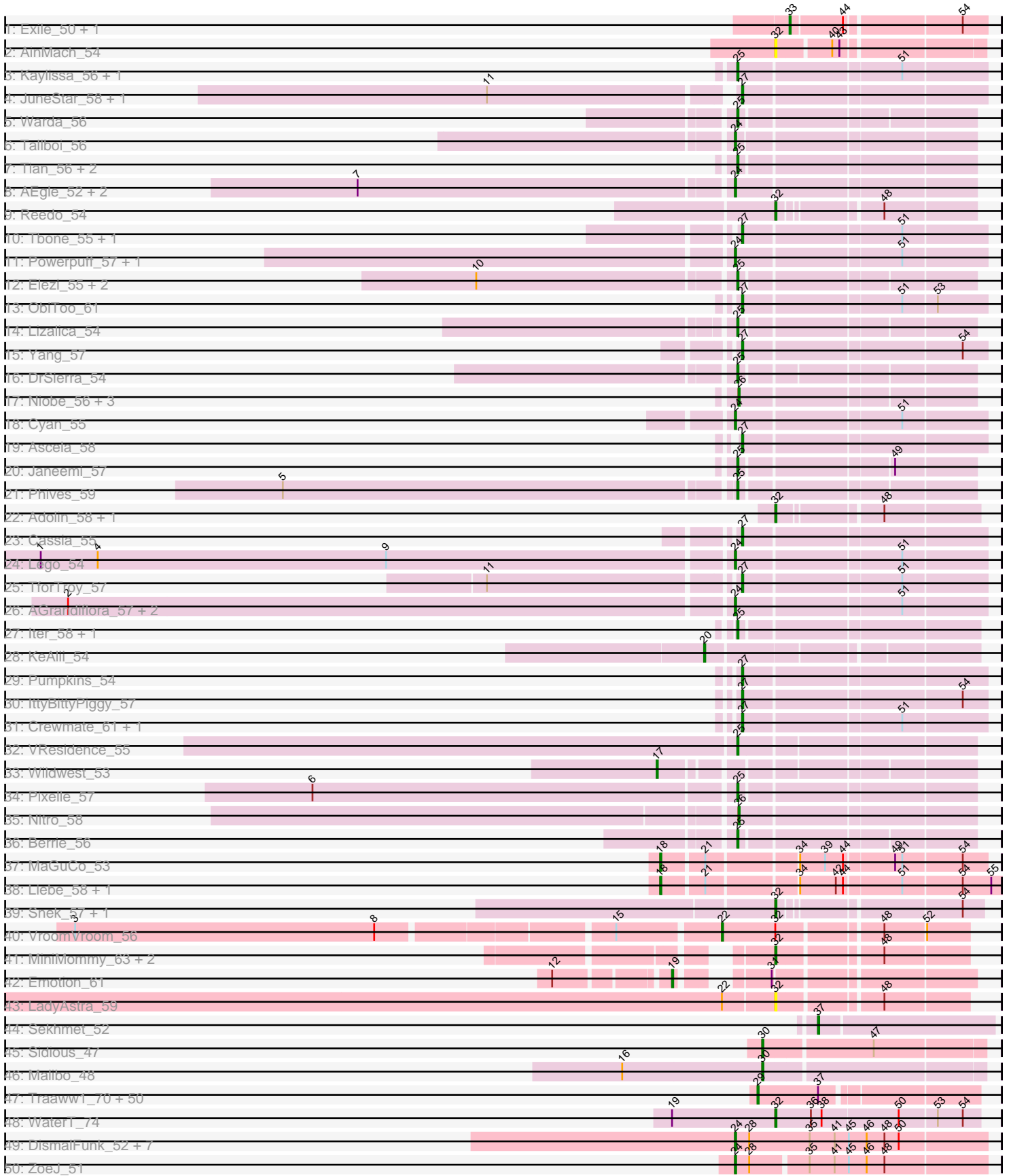
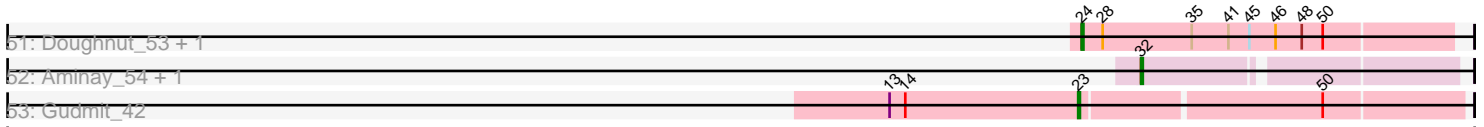


Pham 215943





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 215943 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215943 has 135 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Exile_50, Soondubu_51
- Track 2 : AinMach_54
- Track 3 : Kaylissa_56, Tutumahutu_56
- Track 4 : JuneStar_58, Shaffner_54
- Track 5 : Warda_56
- Track 6 : Tallboi_56
- Track 7 : Tian_56, Community_58, Amyev_57
- Track 8 : AEgle_52, Turab_53, Adumb2043_53
- Track 9 : Reedo_54
- Track 10 : Tbone_55, Mudpuppy_52
- Track 11 : Powerpuff_57, YesChef_55
- Track 12 : Elezi_55, Subaru_56, Jstan_57
- Track 13 : ObiToo_61
- Track 14 : Lizalica_54
- Track 15 : Yang_57
- Track 16 : DrSierra_54
- Track 17 : Niobe_56, Asa16_56, Eraser_56, London_56
- Track 18 : Cyan_55
- Track 19 : Ascela_58
- Track 20 : Janeemi_57
- Track 21 : Phives_59
- Track 22 : Adolin_58, DrManhattan_58
- Track 23 : Cassia_55
- Track 24 : Lego_54
- Track 25 : TforTroy_57
- Track 26 : AGrandiflora_57, Joemato_55, Simpson_57
- Track 27 : Iter_58, Tuck_58
- Track 28 : KeAlii_54
- Track 29 : Pumpkins_54
- Track 30 : IttyBittyPiggy_57
- Track 31 : Crewmate_61, JohnDoe_55
- Track 32 : VResidence_55
- Track 33 : Wildwest_53
- Track 34 : Pixelle_57
- Track 35 : Nitro_58
- Track 36 : Berrie_56
- Track 37 : MaGuCo_53

- Track 38 : Liebe_58, Maureen_58
- Track 39 : Snek_57, Tweety19_58
- Track 40 : VroomVroom_56
- Track 41 : MiniMommy_63, ShakeltOph_62, JasmineDragon_60
- Track 42 : Emotion_61
- Track 43 : LadyAstra_59
- Track 44 : Sekhmet_52
- Track 45 : Sidious_47
- Track 46 : Malibo_48
- Track 47 : Traaww1_70, Barbarian_73, Tomaszewski_69, Mosby_70, Lilac_76, Filch_75, Miniwave_69, Phaux_76, YassJohnny_71, Pumpkin_77, Czyszczonek1_75, Adnama_78, Sassay_69, RiverMonster_74, BigBubba_74, Lilizi_75, Thresher_76, Hopey_74, Youngblood_77, Elph10_74, MPhalcon_75, Terminus_77, Murphy_74, Pharsalus_71, Bench_77, Gator_72, Stark_75, PhatBacter_78, Phrux_71, BugsBunny_74, Maxxinista_76, Misfit_75, MISSy_75, Moldemort_77, Tarkin_73, Asriel_73, Phaja_72, Palpatine_76, Bruin_71, Wiggins_76, Xandras_73, Policronamos_77, HanKaySha_74, Becksu_73, Rakim_75, DrDrey_74, Paperbeatsrock_73, Contagion_70, Thimble_76, StellaBean_72, Willez_69
- Track 48 : WaterT_74
- Track 49 : DismalFunk_52, Findley_52, DismalStressor_52, Milly_52, Strobilo_52, TM4_47, BoostSeason_52, Marcoliusprime_52
- Track 50 : ZoeJ_51
- Track 51 : Doughnut_53, Mufasa_52
- Track 52 : Aminay_54, MissSwiss_57
- Track 53 : Gudmit_42

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

The start number called the most often in the published annotations is 29, it was called in 48 of the 117 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adnama_78, Asriel_73, Barbarian_73, Becksu_73, Bench_77, BigBubba_74, Bruin_71, BugsBunny_74, Contagion_70, Czyszczonek1_75, DrDrey_74, Elph10_74, Filch_75, Gator_72, HanKaySha_74, Hopey_74, Lilac_76, Lilizi_75, MISSy_75, MPhalcon_75, Maxxinista_76, Miniwave_69, Misfit_75, Moldemort_77, Mosby_70, Murphy_74, Palpatine_76, Paperbeatsrock_73, Phaja_72, Pharsalus_71, PhatBacter_78, Phaux_76, Phrux_71, Policronamos_77, Pumpkin_77, Rakim_75, RiverMonster_74, Sassay_69, Stark_75, StellaBean_72, Tarkin_73, Terminus_77, Thimble_76, Thresher_76, Tomaszewski_69, Traaww1_70, Wiggins_76, Willez_69, Xandras_73, YassJohnny_71, Youngblood_77,

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

-

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

- AEgle_52, AGrandiflora_57, Adolin_58, Adumb2043_53, AinMach_54, Aminay_54, Amyev_57, Asa16_56, Ascela_58, Berrie_56, BoostSeason_52, Cassia_55, Community_58, Crewmate_61, Cyan_55, DismalFunk_52, DismalStressor_52, Doughnut_53, DrManhattan_58, DrSierra_54, Elezi_55, Emotion_61, Eraser_56,

Exile_50, Findley_52, Gudmit_42, Iter_58, IttyBittyPiggy_57, Janeemi_57, JasmineDragon_60, Joemato_55, JohnDoe_55, Jstan_57, JuneStar_58, Kaylissa_56, KeAlii_54, LadyAstra_59, Lego_54, Liebe_58, Lizalica_54, London_56, MaGuCo_53, Malibo_48, Marcoliusprime_52, Maureen_58, Milly_52, MiniMommy_63, MissSwiss_57, Mudpuppy_52, Mufasa_52, Niobe_56, Nitro_58, ObiToo_61, Phives_59, Pixelle_57, Powerpuff_57, Pumpkins_54, Reedo_54, Sekhmet_52, Shaffner_54, ShakeltOph_62, Sidious_47, Simpson_57, Snek_57, Soondubu_51, Strobilo_52, Subaru_56, TM4_47, Tallboi_56, Tbone_55, TforTroy_57, Tian_56, Tuck_58, Turab_53, Tutumahutu_56, Tweety19_58, VResidence_55, VroomVroom_56, Warda_56, WaterT_74, Wildwest_53, Yang_57, YesChef_55, ZoeJ_51,

Summary by start number:

Start 17:

- Found in 1 of 135 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wildwest_53 (AZ1),

Start 18:

- Found in 3 of 135 (2.2%) of genes in pham
- Manual Annotations of this start: 3 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Liebe_58 (AZ2), MaGuCo_53 (AZ2), Maureen_58 (AZ2),

Start 19:

- Found in 2 of 135 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Emotion_61 (AZ4),

Start 20:

- Found in 1 of 135 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KeAlii_54 (AZ1),

Start 22:

- Found in 2 of 135 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 50.0% of time when present
- Phage (with cluster) where this start called: VroomVroom_56 (AZ4),

Start 23:

- Found in 1 of 135 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gudmit_42 (singleton),

Start 24:

- Found in 22 of 135 (16.3%) of genes in pham

- Manual Annotations of this start: 17 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_52 (AZ1), AGrandiflora_57 (AZ1), Adumb2043_53 (AZ1), BoostSeason_52 (K2), Cyan_55 (AZ1), DismalFunk_52 (K2), DismalStressor_52 (K2), Doughnut_53 (K2), Findley_52 (K2), Joemato_55 (AZ1), Lego_54 (AZ1), Marcoliusprime_52 (K2), Milly_52 (K2), Mufasa_52 (K2), Powerpuff_57 (AZ1), Simpson_57 (AZ1), Strobilo_52 (K2), TM4_47 (K2), Tallboi_56 (AZ1), Turab_53 (AZ1), YesChef_55 (AZ1), ZoeJ_51 (K2),

Start 25:

- Found in 18 of 135 (13.3%) of genes in pham
- Manual Annotations of this start: 14 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amyev_57 (AZ1), Berrie_56 (AZ1), Community_58 (AZ1), DrSierra_54 (AZ1), Elezi_55 (AZ1), Iter_58 (AZ1), Janeemi_57 (AZ1), Jstan_57 (AZ1), Kaylissa_56 (AZ1), Lizalica_54 (AZ1), Phives_59 (AZ1), Pixelle_57 (AZ1), Subaru_56 (AZ), Tian_56 (AZ1), Tuck_58 (AZ1), Tutumahutu_56 (AZ1), VResidence_55 (AZ1), Warda_56 (AZ1),

Start 26:

- Found in 5 of 135 (3.7%) of genes in pham
- Manual Annotations of this start: 5 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Asa16_56 (AZ1), Eraser_56 (AZ1), London_56 (AZ1), Niobe_56 (AZ1), Nitro_58 (AZ1),

Start 27:

- Found in 13 of 135 (9.6%) of genes in pham
- Manual Annotations of this start: 12 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ascela_58 (AZ1), Cassia_55 (AZ1), Crewmate_61 (AZ1), IttyBittyPiggy_57 (AZ1), JohnDoe_55 (AZ1), JuneStar_58 (AZ1), Mudpuppy_52 (AZ1), ObiToo_61 (AZ1), Pumpkins_54 (AZ1), Shaffner_54 (AZ1), Tbone_55 (AZ1), TforTroy_57 (AZ1), Yang_57 (AZ1),

Start 29:

- Found in 51 of 135 (37.8%) of genes in pham
- Manual Annotations of this start: 48 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adnama_78 (E), Asriel_73 (E), Barbarian_73 (E), Becksu_73 (E), Bench_77 (E), BigBubba_74 (E), Bruin_71 (E), BugsBunny_74 (E), Contagion_70 (E), Czyszczon1_75 (E), DrDrey_74 (E), Elph10_74 (E), Filch_75 (E), Gator_72 (E), HanKaySha_74 (E), Hopey_74 (E), Lilac_76 (E), Lilizi_75 (E), MISSy_75 (E), MPhalcon_75 (E), Maxxinista_76 (E), Miniwave_69 (E), Misfit_75 (E), Moldemort_77 (E), Mosby_70 (E), Murphy_74 (E), Palpatine_76 (E), Paperbeatsrock_73 (E), Phaja_72 (E), Pharsalus_71 (E), PhatBacter_78 (E), Phaux_76 (E), Phrux_71 (E), Policronamos_77 (E), Pumpkin_77 (E), Rakim_75 (E), RiverMonster_74 (E), Sassay_69 (E), Stark_75 (E), StellaBean_72 (E), Tarkin_73 (E), Terminus_77 (E), Thimble_76 (E), Thresher_76 (E), Tomaszewski_69 (E), Traaww1_70 (E), Wiggin_76 (E), Willez_69 (E), Xandras_73 (E), YassJohnny_71 (E), Youngblood_77 (E),

Start 30:

- Found in 2 of 135 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Malibo_48 (DW), Sidious_47 (CZ7),

Start 32:

- Found in 14 of 135 (10.4%) of genes in pham
- Manual Annotations of this start: 9 of 117
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Adolin_58 (AZ1), AinMach_54 (AZ), Aminay_54 (K7), DrManhattan_58 (AZ1), JasmineDragon_60 (AZ4), LadyAstra_59 (AZ4), MiniMommy_63 (AZ4), MissSwiss_57 (AZ1), Reedo_54 (AZ1), ShakeltOph_62 (AZ4), Snek_57 (AZ3), Tweety19_58 (AZ3), WaterT_74 (GB),

Start 33:

- Found in 2 of 135 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Exile_50 (AZ), Soondubu_51 (AZ),

Start 37:

- Found in 52 of 135 (38.5%) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 1.9% of time when present
- Phage (with cluster) where this start called: Sekhmet_52 (CZ4),

Summary by clusters:

There are 13 clusters represented in this pham: singleton, AZ, E, CZ7, CZ4, K2, K7, GB, DW, AZ1, AZ2, AZ3, AZ4,

Info for manual annotations of cluster AZ:

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

Info for manual annotations of cluster AZ1:

- Start number 17 was manually annotated 1 time for cluster AZ1.
- Start number 20 was manually annotated 1 time for cluster AZ1.
- Start number 24 was manually annotated 7 times for cluster AZ1.
- Start number 25 was manually annotated 14 times for cluster AZ1.
- Start number 26 was manually annotated 5 times for cluster AZ1.
- Start number 27 was manually annotated 12 times for cluster AZ1.
- Start number 32 was manually annotated 4 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 18 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 32 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 19 was manually annotated 1 time for cluster AZ4.
- Start number 22 was manually annotated 1 time for cluster AZ4.
- Start number 32 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster CZ4:

- Start number 37 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ7:

- Start number 30 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DW:

- Start number 30 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster E:

- Start number 29 was manually annotated 48 times for cluster E.

Info for manual annotations of cluster GB:

- Start number 32 was manually annotated 1 time for cluster GB.

Info for manual annotations of cluster K2:

- Start number 24 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K7:

- Start number 32 was manually annotated 1 time for cluster K7.

Gene Information:

Gene: AEgle_52 Start: 37591, Stop: 37782, Start Num: 24

Candidate Starts for AEgle_52:

(7, 37285), (Start: 24 @37591 has 17 MA's),

Gene: AGrandiflora_57 Start: 38760, Stop: 38960, Start Num: 24

Candidate Starts for AGrandiflora_57:

(2, 38211), (Start: 24 @38760 has 17 MA's), (51, 38892),

Gene: Adnama_78 Start: 48172, Stop: 48345, Start Num: 29

Candidate Starts for Adnama_78:

(Start: 29 @48172 has 48 MA's), (Start: 37 @48223 has 1 MA's),

Gene: Adolin_58 Start: 37478, Stop: 37633, Start Num: 32

Candidate Starts for Adolin_58:

(Start: 32 @37478 has 9 MA's), (48, 37556),

Gene: Adumb2043_53 Start: 37614, Stop: 37805, Start Num: 24

Candidate Starts for Adumb2043_53:

(7, 37308), (Start: 24 @37614 has 17 MA's),

Gene: AinMach_54 Start: 37308, Stop: 37466, Start Num: 32

Candidate Starts for AinMach_54:

(Start: 32 @37308 has 9 MA's), (40, 37350), (43, 37356),

Gene: Aminay_54 Start: 38354, Stop: 38521, Start Num: 32

Candidate Starts for Aminay_54:

(Start: 32 @38354 has 9 MA's),

Gene: Amyev_57 Start: 40846, Stop: 41031, Start Num: 25
Candidate Starts for Amyev_57:
(Start: 25 @40846 has 14 MA's),

Gene: Asa16_56 Start: 39543, Stop: 39728, Start Num: 26
Candidate Starts for Asa16_56:
(Start: 26 @39543 has 5 MA's),

Gene: Ascela_58 Start: 39002, Stop: 39196, Start Num: 27
Candidate Starts for Ascela_58:
(Start: 27 @39002 has 12 MA's),

Gene: Asriel_73 Start: 46509, Stop: 46682, Start Num: 29
Candidate Starts for Asriel_73:
(Start: 29 @46509 has 48 MA's), (Start: 37 @46560 has 1 MA's),

Gene: Barbarian_73 Start: 46509, Stop: 46682, Start Num: 29
Candidate Starts for Barbarian_73:
(Start: 29 @46509 has 48 MA's), (Start: 37 @46560 has 1 MA's),

Gene: Becksu_73 Start: 48345, Stop: 48524, Start Num: 29
Candidate Starts for Becksu_73:
(Start: 29 @48345 has 48 MA's), (Start: 37 @48396 has 1 MA's),

Gene: Bench_77 Start: 47813, Stop: 47992, Start Num: 29
Candidate Starts for Bench_77:
(Start: 29 @47813 has 48 MA's), (Start: 37 @47864 has 1 MA's),

Gene: Berrie_56 Start: 38817, Stop: 38999, Start Num: 25
Candidate Starts for Berrie_56:
(Start: 25 @38817 has 14 MA's),

Gene: BigBubba_74 Start: 47525, Stop: 47704, Start Num: 29
Candidate Starts for BigBubba_74:
(Start: 29 @47525 has 48 MA's), (Start: 37 @47576 has 1 MA's),

Gene: BoostSeason_52 Start: 38177, Stop: 38386, Start Num: 24
Candidate Starts for BoostSeason_52:
(Start: 24 @38177 has 17 MA's), (28, 38189), (35, 38240), (41, 38261), (45, 38273), (46, 38288), (48, 38303), (50, 38315),

Gene: Bruin_71 Start: 46689, Stop: 46868, Start Num: 29
Candidate Starts for Bruin_71:
(Start: 29 @46689 has 48 MA's), (Start: 37 @46740 has 1 MA's),

Gene: BugsBunny_74 Start: 48221, Stop: 48400, Start Num: 29
Candidate Starts for BugsBunny_74:
(Start: 29 @48221 has 48 MA's), (Start: 37 @48272 has 1 MA's),

Gene: Cassia_55 Start: 38504, Stop: 38698, Start Num: 27
Candidate Starts for Cassia_55:
(Start: 27 @38504 has 12 MA's),

Gene: Community_58 Start: 40395, Stop: 40577, Start Num: 25
Candidate Starts for Community_58:
(Start: 25 @40395 has 14 MA's),

Gene: Contagion_70 Start: 46970, Stop: 47149, Start Num: 29
Candidate Starts for Contagion_70:
(Start: 29 @46970 has 48 MA's), (Start: 37 @47021 has 1 MA's),

Gene: Crewmate_61 Start: 40124, Stop: 40318, Start Num: 27
Candidate Starts for Crewmate_61:
(Start: 27 @40124 has 12 MA's), (51, 40250),

Gene: Cyan_55 Start: 38301, Stop: 38501, Start Num: 24
Candidate Starts for Cyan_55:
(Start: 24 @38301 has 17 MA's), (51, 38433),

Gene: Czyszczone1_75 Start: 47676, Stop: 47855, Start Num: 29
Candidate Starts for Czyszczone1_75:
(Start: 29 @47676 has 48 MA's), (Start: 37 @47727 has 1 MA's),

Gene: DismalFunk_52 Start: 38608, Stop: 38817, Start Num: 24
Candidate Starts for DismalFunk_52:
(Start: 24 @38608 has 17 MA's), (28, 38620), (35, 38671), (41, 38692), (45, 38704), (46, 38719), (48, 38734), (50, 38746),

Gene: DismalStressor_52 Start: 38608, Stop: 38817, Start Num: 24
Candidate Starts for DismalStressor_52:
(Start: 24 @38608 has 17 MA's), (28, 38620), (35, 38671), (41, 38692), (45, 38704), (46, 38719), (48, 38734), (50, 38746),

Gene: Doughnut_53 Start: 38218, Stop: 38427, Start Num: 24
Candidate Starts for Doughnut_53:
(Start: 24 @38218 has 17 MA's), (28, 38230), (35, 38281), (41, 38302), (45, 38314), (46, 38329), (48, 38344), (50, 38356),

Gene: DrDrey_74 Start: 48595, Stop: 48774, Start Num: 29
Candidate Starts for DrDrey_74:
(Start: 29 @48595 has 48 MA's), (Start: 37 @48646 has 1 MA's),

Gene: DrManhattan_58 Start: 37046, Stop: 37201, Start Num: 32
Candidate Starts for DrManhattan_58:
(Start: 32 @37046 has 9 MA's), (48, 37124),

Gene: DrSierra_54 Start: 37220, Stop: 37399, Start Num: 25
Candidate Starts for DrSierra_54:
(Start: 25 @37220 has 14 MA's),

Gene: Elezi_55 Start: 39303, Stop: 39485, Start Num: 25
Candidate Starts for Elezi_55:
(10, 39096), (Start: 25 @39303 has 14 MA's),

Gene: Elph10_74 Start: 47174, Stop: 47353, Start Num: 29

Candidate Starts for Elph10_74:
(Start: 29 @47174 has 48 MA's), (Start: 37 @47225 has 1 MA's),

Gene: Emotion_61 Start: 40785, Stop: 40988, Start Num: 19
Candidate Starts for Emotion_61:
(12, 40701), (Start: 19 @40785 has 1 MA's), (31, 40836),

Gene: Eraser_56 Start: 39550, Stop: 39735, Start Num: 26
Candidate Starts for Eraser_56:
(Start: 26 @39550 has 5 MA's),

Gene: Exile_50 Start: 40505, Stop: 40657, Start Num: 33
Candidate Starts for Exile_50:
(Start: 33 @40505 has 1 MA's), (44, 40547), (54, 40637),

Gene: Filch_75 Start: 47101, Stop: 47280, Start Num: 29
Candidate Starts for Filch_75:
(Start: 29 @47101 has 48 MA's), (Start: 37 @47152 has 1 MA's),

Gene: Findley_52 Start: 38601, Stop: 38810, Start Num: 24
Candidate Starts for Findley_52:
(Start: 24 @38601 has 17 MA's), (28, 38613), (35, 38664), (41, 38685), (45, 38697), (46, 38712), (48, 38727), (50, 38739),

Gene: Gator_72 Start: 48006, Stop: 48185, Start Num: 29
Candidate Starts for Gator_72:
(Start: 29 @48006 has 48 MA's), (Start: 37 @48057 has 1 MA's),

Gene: Gudmit_42 Start: 28762, Stop: 28971, Start Num: 23
Candidate Starts for Gudmit_42:
(13, 28654), (14, 28663), (Start: 23 @28762 has 1 MA's), (50, 28894),

Gene: HanKaySha_74 Start: 47254, Stop: 47433, Start Num: 29
Candidate Starts for HanKaySha_74:
(Start: 29 @47254 has 48 MA's), (Start: 37 @47305 has 1 MA's),

Gene: Hokey_74 Start: 47786, Stop: 47965, Start Num: 29
Candidate Starts for Hokey_74:
(Start: 29 @47786 has 48 MA's), (Start: 37 @47837 has 1 MA's),

Gene: Iter_58 Start: 38994, Stop: 39182, Start Num: 25
Candidate Starts for Iter_58:
(Start: 25 @38994 has 14 MA's),

Gene: IttyBittyPiggy_57 Start: 38132, Stop: 38326, Start Num: 27
Candidate Starts for IttyBittyPiggy_57:
(Start: 27 @38132 has 12 MA's), (54, 38306),

Gene: Janeemi_57 Start: 39872, Stop: 40054, Start Num: 25
Candidate Starts for Janeemi_57:
(Start: 25 @39872 has 14 MA's), (49, 39989),

Gene: JasmineDragon_60 Start: 40141, Stop: 40287, Start Num: 32

Candidate Starts for JasmineDragon_60:
(Start: 32 @40141 has 9 MA's), (48, 40219),

Gene: Joemato_55 Start: 38382, Stop: 38582, Start Num: 24
Candidate Starts for Joemato_55:
(2, 37833), (Start: 24 @38382 has 17 MA's), (51, 38514),

Gene: JohnDoe_55 Start: 38368, Stop: 38562, Start Num: 27
Candidate Starts for JohnDoe_55:
(Start: 27 @38368 has 12 MA's), (51, 38494),

Gene: Jstan_57 Start: 39307, Stop: 39489, Start Num: 25
Candidate Starts for Jstan_57:
(10, 39100), (Start: 25 @39307 has 14 MA's),

Gene: JuneStar_58 Start: 41416, Stop: 41610, Start Num: 27
Candidate Starts for JuneStar_58:
(11, 41221), (Start: 27 @41416 has 12 MA's),

Gene: Kaylissa_56 Start: 38763, Stop: 38960, Start Num: 25
Candidate Starts for Kaylissa_56:
(Start: 25 @38763 has 14 MA's), (51, 38892),

Gene: KeAlii_54 Start: 38009, Stop: 38218, Start Num: 20
Candidate Starts for KeAlii_54:
(Start: 20 @38009 has 1 MA's),

Gene: LadyAstra_59 Start: 39371, Stop: 39517, Start Num: 32
Candidate Starts for LadyAstra_59:
(Start: 22 @39329 has 1 MA's), (Start: 32 @39371 has 9 MA's), (48, 39449),

Gene: Lego_54 Start: 38079, Stop: 38279, Start Num: 24
Candidate Starts for Lego_54:
(1, 37506), (4, 37554), (9, 37797), (Start: 24 @38079 has 17 MA's), (51, 38211),

Gene: Liebe_58 Start: 41412, Stop: 41675, Start Num: 18
Candidate Starts for Liebe_58:
(Start: 18 @41412 has 3 MA's), (21, 41445), (34, 41514), (42, 41544), (44, 41550), (51, 41595), (54, 41643), (55, 41667),

Gene: Lilac_76 Start: 47571, Stop: 47750, Start Num: 29
Candidate Starts for Lilac_76:
(Start: 29 @47571 has 48 MA's), (Start: 37 @47622 has 1 MA's),

Gene: Lilizi_75 Start: 47284, Stop: 47463, Start Num: 29
Candidate Starts for Lilizi_75:
(Start: 29 @47284 has 48 MA's), (Start: 37 @47335 has 1 MA's),

Gene: Lizalica_54 Start: 37826, Stop: 38008, Start Num: 25
Candidate Starts for Lizalica_54:
(Start: 25 @37826 has 14 MA's),

Gene: London_56 Start: 39541, Stop: 39726, Start Num: 26

Candidate Starts for London_56:
(Start: 26 @39541 has 5 MA's),

Gene: MISSy_75 Start: 47675, Stop: 47854, Start Num: 29
Candidate Starts for MISSy_75:
(Start: 29 @47675 has 48 MA's), (Start: 37 @47726 has 1 MA's),

Gene: MPhalcon_75 Start: 47668, Stop: 47847, Start Num: 29
Candidate Starts for MPhalcon_75:
(Start: 29 @47668 has 48 MA's), (Start: 37 @47719 has 1 MA's),

Gene: MaGuCo_53 Start: 39882, Stop: 40133, Start Num: 18
Candidate Starts for MaGuCo_53:
(Start: 18 @39882 has 3 MA's), (21, 39915), (34, 39984), (39, 40005), (44, 40020), (49, 40059), (51, 40065), (54, 40113),

Gene: Malibo_48 Start: 36272, Stop: 36448, Start Num: 30
Candidate Starts for Malibo_48:
(16, 36155), (Start: 30 @36272 has 2 MA's),

Gene: Marcoliusprime_52 Start: 38608, Stop: 38817, Start Num: 24
Candidate Starts for Marcoliusprime_52:
(Start: 24 @38608 has 17 MA's), (28, 38620), (35, 38671), (41, 38692), (45, 38704), (46, 38719), (48, 38734), (50, 38746),

Gene: Maureen_58 Start: 41411, Stop: 41674, Start Num: 18
Candidate Starts for Maureen_58:
(Start: 18 @41411 has 3 MA's), (21, 41444), (34, 41513), (42, 41543), (44, 41549), (51, 41594), (54, 41642), (55, 41666),

Gene: Maxxinista_76 Start: 47544, Stop: 47723, Start Num: 29
Candidate Starts for Maxxinista_76:
(Start: 29 @47544 has 48 MA's), (Start: 37 @47595 has 1 MA's),

Gene: Milly_52 Start: 38581, Stop: 38790, Start Num: 24
Candidate Starts for Milly_52:
(Start: 24 @38581 has 17 MA's), (28, 38593), (35, 38644), (41, 38665), (45, 38677), (46, 38692), (48, 38707), (50, 38719),

Gene: MiniMommy_63 Start: 40144, Stop: 40290, Start Num: 32
Candidate Starts for MiniMommy_63:
(Start: 32 @40144 has 9 MA's), (48, 40222),

Gene: Miniwave_69 Start: 47213, Stop: 47386, Start Num: 29
Candidate Starts for Miniwave_69:
(Start: 29 @47213 has 48 MA's), (Start: 37 @47264 has 1 MA's),

Gene: Misfit_75 Start: 48687, Stop: 48866, Start Num: 29
Candidate Starts for Misfit_75:
(Start: 29 @48687 has 48 MA's), (Start: 37 @48738 has 1 MA's),

Gene: MissSwiss_57 Start: 37199, Stop: 37351, Start Num: 32
Candidate Starts for MissSwiss_57:

(Start: 32 @37199 has 9 MA's),

Gene: Moldemort_77 Start: 47772, Stop: 47945, Start Num: 29

Candidate Starts for Moldemort_77:

(Start: 29 @47772 has 48 MA's), (Start: 37 @47823 has 1 MA's),

Gene: Mosby_70 Start: 46970, Stop: 47149, Start Num: 29

Candidate Starts for Mosby_70:

(Start: 29 @46970 has 48 MA's), (Start: 37 @47021 has 1 MA's),

Gene: Mudpuppy_52 Start: 38242, Stop: 38436, Start Num: 27

Candidate Starts for Mudpuppy_52:

(Start: 27 @38242 has 12 MA's), (51, 38368),

Gene: Mufasa_52 Start: 38162, Stop: 38371, Start Num: 24

Candidate Starts for Mufasa_52:

(Start: 24 @38162 has 17 MA's), (28, 38174), (35, 38225), (41, 38246), (45, 38258), (46, 38273), (48, 38288), (50, 38300),

Gene: Murphy_74 Start: 48056, Stop: 48235, Start Num: 29

Candidate Starts for Murphy_74:

(Start: 29 @48056 has 48 MA's), (Start: 37 @48107 has 1 MA's),

Gene: Niobe_56 Start: 39544, Stop: 39729, Start Num: 26

Candidate Starts for Niobe_56:

(Start: 26 @39544 has 5 MA's),

Gene: Nitro_58 Start: 40465, Stop: 40653, Start Num: 26

Candidate Starts for Nitro_58:

(Start: 26 @40465 has 5 MA's),

Gene: ObiToo_61 Start: 39721, Stop: 39915, Start Num: 27

Candidate Starts for ObiToo_61:

(Start: 27 @39721 has 12 MA's), (51, 39847), (53, 39874),

Gene: Palpatine_76 Start: 48646, Stop: 48825, Start Num: 29

Candidate Starts for Palpatine_76:

(Start: 29 @48646 has 48 MA's), (Start: 37 @48697 has 1 MA's),

Gene: Paperbeatsrock_73 Start: 47891, Stop: 48064, Start Num: 29

Candidate Starts for Paperbeatsrock_73:

(Start: 29 @47891 has 48 MA's), (Start: 37 @47942 has 1 MA's),

Gene: Phaja_72 Start: 47717, Stop: 47890, Start Num: 29

Candidate Starts for Phaja_72:

(Start: 29 @47717 has 48 MA's), (Start: 37 @47768 has 1 MA's),

Gene: Pharsalus_71 Start: 47691, Stop: 47864, Start Num: 29

Candidate Starts for Pharsalus_71:

(Start: 29 @47691 has 48 MA's), (Start: 37 @47742 has 1 MA's),

Gene: PhatBacter_78 Start: 48663, Stop: 48842, Start Num: 29

Candidate Starts for PhatBacter_78:

(Start: 29 @48663 has 48 MA's), (Start: 37 @48714 has 1 MA's),

Gene: Phaux_76 Start: 48658, Stop: 48837, Start Num: 29

Candidate Starts for Phaux_76:

(Start: 29 @48658 has 48 MA's), (Start: 37 @48709 has 1 MA's),

Gene: Phives_59 Start: 40511, Stop: 40693, Start Num: 25

Candidate Starts for Phives_59:

(5, 40142), (Start: 25 @40511 has 14 MA's),

Gene: Phrux_71 Start: 47254, Stop: 47433, Start Num: 29

Candidate Starts for Phrux_71:

(Start: 29 @47254 has 48 MA's), (Start: 37 @47305 has 1 MA's),

Gene: Pixelle_57 Start: 40947, Stop: 41132, Start Num: 25

Candidate Starts for Pixelle_57:

(6, 40599), (Start: 25 @40947 has 14 MA's),

Gene: Policronamos_77 Start: 48658, Stop: 48837, Start Num: 29

Candidate Starts for Policronamos_77:

(Start: 29 @48658 has 48 MA's), (Start: 37 @48709 has 1 MA's),

Gene: Powerpuff_57 Start: 39483, Stop: 39683, Start Num: 24

Candidate Starts for Powerpuff_57:

(Start: 24 @39483 has 17 MA's), (51, 39615),

Gene: Pumpkin_77 Start: 48312, Stop: 48491, Start Num: 29

Candidate Starts for Pumpkin_77:

(Start: 29 @48312 has 48 MA's), (Start: 37 @48363 has 1 MA's),

Gene: Pumpkins_54 Start: 39127, Stop: 39321, Start Num: 27

Candidate Starts for Pumpkins_54:

(Start: 27 @39127 has 12 MA's),

Gene: Rakim_75 Start: 47768, Stop: 47947, Start Num: 29

Candidate Starts for Rakim_75:

(Start: 29 @47768 has 48 MA's), (Start: 37 @47819 has 1 MA's),

Gene: Reedo_54 Start: 36267, Stop: 36416, Start Num: 32

Candidate Starts for Reedo_54:

(Start: 32 @36267 has 9 MA's), (48, 36342),

Gene: RiverMonster_74 Start: 47832, Stop: 48011, Start Num: 29

Candidate Starts for RiverMonster_74:

(Start: 29 @47832 has 48 MA's), (Start: 37 @47883 has 1 MA's),

Gene: Sassay_69 Start: 45932, Stop: 46111, Start Num: 29

Candidate Starts for Sassay_69:

(Start: 29 @45932 has 48 MA's), (Start: 37 @45983 has 1 MA's),

Gene: Sekhmet_52 Start: 36421, Stop: 36564, Start Num: 37

Candidate Starts for Sekhmet_52:

(Start: 37 @36421 has 1 MA's),

Gene: Shaffner_54 Start: 38968, Stop: 39162, Start Num: 27
Candidate Starts for Shaffner_54:
(11, 38773), (Start: 27 @38968 has 12 MA's),

Gene: ShakeltOph_62 Start: 40141, Stop: 40287, Start Num: 32
Candidate Starts for ShakeltOph_62:
(Start: 32 @40141 has 9 MA's), (48, 40219),

Gene: Sidious_47 Start: 36440, Stop: 36616, Start Num: 30
Candidate Starts for Sidious_47:
(Start: 30 @36440 has 2 MA's), (47, 36527),

Gene: Simpson_57 Start: 38386, Stop: 38586, Start Num: 24
Candidate Starts for Simpson_57:
(2, 37837), (Start: 24 @38386 has 17 MA's), (51, 38518),

Gene: Snek_57 Start: 37403, Stop: 37558, Start Num: 32
Candidate Starts for Snek_57:
(Start: 32 @37403 has 9 MA's), (54, 37541),

Gene: Soondubu_51 Start: 41018, Stop: 41170, Start Num: 33
Candidate Starts for Soondubu_51:
(Start: 33 @41018 has 1 MA's), (44, 41060), (54, 41150),

Gene: Stark_75 Start: 47715, Stop: 47894, Start Num: 29
Candidate Starts for Stark_75:
(Start: 29 @47715 has 48 MA's), (Start: 37 @47766 has 1 MA's),

Gene: StellaBean_72 Start: 47478, Stop: 47651, Start Num: 29
Candidate Starts for StellaBean_72:
(Start: 29 @47478 has 48 MA's), (Start: 37 @47529 has 1 MA's),

Gene: Strobilo_52 Start: 38583, Stop: 38792, Start Num: 24
Candidate Starts for Strobilo_52:
(Start: 24 @38583 has 17 MA's), (28, 38595), (35, 38646), (41, 38667), (45, 38679), (46, 38694), (48, 38709), (50, 38721),

Gene: Subaru_56 Start: 39303, Stop: 39485, Start Num: 25
Candidate Starts for Subaru_56:
(10, 39096), (Start: 25 @39303 has 14 MA's),

Gene: TM4_47 Start: 32969, Stop: 33172, Start Num: 24
Candidate Starts for TM4_47:
(Start: 24 @32969 has 17 MA's), (28, 32981), (35, 33026), (41, 33047), (45, 33059), (46, 33074), (48, 33089), (50, 33101),

Gene: Tallboi_56 Start: 39686, Stop: 39874, Start Num: 24
Candidate Starts for Tallboi_56:
(Start: 24 @39686 has 17 MA's),

Gene: Tarkin_73 Start: 47900, Stop: 48073, Start Num: 29
Candidate Starts for Tarkin_73:

(Start: 29 @47900 has 48 MA's), (Start: 37 @47951 has 1 MA's),

Gene: Tbone_55 Start: 38934, Stop: 39128, Start Num: 27

Candidate Starts for Tbone_55:

(Start: 27 @38934 has 12 MA's), (51, 39060),

Gene: Terminus_77 Start: 48687, Stop: 48866, Start Num: 29

Candidate Starts for Terminus_77:

(Start: 29 @48687 has 48 MA's), (Start: 37 @48738 has 1 MA's),

Gene: TforTroy_57 Start: 39052, Stop: 39246, Start Num: 27

Candidate Starts for TforTroy_57:

(11, 38854), (Start: 27 @39052 has 12 MA's), (51, 39178),

Gene: Thimble_76 Start: 47135, Stop: 47314, Start Num: 29

Candidate Starts for Thimble_76:

(Start: 29 @47135 has 48 MA's), (Start: 37 @47186 has 1 MA's),

Gene: Thresher_76 Start: 48774, Stop: 48953, Start Num: 29

Candidate Starts for Thresher_76:

(Start: 29 @48774 has 48 MA's), (Start: 37 @48825 has 1 MA's),

Gene: Tian_56 Start: 40845, Stop: 41030, Start Num: 25

Candidate Starts for Tian_56:

(Start: 25 @40845 has 14 MA's),

Gene: Tomaszewski_69 Start: 47063, Stop: 47236, Start Num: 29

Candidate Starts for Tomaszewski_69:

(Start: 29 @47063 has 48 MA's), (Start: 37 @47114 has 1 MA's),

Gene: Traaww1_70 Start: 47338, Stop: 47511, Start Num: 29

Candidate Starts for Traaww1_70:

(Start: 29 @47338 has 48 MA's), (Start: 37 @47389 has 1 MA's),

Gene: Tuck_58 Start: 40300, Stop: 40482, Start Num: 25

Candidate Starts for Tuck_58:

(Start: 25 @40300 has 14 MA's),

Gene: Turab_53 Start: 37635, Stop: 37826, Start Num: 24

Candidate Starts for Turab_53:

(7, 37329), (Start: 24 @37635 has 17 MA's),

Gene: Tutumahutu_56 Start: 38356, Stop: 38553, Start Num: 25

Candidate Starts for Tutumahutu_56:

(Start: 25 @38356 has 14 MA's), (51, 38485),

Gene: Tweety19_58 Start: 37403, Stop: 37558, Start Num: 32

Candidate Starts for Tweety19_58:

(Start: 32 @37403 has 9 MA's), (54, 37541),

Gene: VResidence_55 Start: 37492, Stop: 37677, Start Num: 25

Candidate Starts for VResidence_55:

(Start: 25 @37492 has 14 MA's),

Gene: VroomVroom_56 Start: 39271, Stop: 39462, Start Num: 22
Candidate Starts for VroomVroom_56:
(3, 38755), (8, 39007), (15, 39190), (Start: 22 @39271 has 1 MA's), (Start: 32 @39316 has 9 MA's),
(48, 39394), (52, 39427),

Gene: Warda_56 Start: 38671, Stop: 38853, Start Num: 25
Candidate Starts for Warda_56:
(Start: 25 @38671 has 14 MA's),

Gene: WaterT_74 Start: 43421, Stop: 43254, Start Num: 32
Candidate Starts for WaterT_74:
(Start: 19 @43508 has 1 MA's), (Start: 32 @43421 has 9 MA's), (36, 43391), (38, 43382), (50, 43319),
(53, 43289), (54, 43268),

Gene: Wiggin_76 Start: 47739, Stop: 47912, Start Num: 29
Candidate Starts for Wiggin_76:
(Start: 29 @47739 has 48 MA's), (Start: 37 @47790 has 1 MA's),

Gene: Wildwest_53 Start: 38260, Stop: 38493, Start Num: 17
Candidate Starts for Wildwest_53:
(Start: 17 @38260 has 1 MA's),

Gene: Willez_69 Start: 45932, Stop: 46111, Start Num: 29
Candidate Starts for Willez_69:
(Start: 29 @45932 has 48 MA's), (Start: 37 @45983 has 1 MA's),

Gene: Xandras_73 Start: 47147, Stop: 47326, Start Num: 29
Candidate Starts for Xandras_73:
(Start: 29 @47147 has 48 MA's), (Start: 37 @47198 has 1 MA's),

Gene: Yang_57 Start: 39052, Stop: 39246, Start Num: 27
Candidate Starts for Yang_57:
(Start: 27 @39052 has 12 MA's), (54, 39226),

Gene: YassJohnny_71 Start: 47102, Stop: 47275, Start Num: 29
Candidate Starts for YassJohnny_71:
(Start: 29 @47102 has 48 MA's), (Start: 37 @47153 has 1 MA's),

Gene: YesChef_55 Start: 38342, Stop: 38542, Start Num: 24
Candidate Starts for YesChef_55:
(Start: 24 @38342 has 17 MA's), (51, 38474),

Gene: Youngblood_77 Start: 48614, Stop: 48793, Start Num: 29
Candidate Starts for Youngblood_77:
(Start: 29 @48614 has 48 MA's), (Start: 37 @48665 has 1 MA's),

Gene: ZoeJ_51 Start: 38060, Stop: 38263, Start Num: 24
Candidate Starts for ZoeJ_51:
(Start: 24 @38060 has 17 MA's), (28, 38072), (35, 38117), (41, 38138), (45, 38150), (46, 38165), (48,
38180),