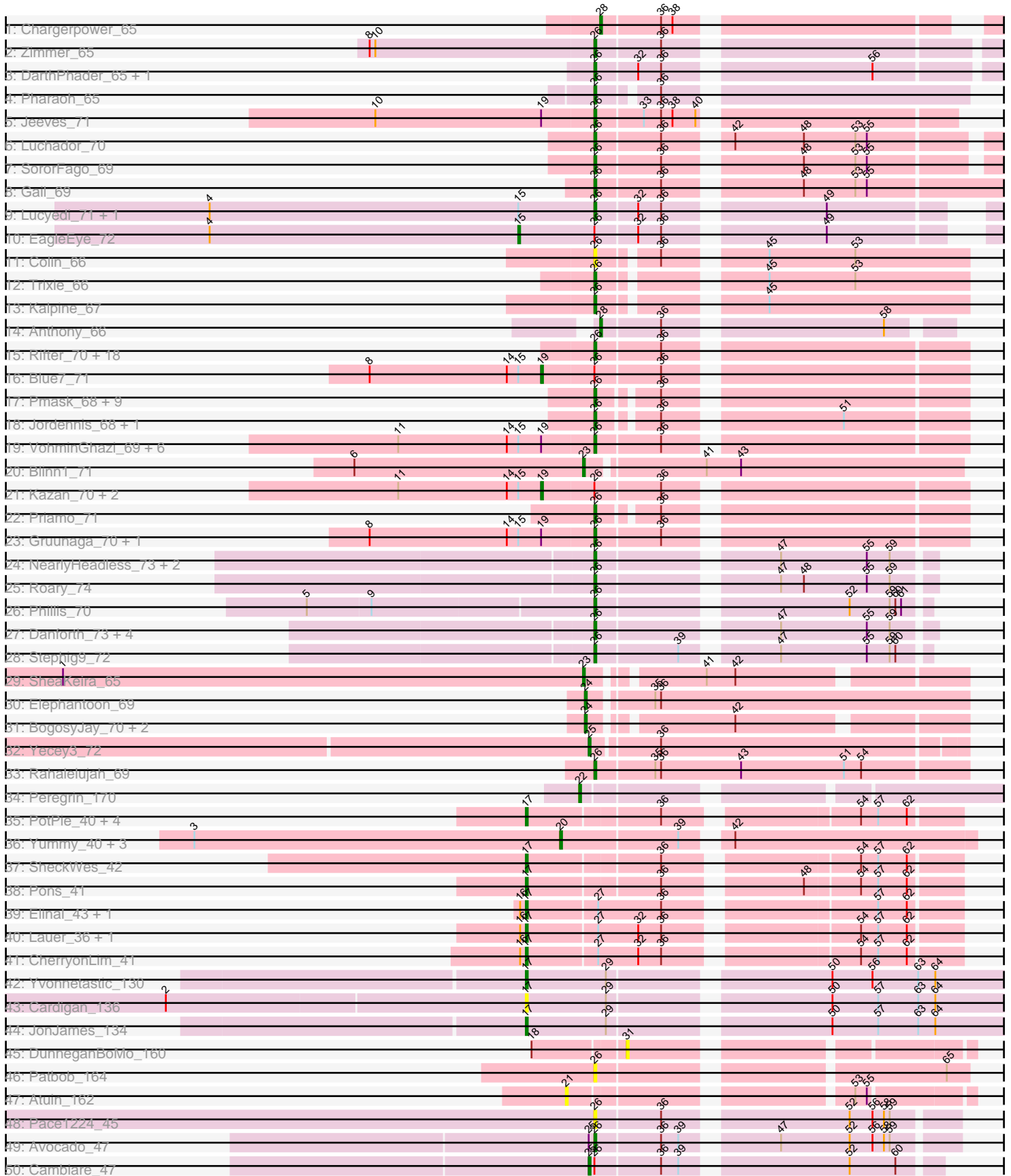
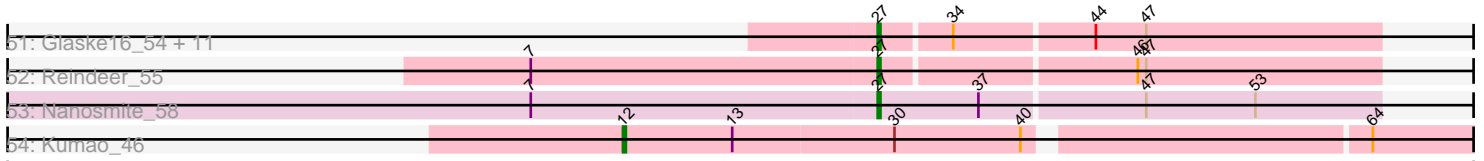


Pham 171304



Pham 171304



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 171304 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171304 has 121 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_65
- Track 2 : Zimmer_65
- Track 3 : DarthPhader_65, Refuge_65
- Track 4 : Pharaoh_65
- Track 5 : Jeeves_71
- Track 6 : Luchador_70
- Track 7 : SororFago_69
- Track 8 : Gail_69
- Track 9 : Lucyedi_71, PainterBoy_70
- Track 10 : EagleEye_72
- Track 11 : Colin_66
- Track 12 : Trixie_66
- Track 13 : Kalpine_67
- Track 14 : Anthony_66
- Track 15 : Rifter_70, Wiks_69, Tucker_70, Hexamo_70, Jeffabunny_70, Hammer_70, Lilbunny_67, ToneTone_67, Artemis2UCLA_70, Zaka_70, Koko_72, Yokurt_69, Zulu_71, WunderPhul_70, Gladiator_67, Garak_71, Helmet_71, CloudWang3_71, Indra_73
- Track 16 : Blue7_71
- Track 17 : Pmask_68, Cookiedough_69, McFly_69, Isiphiwo_67, Neeharika16_68, SuperCallie99_66, Dorothea_66, Chartreuse_66, DaVinci_67, JewelBug_69
- Track 18 : Jordennis_68, BABullseye_62
- Track 19 : VohminGhazi_69, Hoot_64, Candra_67, GreedyLawyer_66, Newrala_69, Kipper29_69, EricB_68
- Track 20 : Blinn1_71
- Track 21 : Kazan_70, SmellyB_69, SuperAwesome_69
- Track 22 : Priamo_71
- Track 23 : Gruunaga_70, Roksolana_71
- Track 24 : NearlyHeadless_73, Saintus_68, Dixon_72
- Track 25 : Roary_74
- Track 26 : Phillis_70
- Track 27 : Danforth_73, Expelliarmus_70, Astro_73, Groundhog_72, Smeadley_73
- Track 28 : Stephig9_72
- Track 29 : SheaKeira_65
- Track 30 : Elephantoon_69
- Track 31 : BogosyJay_70, Maminiaina_70, LoneWolf_70
- Track 32 : Yecey3_72

- Track 33 : Rahalelujah_69
- Track 34 : Peregrin_170
- Track 35 : PotPie_40, Vine_42, SummitAcademy_39, BigChungus_39, Feastonyeet_39
- Track 36 : Yummy_40, Buttrmilkdreams_40, Horseradish_40, MScarn_41
- Track 37 : SheckWes_42
- Track 38 : Pons_41
- Track 39 : Elinal_43, KayGee_40
- Track 40 : Lauer_36, Mayweather_43
- Track 41 : CherryonLim_41
- Track 42 : Yvonnestic_130
- Track 43 : Cardigan_136
- Track 44 : JonJames_134
- Track 45 : DunneganBoMo_160
- Track 46 : Patbob_164
- Track 47 : Atuin_162
- Track 48 : Pace1224_45
- Track 49 : Avocado_47
- Track 50 : Cambiare_47
- Track 51 : Glaske16_54, IPhane7_53, LilhomieP_52, Diminimus_54, PegLeg_53, TyDawg_53, Bongo_53, Skinny_54, SlimJimmy_52, Auspice_53, Bricole_53, Dulcita_54
- Track 52 : Reindeer_55
- Track 53 : Nanosmite_58
- Track 54 : Kumao_46

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

The start number called the most often in the published annotations is 26, it was called in 60 of the 108 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artemis2UCLA_70, Astro_73, Avocado_47, BABullseye_62, Candra_67, Chartreuse_66, CloudWang3_71, Colin_66, Cookiedough_69, DaVinci_67, Danforth_73, DARTHPhader_65, Dixon_72, Dorothea_66, EricB_68, Expelliarmus_70, Gail_69, Garak_71, Gladiator_67, GreedyLawyer_66, Groundhog_72, Gruunaga_70, Hammer_70, Helmet_71, Hexamo_70, Hoot_64, Indra_73, Isiphiwo_67, Jeeves_71, Jeffabunny_70, JewelBug_69, Jordennis_68, Kalpine_67, Kipper29_69, Koko_72, Lilbunny_67, Luchador_70, Lucyedi_71, McFly_69, NearlyHeadless_73, Neeharika16_68, Newrala_69, Pace1224_45, PainterBoy_70, Patbob_164, Pharaoh_65, Phillis_70, Pmask_68, Priamo_71, Rahalelujah_69, Refuge_65, Rifter_70, Roary_74, Roksolana_71, Saintus_68, Smeadley_73, SororFago_69, StepHig9_72, SuperCallie99_66, ToneTone_67, Trixie_66, Tucker_70, VohminGhazi_69, Wiks_69, WunderPhul_70, Yokurt_69, Zaka_70, Zimmer_65, Zulu_71,

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

- Blue7_71, Cambiare_47, EagleEye_72, Kazan_70, SmellyB_69, SuperAwesome_69,

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

- Anthony_66, Atuin_162, Auspice_53, BigChungus_39, Blinn1_71, BogosyJay_70, Bongo_53, Bricole_53, Buttrmlkdreams_40, Cardigan_136, Chargerpower_65, CherryonLim_41, Diminimus_54, Dulcita_54, DunneganBoMo_160, Elephantoan_69, Elinal_43, Feastonyeet_39, Glaske16_54, Horseradish_40, IPHane7_53, JonJames_134, KayGee_40, Kumao_46, Lauer_36, LilhomieP_52, LoneWolf_70, MScarn_41, Maminiaina_70, Mayweather_43, Nanosmite_58, PegLeg_53, Peregrin_170, Pons_41, PotPie_40, Reindeer_55, SheaKeira_65, SheckWes_42, Skinny_54, SlimJimmy_52, SummitAcademy_39, TyDawg_53, Vine_42, Yecy3_72, Yummy_40, Yvonnestic_130,

Summary by start number:

Start 12:

- Found in 1 of 121 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumao_46 (singleton),

Start 15:

- Found in 16 of 121 (13.2%) of genes in pham
- Manual Annotations of this start: 1 of 108
- Called 6.2% of time when present
- Phage (with cluster) where this start called: EagleEye_72 (A16),

Start 17:

- Found in 15 of 121 (12.4%) of genes in pham
- Manual Annotations of this start: 13 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigChungus_39 (CT), Cardigan_136 (DD), CherryonLim_41 (CT), Elinal_43 (CT), Feastonyeet_39 (CT), JonJames_134 (DD), KayGee_40 (CT), Lauer_36 (CT), Mayweather_43 (CT), Pons_41 (CT), PotPie_40 (CT), SheckWes_42 (CT), SummitAcademy_39 (CT), Vine_42 (CT), Yvonnestic_130 (DD),

Start 19:

- Found in 14 of 121 (11.6%) of genes in pham
- Manual Annotations of this start: 4 of 108
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Blue7_71 (A6), Kazan_70 (A6), SmellyB_69 (A6), SuperAwesome_69 (A6),

Start 20:

- Found in 4 of 121 (3.3%) of genes in pham
- Manual Annotations of this start: 4 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Buttrmlkdreams_40 (CT), Horseradish_40 (CT), MScarn_41 (CT), Yummy_40 (CT),

Start 21:

- Found in 1 of 121 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Atuin_162 (FC),

Start 22:

- Found in 1 of 121 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Peregrin_170 (CB),

Start 23:

- Found in 2 of 121 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Blinn1_71 (A6), SheaKeira_65 (A9),

Start 24:

- Found in 4 of 121 (3.3%) of genes in pham
- Manual Annotations of this start: 4 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BogosyJay_70 (A9), Elephantoon_69 (A9), LoneWolf_70 (A9), Maminina_70 (A9),

Start 25:

- Found in 3 of 121 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 108
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Cambiare_47 (G2), Yecey3_72 (A9),

Start 26:

- Found in 75 of 121 (62.0%) of genes in pham
- Manual Annotations of this start: 60 of 108
- Called 92.0% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA_70 (A6), Astro_73 (A8), Avocado_47 (G2), BABullseye_62 (A6), Candra_67 (A6), Chartreuse_66 (A6), CloudWang3_71 (A6), Colin_66 (A2), Cookiedough_69 (A6), DaVinci_67 (A6), Danforth_73 (A8), DARTHPhader_65 (A12), Dixon_72 (A8), Dorothea_66 (A6), EricB_68 (A6), Expelliarmus_70 (A8), Gail_69 (A14), Garak_71 (A6), Gladiator_67 (A6), GreedyLawyer_66 (A6), Groundhog_72 (A8), Gruunaga_70 (A6), Hammer_70 (A6), Helmet_71 (A6), Hexamo_70 (A6), Hoot_64 (A6), Indra_73 (A6), Isiphiwo_67 (A6), Jeeves_71 (A14), Jeffabunny_70 (A6), JewelBug_69 (A6), Jordennis_68 (A6), Kalpine_67 (A2), Kipper29_69 (A6), Koko_72 (A6), Lilbunny_67 (A6), Luchador_70 (A14), Lucyedi_71 (A16), McFly_69 (A6), NearlyHeadless_73 (A8), Neeharika16_68 (A6), Newrala_69 (A6), Pace1224_45 (G2), PainterBoy_70 (A16), Patbob_164 (FC), Pharaoh_65 (A12), Phillis_70 (A8), Pmask_68 (A6), Priamo_71 (A6), Rahalelujah_69 (A9), Refuge_65 (A12), Rifter_70 (A6), Roary_74 (A8), Roksolana_71 (A6), Saintus_68 (A8), Smeadley_73 (A8), SororFago_69 (A14), StepHig9_72 (A8), SuperCallie99_66 (A6), ToneTone_67 (A6), Trixie_66 (A2), Tucker_70 (A6), VohminGhazi_69 (A6), Wiks_69 (A6), WunderPhui_70 (A6), Yokurt_69 (A6), Zaka_70 (A6), Zimmer_65 (A12), Zulu_71 (A6),

Start 27:

- Found in 19 of 121 (15.7%) of genes in pham
- Manual Annotations of this start: 14 of 108
- Called 73.7% of time when present

- Phage (with cluster) where this start called: Auspice_53 (M1), Bongo_53 (M1), Bricole_53 (M1), Diminimus_54 (M1), Dulcita_54 (M1), Glaske16_54 (M1), IPhane7_53 (M1), LilhomieP_52 (M1), Nanosmite_58 (M3), PegLeg_53 (M1), Reindeer_55 (M1), Skinny_54 (M1), SlimJimmy_52 (M1), TyDawg_53 (M1),

Start 28:

- Found in 2 of 121 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 108
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anthony_66 (A20), Chargerpower_65 (A),

Start 31:

- Found in 1 of 121 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DunneganBoMo_160 (FC),

Summary by clusters:

There are 17 clusters represented in this pham: A, A14, singleton, A16, G2, A12, FC, CB, DD, A20, A2, M1, M3, A6, A9, A8, CT,

Info for manual annotations of cluster A:

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

Info for manual annotations of cluster A12:

- Start number 26 was manually annotated 4 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 26 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A16:

- Start number 15 was manually annotated 1 time for cluster A16.
- Start number 26 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 26 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 28 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A6:

- Start number 19 was manually annotated 4 times for cluster A6.
- Start number 23 was manually annotated 1 time for cluster A6.
- Start number 26 was manually annotated 35 times for cluster A6.

Info for manual annotations of cluster A8:

- Start number 26 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 23 was manually annotated 1 time for cluster A9.
- Start number 24 was manually annotated 4 times for cluster A9.

- Start number 25 was manually annotated 1 time for cluster A9.
- Start number 26 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster CB:

- Start number 22 was manually annotated 1 time for cluster CB.

Info for manual annotations of cluster CT:

- Start number 17 was manually annotated 11 times for cluster CT.
- Start number 20 was manually annotated 4 times for cluster CT.

Info for manual annotations of cluster DD:

- Start number 17 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster G2:

- Start number 25 was manually annotated 1 time for cluster G2.
- Start number 26 was manually annotated 1 time for cluster G2.

Info for manual annotations of cluster M1:

- Start number 27 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M3:

- Start number 27 was manually annotated 1 time for cluster M3.

Gene Information:

Gene: Anthony_66 Start: 40829, Stop: 40665, Start Num: 28

Candidate Starts for Anthony_66:

(Start: 28 @40829 has 2 MA's), (36, 40799), (58, 40694),

Gene: Artemis2UCLA_70 Start: 40238, Stop: 40059, Start Num: 26

Candidate Starts for Artemis2UCLA_70:

(Start: 26 @40238 has 60 MA's), (36, 40205),

Gene: Astro_73 Start: 40939, Stop: 40778, Start Num: 26

Candidate Starts for Astro_73:

(Start: 26 @40939 has 60 MA's), (47, 40855), (55, 40810), (59, 40798),

Gene: Atuin_162 Start: 110180, Stop: 110365, Start Num: 21

Candidate Starts for Atuin_162:

(21, 110180), (53, 110309), (55, 110315),

Gene: Auspice_53 Start: 38208, Stop: 38381, Start Num: 27

Candidate Starts for Auspice_53:

(Start: 27 @38208 has 14 MA's), (34, 38232), (44, 38280), (47, 38298),

Gene: Avocado_47 Start: 37189, Stop: 37362, Start Num: 26

Candidate Starts for Avocado_47:

(Start: 25 @37186 has 2 MA's), (Start: 26 @37189 has 60 MA's), (36, 37222), (39, 37231), (47, 37273), (52, 37309), (56, 37321), (58, 37327), (59, 37330),

Gene: BABullseye_62 Start: 37899, Stop: 37726, Start Num: 26

Candidate Starts for BABullseye_62:

(Start: 26 @37899 has 60 MA's), (36, 37872), (51, 37788),

Gene: BigChungus_39 Start: 28782, Stop: 28576, Start Num: 17

Candidate Starts for BigChungus_39:

(Start: 17 @28782 has 13 MA's), (36, 28716), (54, 28626), (57, 28617), (62, 28602),

Gene: Blinn1_71 Start: 39967, Stop: 39776, Start Num: 23

Candidate Starts for Blinn1_71:

(6, 40087), (Start: 23 @39967 has 2 MA's), (41, 39910), (43, 39892),

Gene: Blue7_71 Start: 40393, Stop: 40187, Start Num: 19

Candidate Starts for Blue7_71:

(8, 40483), (14, 40411), (Start: 15 @40405 has 1 MA's), (Start: 19 @40393 has 4 MA's), (Start: 26 @40366 has 60 MA's), (36, 40333),

Gene: BogosyJay_70 Start: 41590, Stop: 41414, Start Num: 24

Candidate Starts for BogosyJay_70:

(Start: 24 @41590 has 4 MA's), (42, 41524),

Gene: Bongo_53 Start: 38212, Stop: 38385, Start Num: 27

Candidate Starts for Bongo_53:

(Start: 27 @38212 has 14 MA's), (34, 38236), (44, 38284), (47, 38302),

Gene: Bricole_53 Start: 38194, Stop: 38367, Start Num: 27

Candidate Starts for Bricole_53:

(Start: 27 @38194 has 14 MA's), (34, 38218), (44, 38266), (47, 38284),

Gene: Buttrmlkdreams_40 Start: 27645, Stop: 27442, Start Num: 20

Candidate Starts for Buttrmlkdreams_40:

(3, 27837), (Start: 20 @27645 has 4 MA's), (39, 27585), (42, 27567),

Gene: Cambiare_47 Start: 37281, Stop: 37448, Start Num: 25

Candidate Starts for Cambiare_47:

(Start: 25 @37281 has 2 MA's), (Start: 26 @37284 has 60 MA's), (36, 37317), (39, 37326), (52, 37404), (60, 37428),

Gene: Candra_67 Start: 40269, Stop: 40090, Start Num: 26

Candidate Starts for Candra_67:

(11, 40371), (14, 40314), (Start: 15 @40308 has 1 MA's), (Start: 19 @40296 has 4 MA's), (Start: 26 @40269 has 60 MA's), (36, 40236),

Gene: Cardigan_136 Start: 76837, Stop: 77085, Start Num: 17

Candidate Starts for Cardigan_136:

(2, 76651), (Start: 17 @76837 has 13 MA's), (29, 76879), (50, 76984), (57, 77008), (63, 77029), (64, 77038),

Gene: Chargerpower_65 Start: 39591, Stop: 39409, Start Num: 28

Candidate Starts for Chargerpower_65:

(Start: 28 @39591 has 2 MA's), (36, 39561), (38, 39555),

Gene: Chartreuse_66 Start: 39579, Stop: 39406, Start Num: 26

Candidate Starts for Chartreuse_66:
(Start: 26 @39579 has 60 MA's), (36, 39552),

Gene: CherryonLim_41 Start: 29932, Stop: 29723, Start Num: 17
Candidate Starts for CherryonLim_41:
(16, 29935), (Start: 17 @29932 has 13 MA's), (Start: 27 @29896 has 14 MA's), (32, 29875), (36, 29863), (54, 29773), (57, 29764), (62, 29749),

Gene: CloudWang3_71 Start: 40750, Stop: 40571, Start Num: 26
Candidate Starts for CloudWang3_71:
(Start: 26 @40750 has 60 MA's), (36, 40717),

Gene: Colin_66 Start: 42014, Stop: 41838, Start Num: 26
Candidate Starts for Colin_66:
(Start: 26 @42014 has 60 MA's), (36, 41987), (45, 41942), (53, 41897),

Gene: Cookiedough_69 Start: 40207, Stop: 40034, Start Num: 26
Candidate Starts for Cookiedough_69:
(Start: 26 @40207 has 60 MA's), (36, 40180),

Gene: DaVinci_67 Start: 39633, Stop: 39460, Start Num: 26
Candidate Starts for DaVinci_67:
(Start: 26 @39633 has 60 MA's), (36, 39606),

Gene: Danforth_73 Start: 40987, Stop: 40826, Start Num: 26
Candidate Starts for Danforth_73:
(Start: 26 @40987 has 60 MA's), (47, 40903), (55, 40858), (59, 40846),

Gene: DarthPhader_65 Start: 42262, Stop: 42065, Start Num: 26
Candidate Starts for DarthPhader_65:
(Start: 26 @42262 has 60 MA's), (32, 42241), (36, 42229), (56, 42130),

Gene: Diminimus_54 Start: 38207, Stop: 38380, Start Num: 27
Candidate Starts for Diminimus_54:
(Start: 27 @38207 has 14 MA's), (34, 38231), (44, 38279), (47, 38297),

Gene: Dixon_72 Start: 40507, Stop: 40346, Start Num: 26
Candidate Starts for Dixon_72:
(Start: 26 @40507 has 60 MA's), (47, 40423), (55, 40378), (59, 40366),

Gene: Dorothea_66 Start: 40205, Stop: 40032, Start Num: 26
Candidate Starts for Dorothea_66:
(Start: 26 @40205 has 60 MA's), (36, 40178),

Gene: Dulcita_54 Start: 38208, Stop: 38381, Start Num: 27
Candidate Starts for Dulcita_54:
(Start: 27 @38208 has 14 MA's), (34, 38232), (44, 38280), (47, 38298),

Gene: DunneganBoMo_160 Start: 107120, Stop: 107278, Start Num: 31
Candidate Starts for DunneganBoMo_160:
(18, 107075), (31, 107120),

Gene: EagleEye_72 Start: 41949, Stop: 41728, Start Num: 15

Candidate Starts for EagleEye_72:

(4, 42111), (Start: 15 @41949 has 1 MA's), (Start: 26 @41910 has 60 MA's), (32, 41889), (36, 41877), (49, 41802),

Gene: Elephantoon_69 Start: 40932, Stop: 40738, Start Num: 24

Candidate Starts for Elephantoon_69:

(Start: 24 @40932 has 4 MA's), (35, 40902), (36, 40899),

Gene: Elinal_43 Start: 29167, Stop: 28958, Start Num: 17

Candidate Starts for Elinal_43:

(16, 29170), (Start: 17 @29167 has 13 MA's), (Start: 27 @29131 has 14 MA's), (36, 29098), (57, 28999), (62, 28984),

Gene: EricB_68 Start: 40226, Stop: 40047, Start Num: 26

Candidate Starts for EricB_68:

(11, 40328), (14, 40271), (Start: 15 @40265 has 1 MA's), (Start: 19 @40253 has 4 MA's), (Start: 26 @40226 has 60 MA's), (36, 40193),

Gene: Expelliarmus_70 Start: 40711, Stop: 40550, Start Num: 26

Candidate Starts for Expelliarmus_70:

(Start: 26 @40711 has 60 MA's), (47, 40627), (55, 40582), (59, 40570),

Gene: Feastonyeet_39 Start: 28782, Stop: 28576, Start Num: 17

Candidate Starts for Feastonyeet_39:

(Start: 17 @28782 has 13 MA's), (36, 28716), (54, 28626), (57, 28617), (62, 28602),

Gene: Gail_69 Start: 42059, Stop: 41856, Start Num: 26

Candidate Starts for Gail_69:

(Start: 26 @42059 has 60 MA's), (36, 42026), (48, 41963), (53, 41936), (55, 41930),

Gene: Garak_71 Start: 40605, Stop: 40426, Start Num: 26

Candidate Starts for Garak_71:

(Start: 26 @40605 has 60 MA's), (36, 40572),

Gene: Gladiator_67 Start: 39830, Stop: 39651, Start Num: 26

Candidate Starts for Gladiator_67:

(Start: 26 @39830 has 60 MA's), (36, 39797),

Gene: Glaske16_54 Start: 38207, Stop: 38380, Start Num: 27

Candidate Starts for Glaske16_54:

(Start: 27 @38207 has 14 MA's), (34, 38231), (44, 38279), (47, 38297),

Gene: GreedyLawyer_66 Start: 40199, Stop: 40020, Start Num: 26

Candidate Starts for GreedyLawyer_66:

(11, 40301), (14, 40244), (Start: 15 @40238 has 1 MA's), (Start: 19 @40226 has 4 MA's), (Start: 26 @40199 has 60 MA's), (36, 40166),

Gene: Groundhog_72 Start: 40917, Stop: 40756, Start Num: 26

Candidate Starts for Groundhog_72:

(Start: 26 @40917 has 60 MA's), (47, 40833), (55, 40788), (59, 40776),

Gene: Gruunaga_70 Start: 40563, Stop: 40384, Start Num: 26

Candidate Starts for Gruunaga_70:

(8, 40680), (14, 40608), (Start: 15 @40602 has 1 MA's), (Start: 19 @40590 has 4 MA's), (Start: 26 @40563 has 60 MA's), (36, 40530),

Gene: Hammer_70 Start: 40170, Stop: 39991, Start Num: 26
Candidate Starts for Hammer_70:
(Start: 26 @40170 has 60 MA's), (36, 40137),

Gene: Helmet_71 Start: 40605, Stop: 40426, Start Num: 26
Candidate Starts for Helmet_71:
(Start: 26 @40605 has 60 MA's), (36, 40572),

Gene: Hexamo_70 Start: 40235, Stop: 40056, Start Num: 26
Candidate Starts for Hexamo_70:
(Start: 26 @40235 has 60 MA's), (36, 40202),

Gene: Hoot_64 Start: 38084, Stop: 37905, Start Num: 26
Candidate Starts for Hoot_64:
(11, 38186), (14, 38129), (Start: 15 @38123 has 1 MA's), (Start: 19 @38111 has 4 MA's), (Start: 26 @38084 has 60 MA's), (36, 38051),

Gene: Horseradish_40 Start: 27173, Stop: 26970, Start Num: 20
Candidate Starts for Horseradish_40:
(3, 27365), (Start: 20 @27173 has 4 MA's), (39, 27113), (42, 27095),

Gene: IPHane7_53 Start: 38212, Stop: 38385, Start Num: 27
Candidate Starts for IPHane7_53:
(Start: 27 @38212 has 14 MA's), (34, 38236), (44, 38284), (47, 38302),

Gene: Indra_73 Start: 40606, Stop: 40427, Start Num: 26
Candidate Starts for Indra_73:
(Start: 26 @40606 has 60 MA's), (36, 40573),

Gene: Isiphiwo_67 Start: 39765, Stop: 39586, Start Num: 26
Candidate Starts for Isiphiwo_67:
(Start: 26 @39765 has 60 MA's), (36, 39732),

Gene: Jeeves_71 Start: 41042, Stop: 40869, Start Num: 26
Candidate Starts for Jeeves_71:
(10, 41156), (Start: 19 @41069 has 4 MA's), (Start: 26 @41042 has 60 MA's), (33, 41018), (36, 41009), (38, 41003), (40, 40991),

Gene: Jeffabunny_70 Start: 40232, Stop: 40053, Start Num: 26
Candidate Starts for Jeffabunny_70:
(Start: 26 @40232 has 60 MA's), (36, 40199),

Gene: JewelBug_69 Start: 40499, Stop: 40326, Start Num: 26
Candidate Starts for JewelBug_69:
(Start: 26 @40499 has 60 MA's), (36, 40472),

Gene: JonJames_134 Start: 77470, Stop: 77718, Start Num: 17
Candidate Starts for JonJames_134:
(Start: 17 @77470 has 13 MA's), (29, 77512), (50, 77617), (57, 77641), (63, 77662), (64, 77671),

Gene: Jordennis_68 Start: 39980, Stop: 39807, Start Num: 26

Candidate Starts for Jordennis_68:

(Start: 26 @39980 has 60 MA's), (36, 39953), (51, 39869),

Gene: Kalpine_67 Start: 42195, Stop: 42019, Start Num: 26

Candidate Starts for Kalpine_67:

(Start: 26 @42195 has 60 MA's), (45, 42123),

Gene: KayGee_40 Start: 29167, Stop: 28958, Start Num: 17

Candidate Starts for KayGee_40:

(16, 29170), (Start: 17 @29167 has 13 MA's), (Start: 27 @29131 has 14 MA's), (36, 29098), (57, 28999), (62, 28984),

Gene: Kazan_70 Start: 40266, Stop: 40060, Start Num: 19

Candidate Starts for Kazan_70:

(11, 40341), (14, 40284), (Start: 15 @40278 has 1 MA's), (Start: 19 @40266 has 4 MA's), (Start: 26 @40239 has 60 MA's), (36, 40206),

Gene: Kipper29_69 Start: 40252, Stop: 40073, Start Num: 26

Candidate Starts for Kipper29_69:

(11, 40354), (14, 40297), (Start: 15 @40291 has 1 MA's), (Start: 19 @40279 has 4 MA's), (Start: 26 @40252 has 60 MA's), (36, 40219),

Gene: Koko_72 Start: 41090, Stop: 40911, Start Num: 26

Candidate Starts for Koko_72:

(Start: 26 @41090 has 60 MA's), (36, 41057),

Gene: Kumao_46 Start: 37602, Stop: 37892, Start Num: 12

Candidate Starts for Kumao_46:

(Start: 12 @37602 has 1 MA's), (13, 37641), (30, 37698), (40, 37743), (64, 37857),

Gene: Lauer_36 Start: 29997, Stop: 29788, Start Num: 17

Candidate Starts for Lauer_36:

(16, 30000), (Start: 17 @29997 has 13 MA's), (Start: 27 @29961 has 14 MA's), (32, 29940), (36, 29928), (54, 29838), (57, 29829), (62, 29814),

Gene: Lilbunny_67 Start: 40236, Stop: 40057, Start Num: 26

Candidate Starts for Lilbunny_67:

(Start: 26 @40236 has 60 MA's), (36, 40203),

Gene: LilhomieP_52 Start: 38212, Stop: 38385, Start Num: 27

Candidate Starts for LilhomieP_52:

(Start: 27 @38212 has 14 MA's), (34, 38236), (44, 38284), (47, 38302),

Gene: LoneWolf_70 Start: 41439, Stop: 41263, Start Num: 24

Candidate Starts for LoneWolf_70:

(Start: 24 @41439 has 4 MA's), (42, 41373),

Gene: Luchador_70 Start: 42522, Stop: 42328, Start Num: 26

Candidate Starts for Luchador_70:

(Start: 26 @42522 has 60 MA's), (36, 42489), (42, 42462), (48, 42426), (53, 42399), (55, 42393),

Gene: Lucyedi_71 Start: 42106, Stop: 41924, Start Num: 26

Candidate Starts for Lucyedi_71:

(4, 42307), (Start: 15 @42145 has 1 MA's), (Start: 26 @42106 has 60 MA's), (32, 42085), (36, 42073), (49, 41998),

Gene: MScarn_41 Start: 27313, Stop: 27110, Start Num: 20

Candidate Starts for MScarn_41:

(3, 27505), (Start: 20 @27313 has 4 MA's), (39, 27253), (42, 27235),

Gene: Maminaiaina_70 Start: 41572, Stop: 41396, Start Num: 24

Candidate Starts for Maminaiaina_70:

(Start: 24 @41572 has 4 MA's), (42, 41506),

Gene: Mayweather_43 Start: 29791, Stop: 29582, Start Num: 17

Candidate Starts for Mayweather_43:

(16, 29794), (Start: 17 @29791 has 13 MA's), (Start: 27 @29755 has 14 MA's), (32, 29734), (36, 29722), (54, 29632), (57, 29623), (62, 29608),

Gene: McFly_69 Start: 40192, Stop: 40019, Start Num: 26

Candidate Starts for McFly_69:

(Start: 26 @40192 has 60 MA's), (36, 40165),

Gene: Nanosmite_58 Start: 39866, Stop: 40042, Start Num: 27

Candidate Starts for Nanosmite_58:

(7, 39743), (Start: 27 @39866 has 14 MA's), (37, 39902), (47, 39959), (53, 39998),

Gene: NearlyHeadless_73 Start: 40753, Stop: 40592, Start Num: 26

Candidate Starts for NearlyHeadless_73:

(Start: 26 @40753 has 60 MA's), (47, 40669), (55, 40624), (59, 40612),

Gene: Neeharika16_68 Start: 39659, Stop: 39486, Start Num: 26

Candidate Starts for Neeharika16_68:

(Start: 26 @39659 has 60 MA's), (36, 39632),

Gene: Newrala_69 Start: 40200, Stop: 40021, Start Num: 26

Candidate Starts for Newrala_69:

(11, 40302), (14, 40245), (Start: 15 @40239 has 1 MA's), (Start: 19 @40227 has 4 MA's), (Start: 26 @40200 has 60 MA's), (36, 40167),

Gene: Pace1224_45 Start: 36103, Stop: 36276, Start Num: 26

Candidate Starts for Pace1224_45:

(Start: 26 @36103 has 60 MA's), (36, 36136), (52, 36223), (56, 36235), (58, 36241), (59, 36244),

Gene: PainterBoy_70 Start: 41815, Stop: 41633, Start Num: 26

Candidate Starts for PainterBoy_70:

(4, 42016), (Start: 15 @41854 has 1 MA's), (Start: 26 @41815 has 60 MA's), (32, 41794), (36, 41782), (49, 41707),

Gene: Patbob_164 Start: 111552, Stop: 111728, Start Num: 26

Candidate Starts for Patbob_164:

(Start: 26 @111552 has 60 MA's), (65, 111717),

Gene: PegLeg_53 Start: 38211, Stop: 38384, Start Num: 27

Candidate Starts for PegLeg_53:

(Start: 27 @38211 has 14 MA's), (34, 38235), (44, 38283), (47, 38301),

Gene: Peregrin_170 Start: 91883, Stop: 92095, Start Num: 22

Candidate Starts for Peregrin_170:

(Start: 22 @91883 has 1 MA's),

Gene: Pharaoh_65 Start: 41502, Stop: 41326, Start Num: 26

Candidate Starts for Pharaoh_65:

(Start: 26 @41502 has 60 MA's), (36, 41475),

Gene: Phillis_70 Start: 40207, Stop: 40049, Start Num: 26

Candidate Starts for Phillis_70:

(5, 40354), (9, 40321), (Start: 26 @40207 has 60 MA's), (52, 40087), (59, 40066), (60, 40063), (61, 40060),

Gene: Pmask_68 Start: 40195, Stop: 40022, Start Num: 26

Candidate Starts for Pmask_68:

(Start: 26 @40195 has 60 MA's), (36, 40168),

Gene: Pons_41 Start: 29139, Stop: 28933, Start Num: 17

Candidate Starts for Pons_41:

(Start: 17 @29139 has 13 MA's), (36, 29073), (48, 29010), (54, 28983), (57, 28974), (62, 28959),

Gene: PotPie_40 Start: 30073, Stop: 29867, Start Num: 17

Candidate Starts for PotPie_40:

(Start: 17 @30073 has 13 MA's), (36, 30007), (54, 29917), (57, 29908), (62, 29893),

Gene: Priamo_71 Start: 40046, Stop: 39873, Start Num: 26

Candidate Starts for Priamo_71:

(Start: 26 @40046 has 60 MA's), (36, 40019),

Gene: Rahalelujah_69 Start: 41050, Stop: 40859, Start Num: 26

Candidate Starts for Rahalelujah_69:

(Start: 26 @41050 has 60 MA's), (35, 41020), (36, 41017), (43, 40975), (51, 40921), (54, 40912),

Gene: Refuge_65 Start: 42312, Stop: 42115, Start Num: 26

Candidate Starts for Refuge_65:

(Start: 26 @42312 has 60 MA's), (32, 42291), (36, 42279), (56, 42180),

Gene: Reindeer_55 Start: 39414, Stop: 39587, Start Num: 27

Candidate Starts for Reindeer_55:

(7, 39291), (Start: 27 @39414 has 14 MA's), (46, 39501), (47, 39504),

Gene: Rifter_70 Start: 39766, Stop: 39587, Start Num: 26

Candidate Starts for Rifter_70:

(Start: 26 @39766 has 60 MA's), (36, 39733),

Gene: Roary_74 Start: 40972, Stop: 40811, Start Num: 26

Candidate Starts for Roary_74:

(Start: 26 @40972 has 60 MA's), (47, 40888), (48, 40876), (55, 40843), (59, 40831),

Gene: Roksolana_71 Start: 40600, Stop: 40421, Start Num: 26

Candidate Starts for Roksolana_71:

(8, 40717), (14, 40645), (Start: 15 @40639 has 1 MA's), (Start: 19 @40627 has 4 MA's), (Start: 26 @40600 has 60 MA's), (36, 40567),

Gene: Saintus_68 Start: 37637, Stop: 37476, Start Num: 26

Candidate Starts for Saintus_68:

(Start: 26 @37637 has 60 MA's), (47, 37553), (55, 37508), (59, 37496),

Gene: SheaKeira_65 Start: 40520, Stop: 40344, Start Num: 23

Candidate Starts for SheaKeira_65:

(1, 40793), (Start: 23 @40520 has 2 MA's), (41, 40469), (42, 40454),

Gene: SheckWes_42 Start: 28660, Stop: 28454, Start Num: 17

Candidate Starts for SheckWes_42:

(Start: 17 @28660 has 13 MA's), (36, 28594), (54, 28504), (57, 28495), (62, 28480),

Gene: Skinny_54 Start: 38641, Stop: 38814, Start Num: 27

Candidate Starts for Skinny_54:

(Start: 27 @38641 has 14 MA's), (34, 38665), (44, 38713), (47, 38731),

Gene: SlimJimmy_52 Start: 38195, Stop: 38368, Start Num: 27

Candidate Starts for SlimJimmy_52:

(Start: 27 @38195 has 14 MA's), (34, 38219), (44, 38267), (47, 38285),

Gene: Smeadley_73 Start: 40833, Stop: 40672, Start Num: 26

Candidate Starts for Smeadley_73:

(Start: 26 @40833 has 60 MA's), (47, 40749), (55, 40704), (59, 40692),

Gene: SmellyB_69 Start: 40260, Stop: 40054, Start Num: 19

Candidate Starts for SmellyB_69:

(11, 40335), (14, 40278), (Start: 15 @40272 has 1 MA's), (Start: 19 @40260 has 4 MA's), (Start: 26 @40233 has 60 MA's), (36, 40200),

Gene: SororFago_69 Start: 42242, Stop: 42048, Start Num: 26

Candidate Starts for SororFago_69:

(Start: 26 @42242 has 60 MA's), (36, 42209), (48, 42146), (53, 42119), (55, 42113),

Gene: Stephig9_72 Start: 40770, Stop: 40612, Start Num: 26

Candidate Starts for Stephig9_72:

(Start: 26 @40770 has 60 MA's), (39, 40728), (47, 40686), (55, 40641), (59, 40629), (60, 40626),

Gene: SummitAcademy_39 Start: 28702, Stop: 28496, Start Num: 17

Candidate Starts for SummitAcademy_39:

(Start: 17 @28702 has 13 MA's), (36, 28636), (54, 28546), (57, 28537), (62, 28522),

Gene: SuperAwesome_69 Start: 40265, Stop: 40059, Start Num: 19

Candidate Starts for SuperAwesome_69:

(11, 40340), (14, 40283), (Start: 15 @40277 has 1 MA's), (Start: 19 @40265 has 4 MA's), (Start: 26 @40238 has 60 MA's), (36, 40205),

Gene: SuperCallie99_66 Start: 40079, Stop: 39906, Start Num: 26

Candidate Starts for SuperCallie99_66:

(Start: 26 @40079 has 60 MA's), (36, 40052),

Gene: ToneTone_67 Start: 40165, Stop: 39986, Start Num: 26
Candidate Starts for ToneTone_67:
(Start: 26 @40165 has 60 MA's), (36, 40132),

Gene: Trixie_66 Start: 41830, Stop: 41654, Start Num: 26
Candidate Starts for Trixie_66:
(Start: 26 @41830 has 60 MA's), (45, 41758), (53, 41713),

Gene: Tucker_70 Start: 40368, Stop: 40189, Start Num: 26
Candidate Starts for Tucker_70:
(Start: 26 @40368 has 60 MA's), (36, 40335),

Gene: TyDawg_53 Start: 38212, Stop: 38385, Start Num: 27
Candidate Starts for TyDawg_53:
(Start: 27 @38212 has 14 MA's), (34, 38236), (44, 38284), (47, 38302),

Gene: Vine_42 Start: 29438, Stop: 29232, Start Num: 17
Candidate Starts for Vine_42:
(Start: 17 @29438 has 13 MA's), (36, 29372), (54, 29282), (57, 29273), (62, 29258),

Gene: VohminGhazi_69 Start: 40234, Stop: 40055, Start Num: 26
Candidate Starts for VohminGhazi_69:
(11, 40336), (14, 40279), (Start: 15 @40273 has 1 MA's), (Start: 19 @40261 has 4 MA's), (Start: 26 @40234 has 60 MA's), (36, 40201),

Gene: Wiks_69 Start: 40236, Stop: 40057, Start Num: 26
Candidate Starts for Wiks_69:
(Start: 26 @40236 has 60 MA's), (36, 40203),

Gene: WunderPhul_70 Start: 40234, Stop: 40055, Start Num: 26
Candidate Starts for WunderPhul_70:
(Start: 26 @40234 has 60 MA's), (36, 40201),

Gene: Yecey3_72 Start: 41315, Stop: 41127, Start Num: 25
Candidate Starts for Yecey3_72:
(Start: 25 @41315 has 2 MA's), (36, 41282),

Gene: Yokurt_69 Start: 40236, Stop: 40057, Start Num: 26
Candidate Starts for Yokurt_69:
(Start: 26 @40236 has 60 MA's), (36, 40203),

Gene: Yummy_40 Start: 27287, Stop: 27084, Start Num: 20
Candidate Starts for Yummy_40:
(3, 27479), (Start: 20 @27287 has 4 MA's), (39, 27227), (42, 27209),

Gene: Yvonnetastic_130 Start: 73750, Stop: 73998, Start Num: 17
Candidate Starts for Yvonnetastic_130:
(Start: 17 @73750 has 13 MA's), (29, 73792), (50, 73897), (56, 73918), (63, 73942), (64, 73951),

Gene: Zaka_70 Start: 40236, Stop: 40057, Start Num: 26
Candidate Starts for Zaka_70:
(Start: 26 @40236 has 60 MA's), (36, 40203),

Gene: Zimmer_65 Start: 42012, Stop: 41815, Start Num: 26

Candidate Starts for Zimmer_65:

(8, 42129), (10, 42126), (Start: 26 @42012 has 60 MA's), (36, 41979),

Gene: Zulu_71 Start: 40614, Stop: 40435, Start Num: 26

Candidate Starts for Zulu_71:

(Start: 26 @40614 has 60 MA's), (36, 40581),