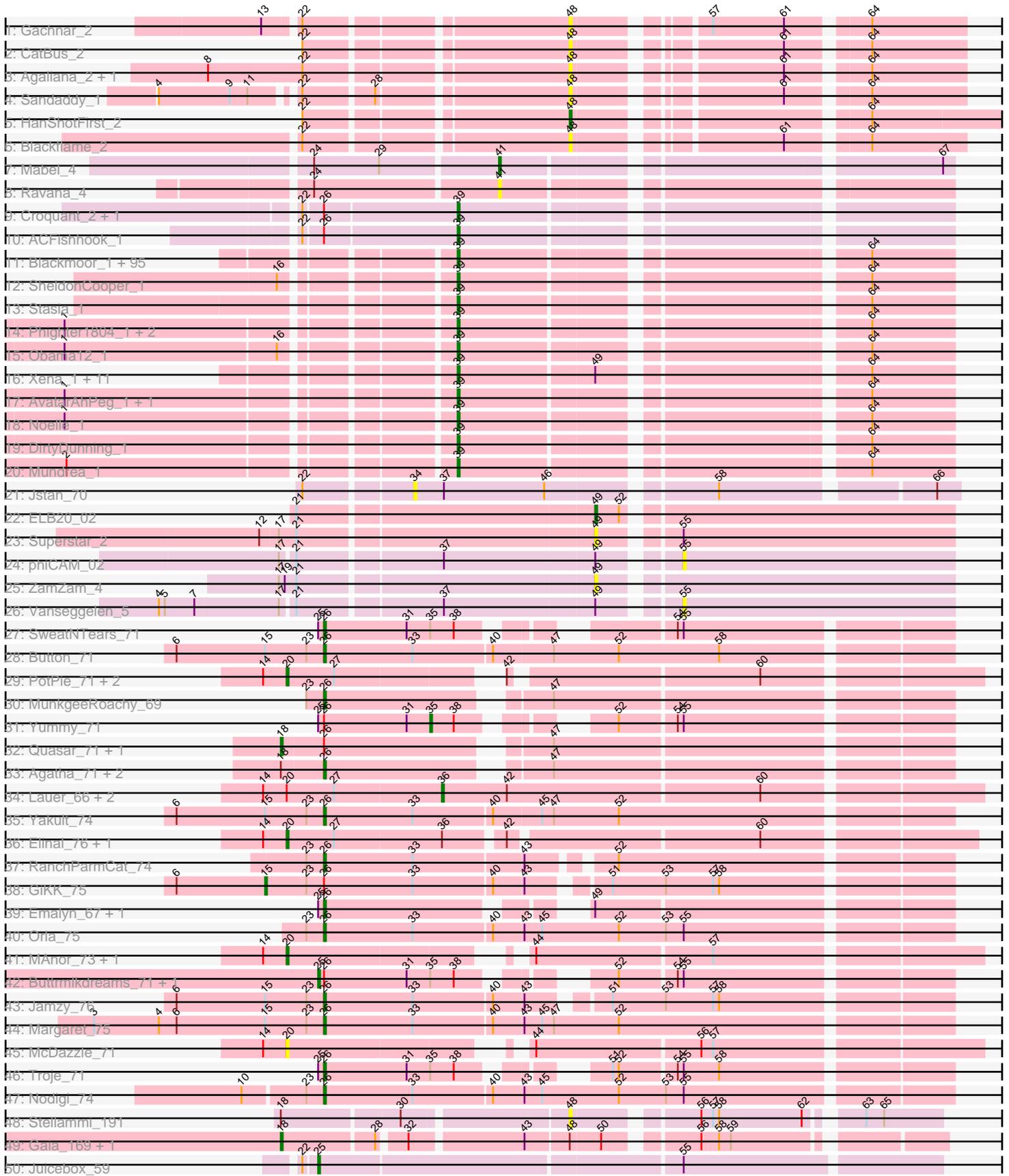# Pham 283531

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 283531 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283531 has 173 members, 17 are drafts.

Phages represented in each track:
• Track 1 : Gachnar_2
• Track 2 : CatBus_2
• Track 3 : Agaliana_2, ChristmasHams_2
• Track 4 : Sandaddy_1
• Track 5 : HanShotFirst_2
• Track 6 : Blackflame_2
• Track 7 : Mabel_4
• Track 8 : Ravana_4
• Track 9 : Croquant_2, SoYo_1
• Track 10 : ACFishhook_1
• Track 11 : Blackmoor_1, SenorClean_1, LittleGuy_1, Kremtemulon_1, Druantia_1, ICleared_1, Avle17_1, Mayonnaise_1, Cocoaberry_1, Holli_1, Kratark_1, Polymorphads_1, BellusTerra_1, Kampy_1, Palestino_1, Medusa_1, Wizard007_1, Morrow_1, Melvin_1, Annyong_1, Lunsford_1, Funston_1, Houdini22_1, Lorenzo_1, Phontbonne_1, Koreni_1, Iracema64_1, Nemo27_1, TroyPia_1, Ohfah_1, Sultana_1, Shygu2_1, BubbleTrouble_1, Broseidon_1, OKaNui_1, Sabertooth_1, Taquarus_1, Millski_1, Citius_1, Jaykayelowell_1, Clarenza_1, JetBlade_1, CentreCat_1, Lemur_1, Cintron_1, Romney_1, Sparxx_1, Eapen_1, NotAPhaseMom_1, Arturo_86, Iceman_1, Florean_1, Kyee_1, Maxo_1, Connomayer_1, Pipcraft_1, Koan_1, Nyxis_1, Skipitt_1, Bartimeaus_1, Relief_1, Eris_1, Alberto7_1, Chaph_1, JoongJeon_1, Flux_1, Spino_1, Roosevelt_1, TinaFeyge_1, Eros_1, Gadost_1, Albee_1, Eurydice_1, Thanksgivukkah_1, Nebs_1, Bombshell_1, NorthStar_1, LittleB_1, Scamp_1, Baby16_1, TygerBlood_1, Mazhar510_1, KFPoly_1, Happiness_1, Deano_1, YoSam321_1, Wilbur_1, Dhanush_1, Wander_1, Abdiel_1, PeterPeter_1, Bruiser_1, Phacado_1, Kingmustik0402_1, Ruin_1, Camperdownii_1
• Track 12 : SheldonCooper_1
• Track 13 : Stasia_1
• Track 14 : Phighter1804_1, Pumbaa_1, LochMonster_1
• Track 15 : Obama12_1
• Track 16 : Xena_1, Badger_1, Datway_1, PetiteSangsue_1, Cici_1, Morpher26_1, Wile_1, Katalie136_1, Achebe_1, Perplexer_1, AbbysRanger_1, Bumblebee11_1
• Track 17 : AvatarAhPeg_1, Miramae_1
• Track 18 : Noelle_1
• Track 19 : DirtyDunning_1
• Track 20 : Mundrea_1
• Track 21 : Jstan_70
• Track 22 : ELB20_02

- Track 23 : Superstar_2
- Track 24 : phiCAM_02
- Track 25 : ZamZam_4
- Track 26 : Vanseggelen_5
- Track 27 : SweatNTears_71
- Track 28 : Button_71
- Track 29 : PotPie_71, SummitAcademy_71, Yucky_74
- Track 30 : MunkgeeRoachy_69
- Track 31 : Yummy_71
- Track 32 : Quasar_71, Bubble_70
- Track 33 : Agatha_71, Axym_69, Burnsey_70
- Track 34 : Lauer_66, Balloona_71, CocoaPuff_70
- Track 35 : Yakult_74
- Track 36 : Elinal_76, KayGee_74
- Track 37 : RanchParmCat_74
- Track 38 : GiKK_75
- Track 39 : Emalyn_67, Amok_68
- Track 40 : Orla_75
- Track 41 : MAnor_73, Pons_74
- Track 42 : Buttrmlkdreams_71, Horseradish_71
- Track 43 : Jamzy_76
- Track 44 : Margaret_75
- Track 45 : McDazzle_71
- Track 46 : Troje_71
- Track 47 : Nodigi_74
- Track 48 : Stellammi_191
- Track 49 : Gaia_169, Nebkiss_165
- Track 50 : Juicebox_59

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

The start number called the most often in the published annotations is 39, it was called in 121 of the 156 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- ACFishhook_1, AbbysRanger_1, Abdiel_1, Achebe_1, Albee_1, Alberto7_1, Annyong_1, Arturo_86, AvatarAhPeg_1, Avle17_1, Baby16_1, Badger_1, Bartimeaus_1, BellusTerra_1, Blackmoor_1, Bombshell_1, Broseidon_1, Bruiser_1, BubbleTrouble_1, Bumblebee11_1, Camperdownii_1, CentreCat_1, Chaph_1, Cici_1, Cintron_1, Citius_1, Clarenza_1, Cocoaberry_1, Connomayer_1, Croquant_2, Datway_1, Deano_1, Dhanush_1, DirtyDunning_1, Druantia_1, Eapen_1, Eris_1, Eros_1, Eurydice_1, Florean_1, Flux_1, Funston_1, Gadost_1, Happiness_1, Holli_1, Houdini22_1, ICleared_1, Iceman_1, Iracema64_1, Jaykayelowell_1, JetBlade_1, JoongJeon_1, KFPoly_1, Kampy_1, Katalie136_1, Kingmustik0402_1, Koan_1, Koreni_1, Kratark_1, Kremtemulon_1, Kyee_1, Lemur_1, LittleB_1, LittleGuy_1, LochMonster_1, Lorenzo_1, Lunsford_1, Maxo_1, Mayonnaise_1, Mazhar510_1, Medusa_1, Melvin_1, Millski_1, Miramae_1, Morpher26_1, Morrow_1, Mundrea_1, Nebs_1, Nemo27_1, Noelle_1, NorthStar_1, NotAPhaseMom_1, Nyxis_1, OKaNui_1, Obama12_1, Ohfah_1, Palestino_1, Perplexer_1, PeterPeter_1, PetiteSangsue_1, Phacado_1, Phighter1804_1, Phontbonne_1, Pipcraft_1, Polymorphads_1,

Pumbaa_1, Relief_1, Romney_1, Roosevelt_1, Ruin_1, Sabertooth_1, Scamp_1, SenorClean_1, SheldonCooper_1, Shygu2_1, Skipitt_1, SoYo_1, Sparxx_1, Spino_1, Stasia_1, Sultana_1, Taquarus_1, Thanksgivukkah_1, TinaFeyge_1, TroyPia_1, TygerBlood_1, Wander_1, Wilbur_1, Wile_1, Wizard007_1, Xena_1, YoSam321_1,

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

Genes that do not have the "Most Annotated" start:
• Agaliana_2, Agatha_71, Amok_68, Axym_69, Balloona_71, Blackflame_2, Bubble_70, Burnsey_70, Button_71, Buttrmlkdreams_71, CatBus_2, ChristmasHams_2, CocoaPuff_70, ELB20_02, Elinal_76, Emalyn_67, Gachnar_2, Gaia_169, GiKK_75, HanShotFirst_2, Horseradish_71, Jamzy_76, Jstan_70, Juicebox_59, KayGee_74, Lauer_66, MAnor_73, Mabel_4, Margaret_75, McDazzle_71, MunkgeeRoachy_69, Nebkiss_165, Nodigi_74, Orla_75, Pons_74, PotPie_71, Quasar_71, RanchParmCat_74, Ravana_4, Sandaddy_1, Stellammi_191, SummitAcademy_71, Superstar_2, SweatNTears_71, Troje_71, Vanseggelen_5, Yakult_74, Yucky_74, Yummy_71, ZamZam_4, phiCAM_02,

Summary by start number:

Start 15:
• Found in 5 of 173 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 156
• Called 20.0% of time when present
• Phage (with cluster) where this start called: GiKK_75 (CT),

Start 18:
• Found in 8 of 173 (4.6%) of genes in pham
• Manual Annotations of this start: 4 of 156
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Bubble_70 (CT), Gaia_169 (X), Nebkiss_165 (X), Quasar_71 (CT),

Start 20:
• Found in 11 of 173 (6.4%) of genes in pham
• Manual Annotations of this start: 7 of 156
• Called 72.7% of time when present
• Phage (with cluster) where this start called: Elinal_76 (CT), KayGee_74 (CT), MAnor_73 (CT), McDazzle_71 (CT), Pons_74 (CT), PotPie_71 (CT), SummitAcademy_71 (CT), Yucky_74 (CT),

Start 25:
• Found in 8 of 173 (4.6%) of genes in pham
• Manual Annotations of this start: 3 of 156
• Called 37.5% of time when present
• Phage (with cluster) where this start called: Buttrmlkdreams_71 (CT), Horseradish_71 (CT), Juicebox_59 (singleton),

Start 26:
• Found in 24 of 173 (13.9%) of genes in pham
• Manual Annotations of this start: 15 of 156
• Called 62.5% of time when present

• Phage (with cluster) where this start called: Agatha_71 (CT), Amok_68 (CT), Axym_69 (CT), Burnsey_70 (CT), Button_71 (CT), Emalyn_67 (CT), Jamzy_76 (CT), Margaret_75 (CT), MunkgeeRoachy_69 (CT), Nodigi_74 (CT), Orla_75 (CT), RanchParmCat_74 (CT), SweatNTears_71 (CT), Troje_71 (CT), Yakult_74 (CT),

Start 34:
• Found in 1 of 173 (0.6%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jstan_70 (AZ1),

Start 35:
• Found in 5 of 173 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 156
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Yummy_71 (CT),

Start 36:
• Found in 5 of 173 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 156
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Balloona_71 (CT), CocoaPuff_70 (CT), Lauer_66 (CT),

Start 39:
• Found in 122 of 173 (70.5%) of genes in pham
• Manual Annotations of this start: 121 of 156
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ACFishhook_1 (A3), AbbysRanger_1 (A4), Abdiel_1 (A4), Achebe_1 (A4), Albee_1 (A4), Alberto7_1 (A4), Annyong_1 (A4), Arturo_86 (A4), AvatarAhPeg_1 (A4), Avle17_1 (A4), Baby16_1 (A4), Badger_1 (A4), Bartimeaus_1 (A4), BellusTerra_1 (A4), Blackmoor_1 (A4), Bombshell_1 (A4), Broseidon_1 (A4), Bruiser_1 (A4), BubbleTrouble_1 (A4), Bumblebee11_1 (A4), Camperdownii_1 (A4), CentreCat_1 (A4), Chaph_1 (A4), Cici_1 (A4), Cintron_1 (A4), Citius_1 (A4), Clarenza_1 (A4), Cocoaberry_1 (A4), Connomayer_1 (A4), Croquant_2 (A3), Datway_1 (A4), Deano_1 (A4), Dhanush_1 (A4), DirtyDunning_1 (A4), Druantia_1 (A4), Eapen_1 (A4), Eris_1 (A4), Eros_1 (A4), Eurydice_1 (A4), Florean_1 (A4), Flux_1 (A4), Funston_1 (A4), Gadost_1 (A4), Happiness_1 (A4), Holli_1 (A4), Houdini22_1 (A4), ICleared_1 (A4), Iceman_1 (A4), Iracema64_1 (A4), Jaykayelowell_1 (A4), JetBlade_1 (A4), JoongJeon_1 (A4), KFPoly_1 (A4), Kampy_1 (A4), Katalie136_1 (A4), Kingmustik0402_1 (A4), Koan_1 (A4), Koreni_1 (A4), Kratark_1 (A4), Kremtemulon_1 (A4), Kyee_1 (A4), Lemur_1 (A4), LittleB_1 (A4), LittleGuy_1 (A4), LochMonster_1 (A4), Lorenzo_1 (A4), Lunsford_1 (A4), Maxo_1 (A4), Mayonnaise_1 (A4), Mazhar510_1 (A4), Medusa_1 (A4), Melvin_1 (A4), Millski_1 (A4), Miramae_1 (A4), Morpher26_1 (A4), Morrow_1 (A4), Mundrea_1 (A4), Nebs_1 (A4), Nemo27_1 (A4), Noelle_1 (A4), NorthStar_1 (A4), NotAPhaseMom_1 (A4), Nyxis_1 (A4), OKaNui_1 (A4), Obama12_1 (A4), Ohfah_1 (A4), Palestino_1 (A4), Perplexer_1 (A4), PeterPeter_1 (A4), PetiteSangsue_1 (A4), Phacado_1 (A4), Phighter1804_1 (A4), Phontbonne_1 (A4), Pipcraft_1 (A4), Polymorphads_1 (A4), Pumbaa_1 (A4), Relief_1 (A4), Romney_1 (A4), Roosevelt_1 (A4), Ruin_1 (A4), Sabertooth_1 (A4), Scamp_1 (A4), SenorClean_1 (A4), SheldonCooper_1 (A4), Shygu2_1 (A4), Skipitt_1 (A4), SoYo_1 (A3), Sparxx_1 (A4), Spino_1 (A4), Stasia_1 (A4), Sultana_1 (A4), Taquarus_1 (A4), Thanksgivukkah_1 (A4), TinaFeyge_1 (A4),

TroyPia_1 (A4), TygerBlood_1 (A4), Wander_1 (A4), Wilbur_1 (A4), Wile_1 (A4), Wizard007_1 (A4), Xena_1 (A4), YoSam321_1 (A4),

Start 41:
• Found in 2 of 173 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 156
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mabel_4 (A11), Ravana_4 (A15),

Start 48:
• Found in 10 of 173 (5.8%) of genes in pham
• Manual Annotations of this start: 1 of 156
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Agaliana_2 (A1), Blackflame_2 (A1), CatBus_2 (A1), ChristmasHams_2 (A1), Gachnar_2 (A1), HanShotFirst_2 (A1), Sandaddy_1 (A1), Stellammi_191 (UNK),

Start 49:
• Found in 19 of 173 (11.0%) of genes in pham
• Manual Annotations of this start: 1 of 156
• Called 15.8% of time when present
• Phage (with cluster) where this start called: ELB20_02 (BD2), Superstar_2 (BD2), ZamZam_4 (BD3),

Start 55:
• Found in 11 of 173 (6.4%) of genes in pham
• No Manual Annotations of this start.
• Called 18.2% of time when present
• Phage (with cluster) where this start called: Vanseggelen_5 (BD3), phiCAM_02 (BD3),

Summary by clusters:

There are 12 clusters represented in this pham: A15, singleton, A11, BD2, A1, A3, A4, BD3, AZ1, X, UNK, CT,

Info for manual annotations of cluster A1:
•Start number 48 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A11:
•Start number 41 was manually annotated 1 time for cluster A11.

Info for manual annotations of cluster A3:
•Start number 39 was manually annotated 2 times for cluster A3.

Info for manual annotations of cluster A4:
•Start number 39 was manually annotated 119 times for cluster A4.

Info for manual annotations of cluster BD2:
•Start number 49 was manually annotated 1 time for cluster BD2.

Info for manual annotations of cluster CT:
•Start number 15 was manually annotated 1 time for cluster CT.
•Start number 18 was manually annotated 2 times for cluster CT.
•Start number 20 was manually annotated 7 times for cluster CT.
•Start number 25 was manually annotated 2 times for cluster CT.
•Start number 26 was manually annotated 15 times for cluster CT.
•Start number 35 was manually annotated 1 time for cluster CT.
•Start number 36 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster X:
•Start number 18 was manually annotated 2 times for cluster X.

Gene Information:
Gene: ACFishhook_1 Start: 596, Stop: 823, Start Num: 39
Candidate Starts for ACFishhook_1:
(22, 521), (Start: 26 @530 has 15 MA's), (Start: 39 @596 has 121 MA's),

Gene: AbbysRanger_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for AbbysRanger_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Abdiel_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Abdiel_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Achebe_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Achebe_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Agaliana_2 Start: 958, Stop: 1131, Start Num: 48
Candidate Starts for Agaliana_2:
(8, 787), (22, 835), (Start: 48 @958 has 1 MA's), (61, 1048), (64, 1084),

Gene: Agatha_71 Start: 46233, Stop: 46523, Start Num: 26
Candidate Starts for Agatha_71:
(Start: 18 @46212 has 4 MA's), (Start: 26 @46233 has 15 MA's), (47, 46332),

Gene: Albee_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Albee_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Alberto7_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Alberto7_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Amok_68 Start: 44983, Stop: 45258, Start Num: 26
Candidate Starts for Amok_68:
(Start: 25 @44980 has 3 MA's), (Start: 26 @44983 has 15 MA's), (Start: 49 @45088 has 1 MA's),

Gene: Annyong_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Annyong_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Arturo_86 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Arturo_86:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: AvatarAhPeg_1 Start: 535, Stop: 762, Start Num: 39
Candidate Starts for AvatarAhPeg_1:
(1, 355), (Start: 39 @535 has 121 MA's), (64, 721),

Gene: Avle17_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Avle17_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Axym_69 Start: 46163, Stop: 46453, Start Num: 26
Candidate Starts for Axym_69:
(Start: 18 @46142 has 4 MA's), (Start: 26 @46163 has 15 MA's), (47, 46262),

Gene: Baby16_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Baby16_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Badger_1 Start: 543, Stop: 770, Start Num: 39
Candidate Starts for Badger_1:
(Start: 39 @543 has 121 MA's), (Start: 49 @609 has 1 MA's), (64, 729),

Gene: Balloona_71 Start: 47653, Stop: 47916, Start Num: 36
Candidate Starts for Balloona_71:
(14, 47563), (Start: 20 @47575 has 7 MA's), (27, 47599), (Start: 36 @47653 has 1 MA's), (42, 47686),
(60, 47812),

Gene: Bartimeaus_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Bartimeaus_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: BellusTerra_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for BellusTerra_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Blackflame_2 Start: 840, Stop: 1013, Start Num: 48
Candidate Starts for Blackflame_2:
(22, 717), (Start: 48 @840 has 1 MA's), (61, 930), (64, 966),

Gene: Blackmoor_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Blackmoor_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Bombshell_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Bombshell_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Broseidon_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Broseidon_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Bruiser_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Bruiser_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Bubble_70 Start: 46197, Stop: 46508, Start Num: 18
Candidate Starts for Bubble_70:
(Start: 18 @46197 has 4 MA's), (Start: 26 @46218 has 15 MA's), (47, 46317),

Gene: BubbleTrouble_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for BubbleTrouble_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Bumblebee11_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Bumblebee11_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Burnsey_70 Start: 45875, Stop: 46165, Start Num: 26
Candidate Starts for Burnsey_70:
(Start: 18 @45854 has 4 MA's), (Start: 26 @45875 has 15 MA's), (47, 45974),

Gene: Button_71 Start: 45762, Stop: 46070, Start Num: 26
Candidate Starts for Button_71:
(6, 45687), (Start: 15 @45732 has 1 MA's), (23, 45753), (Start: 26 @45762 has 15 MA's), (33, 45807), (40, 45846), (47, 45876), (52, 45909), (58, 45960),

Gene: Buttrmlkdreams_71 Start: 45701, Stop: 45979, Start Num: 25
Candidate Starts for Buttrmlkdreams_71:
(Start: 25 @45701 has 3 MA's), (Start: 26 @45704 has 15 MA's), (31, 45746), (Start: 35 @45758 has 1 MA's), (38, 45770), (52, 45821), (54, 45848), (55, 45851),

Gene: Camperdownii_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Camperdownii_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: CatBus_2 Start: 873, Stop: 1046, Start Num: 48
Candidate Starts for CatBus_2:
(22, 750), (Start: 48 @873 has 1 MA's), (61, 963), (64, 999),

Gene: CentreCat_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for CentreCat_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Chaph_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Chaph_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: ChristmasHams_2 Start: 958, Stop: 1131, Start Num: 48
Candidate Starts for ChristmasHams_2:

(8, 787), (22, 835), (Start: 48 @958 has 1 MA's), (61, 1048), (64, 1084),

Gene: Cici_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Cici_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Cintron_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Cintron_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Citius_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Citius_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Clarenza_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Clarenza_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: CocoaPuff_70 Start: 46933, Stop: 47196, Start Num: 36
Candidate Starts for CocoaPuff_70:
(14, 46843), (Start: 20 @46855 has 7 MA's), (27, 46879), (Start: 36 @46933 has 1 MA's), (42, 46966), (60, 47092),

Gene: Cocoaberry_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Cocoaberry_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Connomayer_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Connomayer_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Croquant_2 Start: 592, Stop: 819, Start Num: 39
Candidate Starts for Croquant_2:
(22, 517), (Start: 26 @526 has 15 MA's), (Start: 39 @592 has 121 MA's),

Gene: Datway_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Datway_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Deano_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Deano_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Dhanush_1 Start: 537, Stop: 764, Start Num: 39
Candidate Starts for Dhanush_1:
(Start: 39 @537 has 121 MA's), (64, 723),

Gene: DirtyDunning_1 Start: 536, Stop: 763, Start Num: 39
Candidate Starts for DirtyDunning_1:
(Start: 39 @536 has 121 MA's), (64, 722),

Gene: Druantia_1 Start: 539, Stop: 766, Start Num: 39
Candidate Starts for Druantia_1:

(Start: 39 @539 has 121 MA's), (64, 725),

Gene: ELB20_02 Start: 804, Stop: 974, Start Num: 49
Candidate Starts for ELB20_02:
(21, 660), (Start: 49 @804 has 1 MA's), (52, 816),

Gene: Eapen_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Eapen_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Elinal_76 Start: 48006, Stop: 48332, Start Num: 20
Candidate Starts for Elinal_76:
(14, 47994), (Start: 20 @48006 has 7 MA's), (27, 48030), (Start: 36 @48084 has 1 MA's), (42, 48111),
(60, 48231),

Gene: Emalyn_67 Start: 43687, Stop: 43962, Start Num: 26
Candidate Starts for Emalyn_67:
(Start: 25 @43684 has 3 MA's), (Start: 26 @43687 has 15 MA's), (Start: 49 @43792 has 1 MA's),

Gene: Eris_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Eris_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Eros_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Eros_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Eurydice_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Eurydice_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Florean_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Florean_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Flux_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Flux_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Funston_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Funston_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Gachnar_2 Start: 892, Stop: 1065, Start Num: 48
Candidate Starts for Gachnar_2:
(13, 754), (22, 769), (Start: 48 @892 has 1 MA's), (57, 946), (61, 982), (64, 1018),

Gene: Gadost_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Gadost_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Gaia_169 Start: 83930, Stop: 84226, Start Num: 18
Candidate Starts for Gaia_169:

(Start: 18 @83930 has 4 MA's), (28, 83975), (32, 83987), (43, 84041), (Start: 48 @84062 has 1 MA's), (50, 84077), (56, 84116), (58, 84125), (59, 84131),

Gene: GiKK_75 Start: 47115, Stop: 47441, Start Num: 15
Candidate Starts for GiKK_75:
(6, 47070), (Start: 15 @47115 has 1 MA's), (23, 47136), (Start: 26 @47145 has 15 MA's), (33, 47190), (40, 47229), (43, 47244), (51, 47277), (53, 47304), (57, 47328), (58, 47331),

Gene: HanShotFirst_2 Start: 873, Stop: 1067, Start Num: 48
Candidate Starts for HanShotFirst_2:
(22, 750), (Start: 48 @873 has 1 MA's), (64, 999),

Gene: Happiness_1 Start: 537, Stop: 764, Start Num: 39
Candidate Starts for Happiness_1:
(Start: 39 @537 has 121 MA's), (64, 723),

Gene: Holli_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Holli_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Horseradish_71 Start: 45465, Stop: 45743, Start Num: 25
Candidate Starts for Horseradish_71:
(Start: 25 @45465 has 3 MA's), (Start: 26 @45468 has 15 MA's), (31, 45510), (Start: 35 @45522 has 1 MA's), (38, 45534), (52, 45585), (54, 45612), (55, 45615),

Gene: Houdini22_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Houdini22_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: ICleared_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for ICleared_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Iceman_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Iceman_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Iracema64_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Iracema64_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Jamzy_76 Start: 46875, Stop: 47171, Start Num: 26
Candidate Starts for Jamzy_76:
(6, 46800), (Start: 15 @46845 has 1 MA's), (23, 46866), (Start: 26 @46875 has 15 MA's), (33, 46920), (40, 46959), (43, 46974), (51, 47007), (53, 47034), (57, 47058), (58, 47061),

Gene: Jaykayelowell_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Jaykayelowell_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: JetBlade_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for JetBlade_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: JoongJeon_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for JoongJeon_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Jstan_70 Start: 43158, Stop: 43409, Start Num: 34
Candidate Starts for Jstan_70:
(22, 43107), (34, 43158), (37, 43173), (46, 43224), (58, 43299), (66, 43398),

Gene: Juicebox_59 Start: 41044, Stop: 41346, Start Num: 25
Candidate Starts for Juicebox_59:
(22, 41038), (Start: 25 @41044 has 3 MA's), (55, 41221),

Gene: KFPoly_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for KFPoly_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Kampy_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Kampy_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Katalie136_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Katalie136_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: KayGee_74 Start: 48035, Stop: 48361, Start Num: 20
Candidate Starts for KayGee_74:
(14, 48023), (Start: 20 @48035 has 7 MA's), (27, 48059), (Start: 36 @48113 has 1 MA's), (42, 48140),
(60, 48260),

Gene: Kingmustik0402_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Kingmustik0402_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Koan_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Koan_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Koreni_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Koreni_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Kratark_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Kratark_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Kremtemulon_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Kremtemulon_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Kyee_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Kyee_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Lauer_66 Start: 47856, Stop: 48119, Start Num: 36
Candidate Starts for Lauer_66:
(14, 47766), (Start: 20 @47778 has 7 MA's), (27, 47802), (Start: 36 @47856 has 1 MA's), (42, 47889), (60, 48015),

Gene: Lemur_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Lemur_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: LittleB_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for LittleB_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: LittleGuy_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for LittleGuy_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: LochMonster_1 Start: 536, Stop: 763, Start Num: 39
Candidate Starts for LochMonster_1:
(1, 356), (Start: 39 @536 has 121 MA's), (64, 722),

Gene: Lorenzo_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Lorenzo_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Lunsford_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Lunsford_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: MAnor_73 Start: 48015, Stop: 48329, Start Num: 20
Candidate Starts for MAnor_73:
(14, 48003), (Start: 20 @48015 has 7 MA's), (44, 48114), (57, 48201),

Gene: Mabel_4 Start: 2458, Stop: 2664, Start Num: 41
Candidate Starts for Mabel_4:
(24, 2368), (29, 2401), (Start: 41 @2458 has 1 MA's), (67, 2659),

Gene: Margaret_75 Start: 46622, Stop: 46930, Start Num: 26
Candidate Starts for Margaret_75:
(3, 46505), (4, 46538), (6, 46547), (Start: 15 @46592 has 1 MA's), (23, 46613), (Start: 26 @46622 has 15 MA's), (33, 46667), (40, 46706), (43, 46721), (45, 46730), (47, 46736), (52, 46769),

Gene: Maxo_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Maxo_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Mayonnaise_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Mayonnaise_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Mazhar510_1 Start: 539, Stop: 766, Start Num: 39
Candidate Starts for Mazhar510_1:

(Start: 39 @539 has 121 MA's), (64, 725),

Gene: McDazzle_71 Start: 47583, Stop: 47897, Start Num: 20
Candidate Starts for McDazzle_71:
(14, 47571), (Start: 20 @47583 has 7 MA's), (44, 47682), (56, 47763), (57, 47769),

Gene: Medusa_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Medusa_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Melvin_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Melvin_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Millski_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Millski_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Miramae_1 Start: 535, Stop: 762, Start Num: 39
Candidate Starts for Miramae_1:
(1, 355), (Start: 39 @535 has 121 MA's), (64, 721),

Gene: Morpher26_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Morpher26_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Morrow_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Morrow_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Mundrea_1 Start: 539, Stop: 766, Start Num: 39
Candidate Starts for Mundrea_1:
(2, 359), (Start: 39 @539 has 121 MA's), (64, 725),

Gene: MunkgeeRoachy_69 Start: 45602, Stop: 45892, Start Num: 26
Candidate Starts for MunkgeeRoachy_69:
(23, 45596), (Start: 26 @45602 has 15 MA's), (47, 45701),

Gene: Nebkiss_165 Start: 79421, Stop: 79717, Start Num: 18
Candidate Starts for Nebkiss_165:
(Start: 18 @79421 has 4 MA's), (28, 79466), (32, 79478), (43, 79532), (Start: 48 @79553 has 1 MA's),
(50, 79568), (56, 79607), (58, 79616), (59, 79622),

Gene: Nebs_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Nebs_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Nemo27_1 Start: 537, Stop: 764, Start Num: 39
Candidate Starts for Nemo27_1:
(Start: 39 @537 has 121 MA's), (64, 723),

Gene: Nodigi_74 Start: 46877, Stop: 47185, Start Num: 26
Candidate Starts for Nodigi_74:

(10, 46838), (23, 46868), (Start: 26 @46877 has 15 MA's), (33, 46922), (40, 46961), (43, 46976), (45, 46985), (52, 47024), (53, 47048), (55, 47057),

Gene: Noelle_1 Start: 526, Stop: 753, Start Num: 39
Candidate Starts for Noelle_1:
(1, 346), (Start: 39 @526 has 121 MA's), (64, 712),

Gene: NorthStar_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for NorthStar_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: NotAPhaseMom_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for NotAPhaseMom_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Nyxis_1 Start: 539, Stop: 766, Start Num: 39
Candidate Starts for Nyxis_1:
(Start: 39 @539 has 121 MA's), (64, 725),

Gene: OKaNui_1 Start: 537, Stop: 764, Start Num: 39
Candidate Starts for OKaNui_1:
(Start: 39 @537 has 121 MA's), (64, 723),

Gene: Obama12_1 Start: 537, Stop: 764, Start Num: 39
Candidate Starts for Obama12_1:
(1, 357), (16, 462), (Start: 39 @537 has 121 MA's), (64, 723),

Gene: Ohfah_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Ohfah_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Orla_75 Start: 47026, Stop: 47334, Start Num: 26
Candidate Starts for Orla_75:
(23, 47017), (Start: 26 @47026 has 15 MA's), (33, 47071), (40, 47110), (43, 47125), (45, 47134), (52, 47173), (53, 47197), (55, 47206),

Gene: Palestino_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Palestino_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Perplexer_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Perplexer_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: PeterPeter_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for PeterPeter_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: PetiteSangsue_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for PetiteSangsue_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Phacado_1 Start: 537, Stop: 764, Start Num: 39

Candidate Starts for Phacado_1:
(Start: 39 @537 has 121 MA's), (64, 723),

Gene: Phighter1804_1 Start: 536, Stop: 763, Start Num: 39
Candidate Starts for Phighter1804_1:
(1, 356), (Start: 39 @536 has 121 MA's), (64, 722),

Gene: Phontbonne_1 Start: 536, Stop: 763, Start Num: 39
Candidate Starts for Phontbonne_1:
(Start: 39 @536 has 121 MA's), (64, 722),

Gene: Pipcraft_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Pipcraft_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Polymorphads_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Polymorphads_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Pons_74 Start: 47664, Stop: 47978, Start Num: 20
Candidate Starts for Pons_74:
(14, 47652), (Start: 20 @47664 has 7 MA's), (44, 47763), (57, 47850),

Gene: PotPie_71 Start: 47864, Stop: 48178, Start Num: 20
Candidate Starts for PotPie_71:
(14, 47852), (Start: 20 @47864 has 7 MA's), (27, 47888), (42, 47957), (60, 48074),

Gene: Pumbaa_1 Start: 536, Stop: 763, Start Num: 39
Candidate Starts for Pumbaa_1:
(1, 356), (Start: 39 @536 has 121 MA's), (64, 722),

Gene: Quasar_71 Start: 46628, Stop: 46939, Start Num: 18
Candidate Starts for Quasar_71:
(Start: 18 @46628 has 4 MA's), (Start: 26 @46649 has 15 MA's), (47, 46748),

Gene: RanchParmCat_74 Start: 46910, Stop: 47206, Start Num: 26
Candidate Starts for RanchParmCat_74:
(23, 46901), (Start: 26 @46910 has 15 MA's), (33, 46955), (43, 47009), (52, 47045),

Gene: Ravana_4 Start: 2368, Stop: 2574, Start Num: 41
Candidate Starts for Ravana_4:
(24, 2278), (Start: 41 @2368 has 1 MA's),

Gene: Relief_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Relief_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Romney_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Romney_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Roosevelt_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Roosevelt_1:

(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Ruin_1 Start: 537, Stop: 764, Start Num: 39
Candidate Starts for Ruin_1:
(Start: 39 @537 has 121 MA's), (64, 723),

Gene: Sabertooth_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Sabertooth_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Sandaddy_1 Start: 722, Stop: 895, Start Num: 48
Candidate Starts for Sandaddy_1:
(4, 536), (9, 572), (11, 581), (22, 599), (28, 632), (Start: 48 @722 has 1 MA's), (61, 812), (64, 848),

Gene: Scamp_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Scamp_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: SenorClean_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for SenorClean_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: SheldonCooper_1 Start: 536, Stop: 763, Start Num: 39
Candidate Starts for SheldonCooper_1:
(16, 461), (Start: 39 @536 has 121 MA's), (64, 722),

Gene: Shygu2_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Shygu2_1:
(Start: 39 @542 has 121 MA's), (64, 728),

Gene: Skipitt_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Skipitt_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: SoYo_1 Start: 592, Stop: 819, Start Num: 39
Candidate Starts for SoYo_1:
(22, 517), (Start: 26 @526 has 15 MA's), (Start: 39 @592 has 121 MA's),

Gene: Sparxx_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Sparxx_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Spino_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Spino_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Stasia_1 Start: 544, Stop: 771, Start Num: 39
Candidate Starts for Stasia_1:
(Start: 39 @544 has 121 MA's), (64, 730),

Gene: Stellammi_191 Start: 80430, Stop: 80594, Start Num: 48
Candidate Starts for Stellammi_191:

(Start: 18 @80295 has 4 MA's), (30, 80352), (Start: 48 @80430 has 1 MA's), (56, 80484), (57, 80490), (58, 80493), (62, 80535), (63, 80556), (65, 80565),

Gene: Sultana_1 Start: 539, Stop: 766, Start Num: 39
Candidate Starts for Sultana_1:
(Start: 39 @539 has 121 MA's), (64, 725),

Gene: SummitAcademy_71 Start: 47007, Stop: 47324, Start Num: 20
Candidate Starts for SummitAcademy_71:
(14, 46995), (Start: 20 @47007 has 7 MA's), (27, 47031), (42, 47100), (60, 47217),

Gene: Superstar_2 Start: 802, Stop: 972, Start Num: 49
Candidate Starts for Superstar_2:
(12, 640), (17, 649), (21, 658), (Start: 49 @802 has 1 MA's), (55, 835),

Gene: SweatNTears_71 Start: 45622, Stop: 45897, Start Num: 26
Candidate Starts for SweatNTears_71:
(Start: 25 @45619 has 3 MA's), (Start: 26 @45622 has 15 MA's), (31, 45664), (Start: 35 @45676 has 1 MA's), (38, 45688), (54, 45766), (55, 45769),

Gene: Taquarus_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Taquarus_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Thanksgivukkah_1 Start: 539, Stop: 766, Start Num: 39
Candidate Starts for Thanksgivukkah_1:
(Start: 39 @539 has 121 MA's), (64, 725),

Gene: TinaFeyge_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for TinaFeyge_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Troje_71 Start: 45614, Stop: 45889, Start Num: 26
Candidate Starts for Troje_71:
(Start: 25 @45611 has 3 MA's), (Start: 26 @45614 has 15 MA's), (31, 45656), (Start: 35 @45668 has 1 MA's), (38, 45680), (51, 45728), (52, 45731), (54, 45758), (55, 45761), (58, 45779),

Gene: TroyPia_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for TroyPia_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: TygerBlood_1 Start: 540, Stop: 767, Start Num: 39
Candidate Starts for TygerBlood_1:
(Start: 39 @540 has 121 MA's), (64, 726),

Gene: Vanseggelen_5 Start: 1149, Stop: 1286, Start Num: 55
Candidate Starts for Vanseggelen_5:
(4, 906), (5, 909), (7, 924), (17, 966), (21, 972), (37, 1041), (Start: 49 @1116 has 1 MA's), (55, 1149),

Gene: Wander_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Wander_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Wilbur_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for Wilbur_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Wile_1 Start: 543, Stop: 770, Start Num: 39
Candidate Starts for Wile_1:
(Start: 39 @543 has 121 MA's), (Start: 49 @609 has 1 MA's), (64, 729),

Gene: Wizard007_1 Start: 540, Stop: 767, Start Num: 39
Candidate Starts for Wizard007_1:
(Start: 39 @540 has 121 MA's), (64, 726),

Gene: Xena_1 Start: 542, Stop: 769, Start Num: 39
Candidate Starts for Xena_1:
(Start: 39 @542 has 121 MA's), (Start: 49 @608 has 1 MA's), (64, 728),

Gene: Yakult_74 Start: 46869, Stop: 47177, Start Num: 26
Candidate Starts for Yakult_74:
(6, 46794), (Start: 15 @46839 has 1 MA's), (23, 46860), (Start: 26 @46869 has 15 MA's), (33, 46914), (40, 46953), (45, 46977), (47, 46983), (52, 47016),

Gene: YoSam321_1 Start: 538, Stop: 765, Start Num: 39
Candidate Starts for YoSam321_1:
(Start: 39 @538 has 121 MA's), (64, 724),

Gene: Yucky_74 Start: 47485, Stop: 47799, Start Num: 20
Candidate Starts for Yucky_74:
(14, 47473), (Start: 20 @47485 has 7 MA's), (27, 47509), (42, 47578), (60, 47695),

Gene: Yummy_71 Start: 45636, Stop: 45857, Start Num: 35
Candidate Starts for Yummy_71:
(Start: 25 @45579 has 3 MA's), (Start: 26 @45582 has 15 MA's), (31, 45624), (Start: 35 @45636 has 1 MA's), (38, 45648), (52, 45699), (54, 45726), (55, 45729),

Gene: ZamZam_4 Start: 1080, Stop: 1250, Start Num: 49
Candidate Starts for ZamZam_4:
(17, 927), (19, 930), (21, 936), (Start: 49 @1080 has 1 MA's),

Gene: phiCAM_02 Start: 1171, Stop: 1308, Start Num: 55
Candidate Starts for phiCAM_02:
(17, 988), (21, 994), (37, 1063), (Start: 49 @1138 has 1 MA's), (55, 1171),