Stop: 32372, Start Num: 21
Candidate Starts for Peanam_42:
(1, 32992), (2, 32980), (8, 32908), (Start: 13 @32809 has 2 MA's), (16, 32770), (19, 32716), (Start: 21 @32677 has 142 MA's), (32, 32554), (35, 32533), (48, 32452),

Gene: Peeb_59 Start: 40403, Stop: 40735, Start Num: 21
Candidate Starts for Peeb_59:
(Start: 21 @40403 has 142 MA's), (39, 40589), (51, 40673), (54, 40730),

Gene: Peel_40 Start: 32239, Stop: 31937, Start Num: 21
Candidate Starts for Peel_40:
(Start: 21 @32239 has 142 MA's), (37, 32080), (45, 32029), (47, 32023), (48, 32017), (49, 32008),

Gene: Periodt_60 Start: 40818, Stop: 41153, Start Num: 21
Candidate Starts for Periodt_60:
(Start: 21 @40818 has 142 MA's), (Start: 23 @40830 has 22 MA's), (25, 40848), (26, 40863), (36, 40992), (39, 41007), (51, 41091), (52, 41094), (54, 41148),

Gene: Phish_59 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for Phish_59:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Phloodle_61 Start: 40453, Stop: 40776, Start Num: 23
Candidate Starts for Phloodle_61:
(Start: 21 @40441 has 142 MA's), (Start: 23 @40453 has 22 MA's), (25, 40471), (26, 40486), (36, 40615), (39, 40630), (51, 40714), (52, 40717), (54, 40771),

Gene: Phreak_60 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for Phreak_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Piatt_40 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for Piatt_40:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: PinkYoshi_60 Start: 40417, Stop: 40752, Start Num: 21
Candidate Starts for PinkYoshi_60:
(5, 40171), (Start: 21 @40417 has 142 MA's), (Start: 23 @40429 has 22 MA's), (25, 40447), (26, 40462), (36, 40591), (39, 40606), (51, 40690), (52, 40693), (54, 40747),

Gene: Pisa1_40 Start: 33411, Stop: 33109, Start Num: 21
Candidate Starts for Pisa1_40:
(14, 33525), (Start: 21 @33411 has 142 MA's), (Start: 24 @33387 has 4 MA's), (37, 33252), (45, 33201), (47, 33195), (48, 33189), (49, 33180),

Gene: Pixie_41 Start: 31717, Stop: 31415, Start Num: 21
Candidate Starts for Pixie_41:
(Start: 21 @31717 has 142 MA's), (48, 31495), (53, 31456),

Gene: Plagueis_60 Start: 40246, Stop: 40581, Start Num: 21
Candidate Starts for Plagueis_60:
(Start: 21 @40246 has 142 MA's), (Start: 23 @40258 has 22 MA's), (25, 40276), (26, 40291), (36, 40420), (39, 40435), (51, 40519), (52, 40522), (54, 40576),

Gene: Pokerus_39 Start: 32158, Stop: 31853, Start Num: 21
Candidate Starts for Pokerus_39:
(Start: 21 @32158 has 142 MA's), (Start: 24 @32134 has 4 MA's), (33, 32032), (48, 31933), (49, 31924),

Gene: Primanti_58 Start: 40437, Stop: 40760, Start Num: 23
Candidate Starts for Primanti_58:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Prithvi_40 Start: 32307, Stop: 32005, Start Num: 21
Candidate Starts for Prithvi_40:
(Start: 21 @32307 has 142 MA's), (Start: 24 @32283 has 4 MA's), (33, 32184), (45, 32097), (48, 32085),

Gene: QuincyRose_39 Start: 32423, Stop: 32121, Start Num: 21
Candidate Starts for QuincyRose_39:
(Start: 21 @32423 has 142 MA's), (37, 32264), (42, 32228), (45, 32213), (49, 32192),

Gene: Rabbs_61 Start: 40507, Stop: 40842, Start Num: 21
Candidate Starts for Rabbs_61:
(Start: 21 @40507 has 142 MA's), (Start: 23 @40519 has 22 MA's), (25, 40537), (26, 40552), (39, 40696), (51, 40780), (52, 40783), (54, 40837),

Gene: Ramen_40 Start: 32123, Stop: 31818, Start Num: 21
Candidate Starts for Ramen_40:
(Start: 21 @32123 has 142 MA's), (Start: 24 @32099 has 4 MA's), (33, 31997), (48, 31898), (49, 31889),

Gene: Rapunzel97_40 Start: 32119, Stop: 31817, Start Num: 21
Candidate Starts for Rapunzel97_40:
(Start: 21 @32119 has 142 MA's), (37, 31960), (45, 31909), (47, 31903), (48, 31897), (49, 31888),

Gene: Rattrick_60 Start: 40830, Stop: 41153, Start Num: 23
Candidate Starts for Rattrick_60:
(Start: 21 @40818 has 142 MA's), (Start: 23 @40830 has 22 MA's), (25, 40848), (26, 40863), (36, 40992), (39, 41007), (51, 41091), (52, 41094), (54, 41148),

Gene: Remy19_60 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for Remy19_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Renaissance_59 Start: 40403, Stop: 40738, Start Num: 21
Candidate Starts for Renaissance_59:
(Start: 21 @40403 has 142 MA's), (Start: 23 @40415 has 22 MA's), (25, 40433), (26, 40448), (36, 40577), (39, 40592), (51, 40676), (52, 40679), (54, 40733),

Gene: Richarlison_61 Start: 40410, Stop: 40745, Start Num: 21
Candidate Starts for Richarlison_61:
(3, 40143), (5, 40164), (10, 40218), (Start: 21 @40410 has 142 MA's), (Start: 23 @40422 has 22 MA's), (25, 40440), (26, 40455), (36, 40584), (39, 40599), (51, 40683), (52, 40686), (54, 40740),

Gene: Richo_42 Start: 32677, Stop: 32372, Start Num: 21
Candidate Starts for Richo_42:
(Start: 13 @32809 has 2 MA's), (16, 32770), (19, 32716), (Start: 21 @32677 has 142 MA's), (32, 32554), (35, 32533), (48, 32452),

Gene: Rosmarinus_40 Start: 32225, Stop: 31923, Start Num: 21
Candidate Starts for Rosmarinus_40:
(Start: 21 @32225 has 142 MA's), (37, 32066), (45, 32015), (47, 32009), (48, 32003), (49, 31994),

Gene: Ruriko_60 Start: 40427, Stop: 40762, Start Num: 21
Candidate Starts for Ruriko_60:
(Start: 21 @40427 has 142 MA's), (Start: 23 @40439 has 22 MA's), (25, 40457), (26, 40472), (36, 40601), (39, 40616), (51, 40700), (52, 40703), (54, 40757),

Gene: SamuelLPlaqson_41 Start: 33019, Stop: 32717, Start Num: 21
Candidate Starts for SamuelLPlaqson_41:
(4, 33271), (14, 33133), (Start: 21 @33019 has 142 MA's), (Start: 24 @32995 has 4 MA's), (33, 32896), (45, 32809), (48, 32797),

Gene: Schiebel_58 Start: 39977, Stop: 40300, Start Num: 23
Candidate Starts for Schiebel_58:
(Start: 21 @39965 has 142 MA's), (Start: 23 @39977 has 22 MA's), (25, 39995), (26, 40010), (36, 40139), (39, 40154), (51, 40238), (52, 40241), (54, 40295),

Gene: ShaboiShabazz_59 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for ShaboiShabazz_59:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Shaobing_42 Start: 32832, Stop: 32386, Start Num: 13
Candidate Starts for Shaobing_42:
(Start: 13 @32832 has 2 MA's), (16, 32793), (19, 32739), (Start: 21 @32700 has 142 MA's), (37, 32532), (39, 32520), (40, 32508), (42, 32496), (47, 32475), (50, 32451), (51, 32433),

Gene: ShedlockHolmes_42 Start: 32251, Stop: 31949, Start Num: 21
Candidate Starts for ShedlockHolmes_42:
(Start: 21 @32251 has 142 MA's), (41, 32062),

Gene: ShiaSurprise_41 Start: 32434, Stop: 32132, Start Num: 21
Candidate Starts for ShiaSurprise_41:
(Start: 21 @32434 has 142 MA's), (37, 32275), (42, 32239), (45, 32224), (49, 32203),

Gene: Sizemore_61 Start: 40414, Stop: 40749, Start Num: 21
Candidate Starts for Sizemore_61:
(Start: 21 @40414 has 142 MA's), (Start: 23 @40426 has 22 MA's), (25, 40444), (26, 40459), (36, 40588), (39, 40603), (51, 40687), (52, 40690), (54, 40744),

Gene: Slimphazie_40 Start: 32119, Stop: 31817, Start Num: 21
Candidate Starts for Slimphazie_40:
(Start: 21 @32119 has 142 MA's), (37, 31960), (45, 31909), (47, 31903), (48, 31897), (49, 31888),

Gene: Sneeze_60 Start: 40506, Stop: 40841, Start Num: 21
Candidate Starts for Sneeze_60:
(Start: 21 @40506 has 142 MA's), (Start: 23 @40518 has 22 MA's), (25, 40536), (26, 40551), (39, 40695), (51, 40779), (52, 40782), (54, 40836),

Gene: Spock_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Spock_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: Sulley_40 Start: 32367, Stop: 32065, Start Num: 21
Candidate Starts for Sulley_40:
(Start: 21 @32367 has 142 MA's), (37, 32208), (42, 32172), (45, 32157), (49, 32136),

Gene: Sweets_60 Start: 40432, Stop: 40755, Start Num: 23
Candidate Starts for Sweets_60:
(Start: 21 @40420 has 142 MA's), (Start: 23 @40432 has 22 MA's), (25, 40450), (26, 40465), (36, 40594), (39, 40609), (51, 40693), (52, 40696), (54, 40750),

Gene: TBond007_41 Start: 31716, Stop: 31414, Start Num: 21
Candidate Starts for TBond007_41:
(Start: 21 @31716 has 142 MA's), (48, 31494), (53, 31455),

Gene: TClif_44 Start: 33159, Stop: 32848, Start Num: 21
Candidate Starts for TClif_44:
(Start: 21 @33159 has 142 MA's), (34, 33027), (37, 32994), (39, 32982), (42, 32958), (47, 32937),

Gene: Tachez_40 Start: 32081, Stop: 31779, Start Num: 21
Candidate Starts for Tachez_40:
(Start: 21 @32081 has 142 MA's), (37, 31922), (45, 31871), (47, 31865), (48, 31859), (49, 31850),

Gene: Taheera_56 Start: 39404, Stop: 39739, Start Num: 21
Candidate Starts for Taheera_56:
(Start: 21 @39404 has 142 MA's), (Start: 23 @39416 has 22 MA's), (25, 39434), (26, 39449), (39, 39593), (51, 39677), (52, 39680), (54, 39734),

Gene: TaiwanKao_42 Start: 32363, Stop: 32061, Start Num: 21
Candidate Starts for TaiwanKao_42:
(Start: 21 @32363 has 142 MA's), (Start: 24 @32339 has 4 MA's), (37, 32204), (42, 32168), (49, 32132),

Gene: Terralys_57 Start: 40371, Stop: 40694, Start Num: 23
Candidate Starts for Terralys_57:
(Start: 21 @40359 has 142 MA's), (Start: 23 @40371 has 22 MA's), (25, 40389), (26, 40404), (36, 40533), (39, 40548), (51, 40632), (52, 40635), (54, 40689),

Gene: Terror_56 Start: 39404, Stop: 39739, Start Num: 21
Candidate Starts for Terror_56:
(Start: 21 @39404 has 142 MA's), (Start: 23 @39416 has 22 MA's), (25, 39434), (26, 39449), (39, 39593), (51, 39677), (52, 39680), (54, 39734),

Gene: TinaBug_61 Start: 40973, Stop: 41308, Start Num: 21
Candidate Starts for TinaBug_61:
(Start: 21 @40973 has 142 MA's), (Start: 23 @40985 has 22 MA's), (25, 41003), (26, 41018), (36, 41147), (39, 41162), (51, 41246), (52, 41249), (54, 41303),

Gene: TingHuaYa_40 Start: 30975, Stop: 30673, Start Num: 21
Candidate Starts for TingHuaYa_40:
(15, 31083), (Start: 21 @30975 has 142 MA's), (45, 30765), (48, 30753),

Gene: TiniBug_41 Start: 33015, Stop: 32713, Start Num: 21
Candidate Starts for TiniBug_41:
(4, 33267), (14, 33129), (Start: 21 @33015 has 142 MA's), (Start: 24 @32991 has 4 MA's), (33, 32892), (45, 32805), (48, 32793),

Gene: Tiri_41 Start: 32417, Stop: 32112, Start Num: 21
Candidate Starts for Tiri_41:
(Start: 21 @32417 has 142 MA's), (Start: 24 @32393 has 4 MA's), (33, 32291), (48, 32192), (49, 32183),

Gene: TomBrady_60 Start: 40426, Stop: 40761, Start Num: 21
Candidate Starts for TomBrady_60:
(Start: 21 @40426 has 142 MA's), (Start: 23 @40438 has 22 MA's), (25, 40456), (26, 40471), (36, 40600), (39, 40615), (51, 40699), (52, 40702), (54, 40756),

Gene: Topper_40 Start: 32237, Stop: 31935, Start Num: 21
Candidate Starts for Topper_40:
(Start: 21 @32237 has 142 MA's), (37, 32078), (45, 32027), (47, 32021), (48, 32015), (49, 32006),

Gene: TreyKay_40 Start: 32307, Stop: 32005, Start Num: 21
Candidate Starts for TreyKay_40:
(Start: 21 @32307 has 142 MA's), (Start: 24 @32283 has 4 MA's), (33, 32184), (45, 32097), (48, 32085),

Gene: TruffulaTree_40 Start: 32115, Stop: 31813, Start Num: 21
Candidate Starts for TruffulaTree_40:
(Start: 21 @32115 has 142 MA's), (37, 31956), (45, 31905), (47, 31899), (48, 31893), (49, 31884),

Gene: Twitch_40 Start: 32239, Stop: 31937, Start Num: 21
Candidate Starts for Twitch_40:
(Start: 21 @32239 has 142 MA's), (37, 32080), (45, 32029), (47, 32023), (48, 32017), (49, 32008),

Gene: Urkel_41 Start: 33019, Stop: 32717, Start Num: 21
Candidate Starts for Urkel_41:
(4, 33271), (14, 33133), (Start: 21 @33019 has 142 MA's), (Start: 24 @32995 has 4 MA's), (33, 32896), (45, 32809), (48, 32797),

Gene: Validus_44 Start: 32894, Stop: 32448, Start Num: 13
Candidate Starts for Validus_44:
(1, 33077), (2, 33065), (9, 32969), (Start: 13 @32894 has 2 MA's), (16, 32855), (18, 32834), (Start: 21 @32762 has 142 MA's), (37, 32594), (39, 32582), (40, 32570), (42, 32558), (47, 32537), (51, 32495),

Gene: Veliki_40 Start: 32155, Stop: 31853, Start Num: 21

Candidate Starts for Veliki_40:
(Start: 21 @32155 has 142 MA's), (37, 31996), (45, 31945), (47, 31939), (48, 31933), (49, 31924),

Gene: Wendigo_60 Start: 40416, Stop: 40739, Start Num: 23
Candidate Starts for Wendigo_60:
(Start: 21 @40404 has 142 MA's), (Start: 23 @40416 has 22 MA's), (25, 40434), (26, 40449), (36, 40578), (39, 40593), (51, 40677), (52, 40680), (54, 40734),

Gene: YoureAdopted_39 Start: 32324, Stop: 32019, Start Num: 21
Candidate Starts for YoureAdopted_39:
(Start: 21 @32324 has 142 MA's), (37, 32162), (42, 32126), (45, 32111), (49, 32090),

Gene: Yunkel11_43 Start: 32165, Stop: 31863, Start Num: 21
Candidate Starts for Yunkel11_43:
(4, 32420), (7, 32399), (12, 32321), (14, 32282), (Start: 21 @32165 has 142 MA's), (Start: 22 @32156 has 2 MA's), (29, 32078), (32, 32045), (45, 31955), (48, 31943),

Gene: Zavala_41 Start: 32401, Stop: 32096, Start Num: 21
Candidate Starts for Zavala_41:
(Start: 21 @32401 has 142 MA's), (33, 32275), (48, 32176), (49, 32167),

Gene: ZoMa_59 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for ZoMa_59:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),

Gene: Zombie_60 Start: 40425, Stop: 40760, Start Num: 21
Candidate Starts for Zombie_60:
(Start: 21 @40425 has 142 MA's), (Start: 23 @40437 has 22 MA's), (25, 40455), (26, 40470), (36, 40599), (39, 40614), (51, 40698), (52, 40701), (54, 40755),