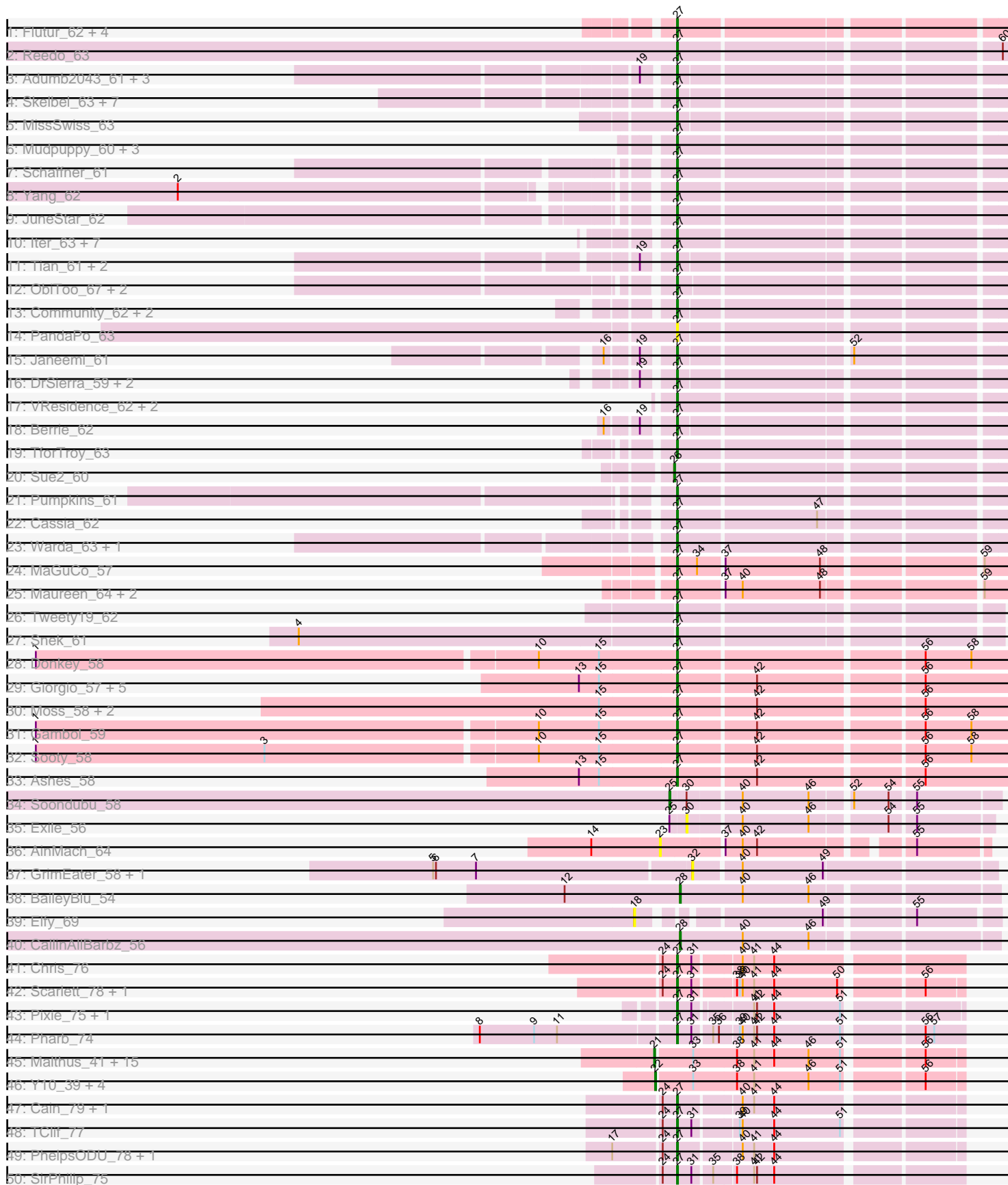


Pham 296360



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 296360 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296360 has 126 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Flutur_62, Simpson_66, Tallboi_62, Joemato_63, Nitro_63
- Track 2 : Reedo_63
- Track 3 : Adumb2043_61, Amploria_62, AEgle_60, Turab_61
- Track 4 : Skelbel_63, Eraser_62, Jstan_63, Asa16_62, London_62, Niobe_62, Elezi_61, Subaru_62
- Track 5 : MissSwiss_63
- Track 6 : Mudpuppy_60, Lego_62, Kaylissa_64, Lizalica_61
- Track 7 : Schaffner_61
- Track 8 : Yang_62
- Track 9 : JuneStar_62
- Track 10 : Iter_63, AGrandiflora_64, Cyan_63, Tutumahutu_64, Ascela_64, Powerpuff_64, YesChef_62, JohnDoe_63
- Track 11 : Tian_61, Pixelle_62, Amyev_62
- Track 12 : ObiToo_67, IttyBittyPiggy_62, Crewmate_67
- Track 13 : Community_62, Tuck_62, Phives_63
- Track 14 : PandaPo_63
- Track 15 : Janeemi_61
- Track 16 : DrSierra_59, KeAlii_60, Wildwest_58
- Track 17 : VResidence_62, DrManhattan_65, Adolin_64
- Track 18 : Berrie_62
- Track 19 : TforTroy_63
- Track 20 : Sue2_60
- Track 21 : Pumpkins_61
- Track 22 : Cassia_62
- Track 23 : Warda_63, Tbone_62
- Track 24 : MaGuCo_57
- Track 25 : Maureen_64, IUFootball_64, Liebe_64
- Track 26 : Tweety19_62
- Track 27 : Snek_61
- Track 28 : Donkey_58
- Track 29 : Giorgio_57, Gumpizza_57, RockScotty_57, Mysterium_57, Stuu_58, Beaupre_57
- Track 30 : Moss_58, Halsey_58, SpecialK_58
- Track 31 : Gambol_59
- Track 32 : Sooty_58
- Track 33 : Ashes_58
- Track 34 : Soondubu_58

- Track 35 : Exile_56
- Track 36 : AinMach_64
- Track 37 : GrimEater_58, Jankie_60
- Track 38 : BaileyBlu_54
- Track 39 : Elfy_69
- Track 40 : CallinAllBarbz_56
- Track 41 : Chris_76
- Track 42 : Scarlett_78, KiSi_78
- Track 43 : Pixie_75, TBond007_72
- Track 44 : Pharb_74
- Track 45 : Malthus_41, Mitti_40, YasnayaPolyana_40, Cheetobro_40, Fionnbharth_40, Kraw_40, Chancellor_40, Lebo14_40, Wintermute_40, Qhanda_41, Eponine_42, OmniCritical_39, SamScheppers_39, Slarp_40, DanSyl44_43, Taquito_40
- Track 46 : Y10_39, Juliette_42, JF1_40, Y2_39, Ruthiejr_41
- Track 47 : Cain_79, Bryler_79
- Track 48 : TClif_77
- Track 49 : PhelpsODU_78, Unicorn_78
- Track 50 : SirPhilip_75
- Track 51 : Tigress9_81
- Track 52 : Krueger_80
- Track 53 : Sunflower1121_81, Shadow1_80
- Track 54 : Phrank_79, Tierra_79
- Track 55 : Syra333_79
- Track 56 : Nanosmite_147

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

The start number called the most often in the published annotations is 27, it was called in 80 of the 105 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AEgle_60, AGrandiflora_64, Adolin_64, Adumb2043_61, Amploria_62, Amyev_62, Asa16_62, Ascela_64, Ashes_58, Beaupre_57, Berrie_62, Bryler_79, Cain_79, Cassia_62, Chris_76, Community_62, Crewmate_67, Cyan_63, Donkey_58, DrManhattan_65, DrSierra_59, Elezi_61, Eraser_62, Flutur_62, Gambol_59, Giorgio_57, Gumpizza_57, Halsey_58, IUFootball_64, Iter_63, IttyBittyPiggy_62, Janeemi_61, Joemato_63, JohnDoe_63, Jstan_63, JuneStar_62, Kaylissa_64, KeAlii_60, KiSi_78, Lego_62, Liebe_64, Lizalica_61, London_62, MaGuCo_57, Maureen_64, MissSwiss_63, Moss_58, Mudpuppy_60, Mysterium_57, Niobe_62, Nitro_63, ObiToo_67, PandaPo_63, Pharb_74, PhelpsODU_78, Phives_63, Phrank_79, Pixelle_62, Pixie_75, Powerpuff_64, Pumpkins_61, Reedo_63, RockScotty_57, Scarlett_78, Schaffner_61, Shadow1_80, Simpson_66, SirPhilip_75, Skelbel_63, Snek_61, Sooty_58, SpecialK_58, Stuu_58, Subaru_62, Sunflower1121_81, Syra333_79, TBond007_72, TClif_77, Tallboi_62, Tbone_62, TforTroy_63, Tian_61, Tierra_79, Tigress9_81, Tuck_62, Turab_61, Tutumahutu_64, Tweety19_62, Unicorn_78, VResidence_62, Warda_63, Wildwest_58, Yang_62, YesChef_62,

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

- Krueger_80,

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

- AinMach_64, BaileyBlu_54, CallinAllBarbz_56, Chancellor_40, Cheetobro_40, DanSyl44_43, Elfy_69, Eponine_42, Exile_56, Fionnbharth_40, GrimEater_58, JF1_40, Jankie_60, Juliette_42, Kraw_40, Lebo14_40, Malthus_41, Mitti_40, Nanosmite_147, OmniCritical_39, Qhanda_41, Ruthiejr_41, SamScheppers_39, Slarp_40, Soondubu_58, Sue2_60, Taquito_40, Wintermute_40, Y10_39, Y2_39, YasnayaPolyana_40,

Summary by start number:

Start 18:

- Found in 1 of 126 (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: Elfy_69 (FP),

Start 21:

- Found in 16 of 126 (12.7%) of genes in pham
- Manual Annotations of this start: 14 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chancellor_40 (K4), Cheetobro_40 (K4), DanSyl44_43 (K4), Eponine_42 (K4), Fionnbharth_40 (K4), Kraw_40 (K4), Lebo14_40 (K4), Malthus_41 (K4), Mitti_40 (K4), OmniCritical_39 (K4), Qhanda_41 (K4), SamScheppers_39 (K4), Slarp_40 (K4), Taquito_40 (K4), Wintermute_40 (K4), YasnayaPolyana_40 (K4),

Start 22:

- Found in 5 of 126 (4.0%) of genes in pham
- Manual Annotations of this start: 5 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JF1_40 (K4), Juliette_42 (K4), Ruthiejr_41 (K4), Y10_39 (K4), Y2_39 (K4),

Start 23:

- Found in 1 of 126 (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: AinMach_64 (AZ7),

Start 24:

- Found in 16 of 126 (12.7%) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Krueger_80 (K6),

Start 25:

- Found in 2 of 126 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Soondubu_58 (AZ6),

Start 26:

- Found in 1 of 126 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sue2_60 (AZ1),

Start 27:

- Found in 95 of 126 (75.4%) of genes in pham
- Manual Annotations of this start: 80 of 105
- Called 98.9% of time when present
- Phage (with cluster) where this start called: AEgle_60 (AZ1), AGrandiflora_64 (AZ1), Adolin_64 (AZ1), Adumb2043_61 (AZ1), Amploria_62 (AZ1), Amyev_62 (AZ1), Asa16_62 (AZ1), Ascela_64 (AZ1), Ashes_58 (AZ5), Beaupre_57 (AZ5), Berrie_62 (AZ1), Bryler_79 (K6), Cain_79 (K6), Cassia_62 (AZ1), Chris_76 (K1), Community_62 (AZ1), Crewmate_67 (AZ1), Cyan_63 (AZ1), Donkey_58 (AZ5), DrManhattan_65 (AZ1), DrSierra_59 (AZ1), Elezi_61 (AZ1), Eraser_62 (AZ1), Flutur_62 (AZ), Gambol_59 (AZ5), Giorgio_57 (AZ5), Gumpizza_57 (AZ5), Halsey_58 (AZ5), IUFootball_64 (AZ2), Iter_63 (AZ1), IttyBittyPiggy_62 (AZ1), Janeemi_61 (AZ1), Joemato_63 (AZ1), JohnDoe_63 (AZ1), Jstan_63 (AZ1), JuneStar_62 (AZ1), Kaylissa_64 (AZ1), KeAlii_60 (AZ1), KiSi_78 (K1), Lego_62 (AZ1), Liebe_64 (AZ2), Lizalica_61 (AZ1), London_62 (AZ1), MaGuCo_57 (AZ2), Maureen_64 (AZ2), MissSwiss_63 (AZ1), Moss_58 (AZ5), Mudpuppy_60 (AZ1), Mysterium_57 (AZ5), Niobe_62 (AZ1), Nitro_63 (AZ1), ObiToo_67 (AZ1), PandaPo_63 (AZ1), Pharb_74 (K3), PhelpsODU_78 (K6), Phives_63 (AZ1), Phrank_79 (K6), Pixelle_62 (AZ1), Pixie_75 (K3), Powerpuff_64 (AZ1), Pumpkins_61 (AZ1), Reedo_63 (AZ1), RockScotty_57 (AZ5), Scarlett_78 (K1), Schaffner_61 (AZ1), Shadow1_80 (K6), Simpson_66 (AZ1), SirPhilip_75 (K6), Skelbel_63 (AZ1), Snek_61 (AZ3), Sooty_58 (AZ5), SpecialK_58 (AZ5), Stuu_58 (AZ5), Subaru_62 (AZ1), Sunflower1121_81 (K6), Syra333_79 (K6), TBond007_72 (K3), TClif_77 (K6), Tallboi_62 (AZ1), Tbone_62 (AZ1), TforTroy_63 (AZ1), Tian_61 (AZ1), Tierra_79 (K6), Tigress9_81 (K6), Tuck_62 (AZ1), Turab_61 (AZ1), Tutumahutu_64 (AZ1), Tweety19_62 (AZ3), Unicorn_78 (K6), VResidence_62 (AZ1), Warda_63 (AZ1), Wildwest_58 (AZ1), Yang_62 (AZ1), YesChef_62 (AZ1),

Start 28:

- Found in 2 of 126 (1.6%) of genes in pham
- Manual Annotations of this start: 2 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_54 (FP), CallinAllBarbz_56 (FP),

Start 29:

- Found in 1 of 126 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 105
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nanosmite_147 (M3),

Start 30:

- Found in 2 of 126 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Exile_56 (AZ6),

Start 32:

- Found in 2 of 126 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GrimEater_58 (FP), Jankie_60 (FP),

Summary by clusters:

There are 13 clusters represented in this pham: FP, AZ, K3, K1, K6, M3, K4, AZ1, AZ2, AZ3, AZ5, AZ6, AZ7,

Info for manual annotations of cluster AZ1:

- Start number 26 was manually annotated 1 time for cluster AZ1.
- Start number 27 was manually annotated 45 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 27 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 27 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ5:

- Start number 27 was manually annotated 13 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 25 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster FP:

- Start number 28 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster K1:

- Start number 27 was manually annotated 3 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 27 was manually annotated 3 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 21 was manually annotated 14 times for cluster K4.
- Start number 22 was manually annotated 5 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 24 was manually annotated 1 time for cluster K6.
- Start number 27 was manually annotated 11 times for cluster K6.

Info for manual annotations of cluster M3:

- Start number 29 was manually annotated 1 time for cluster M3.

Gene Information:

Gene: AEgle_60 Start: 40834, Stop: 41145, Start Num: 27
Candidate Starts for AEgle_60:
(19, 40807), (Start: 27 @40834 has 80 MA's),

Gene: AGrandiflora_64 Start: 41727, Stop: 42041, Start Num: 27
Candidate Starts for AGrandiflora_64:
(Start: 27 @41727 has 80 MA's),

Gene: Adolin_64 Start: 40621, Stop: 40935, Start Num: 27
Candidate Starts for Adolin_64:
(Start: 27 @40621 has 80 MA's),

Gene: Adumb2043_61 Start: 40858, Stop: 41169, Start Num: 27
Candidate Starts for Adumb2043_61:
(19, 40831), (Start: 27 @40858 has 80 MA's),

Gene: AinMach_64 Start: 40671, Stop: 40973, Start Num: 23
Candidate Starts for AinMach_64:
(14, 40599), (23, 40671), (37, 40731), (40, 40749), (42, 40764), (55, 40902),

Gene: Amploria_62 Start: 41038, Stop: 41349, Start Num: 27
Candidate Starts for Amploria_62:
(19, 41011), (Start: 27 @41038 has 80 MA's),

Gene: Amyev_62 Start: 42418, Stop: 42732, Start Num: 27
Candidate Starts for Amyev_62:
(19, 42391), (Start: 27 @42418 has 80 MA's),

Gene: Asa16_62 Start: 41419, Stop: 41730, Start Num: 27
Candidate Starts for Asa16_62:
(Start: 27 @41419 has 80 MA's),

Gene: Ascela_64 Start: 41907, Stop: 42221, Start Num: 27
Candidate Starts for Ascela_64:
(Start: 27 @41907 has 80 MA's),

Gene: Ashes_58 Start: 38079, Stop: 38405, Start Num: 27
Candidate Starts for Ashes_58:
(13, 37980), (15, 38001), (Start: 27 @38079 has 80 MA's), (42, 38157), (56, 38319),

Gene: BaileyBlu_54 Start: 37900, Stop: 38214, Start Num: 28
Candidate Starts for BaileyBlu_54:
(12, 37780), (Start: 28 @37900 has 2 MA's), (40, 37966), (46, 38035),

Gene: Beaupre_57 Start: 37889, Stop: 38215, Start Num: 27
Candidate Starts for Beaupre_57:
(13, 37790), (15, 37811), (Start: 27 @37889 has 80 MA's), (42, 37967), (56, 38129),

Gene: Berrie_62 Start: 41517, Stop: 41828, Start Num: 27
Candidate Starts for Berrie_62:
(16, 41463), (19, 41490), (Start: 27 @41517 has 80 MA's),

Gene: Bryler_79 Start: 49944, Stop: 50216, Start Num: 27

Candidate Starts for Bryler_79:

(Start: 24 @49929 has 1 MA's), (Start: 27 @49944 has 80 MA's), (40, 50004), (41, 50016), (44, 50037),

Gene: Cain_79 Start: 49932, Stop: 50204, Start Num: 27

Candidate Starts for Cain_79:

(Start: 24 @49917 has 1 MA's), (Start: 27 @49932 has 80 MA's), (40, 49992), (41, 50004), (44, 50025),

Gene: CallinAllBarbz_56 Start: 38887, Stop: 39201, Start Num: 28

Candidate Starts for CallinAllBarbz_56:

(Start: 28 @38887 has 2 MA's), (40, 38953), (46, 39022),

Gene: Cassia_62 Start: 41532, Stop: 41846, Start Num: 27

Candidate Starts for Cassia_62:

(Start: 27 @41532 has 80 MA's), (47, 41673),

Gene: Chancellor_40 Start: 31427, Stop: 31726, Start Num: 21

Candidate Starts for Chancellor_40:

(Start: 21 @31427 has 14 MA's), (33, 31463), (38, 31508), (41, 31526), (44, 31547), (46, 31583), (51, 31616), (56, 31688),

Gene: Cheetobro_40 Start: 31424, Stop: 31723, Start Num: 21

Candidate Starts for Cheetobro_40:

(Start: 21 @31424 has 14 MA's), (33, 31460), (38, 31505), (41, 31523), (44, 31544), (46, 31580), (51, 31613), (56, 31685),

Gene: Chris_76 Start: 50718, Stop: 50993, Start Num: 27

Candidate Starts for Chris_76:

(Start: 24 @50703 has 1 MA's), (Start: 27 @50718 has 80 MA's), (31, 50733), (40, 50778), (41, 50790), (44, 50811),

Gene: Community_62 Start: 41790, Stop: 42101, Start Num: 27

Candidate Starts for Community_62:

(Start: 27 @41790 has 80 MA's),

Gene: Crewmate_67 Start: 42141, Stop: 42452, Start Num: 27

Candidate Starts for Crewmate_67:

(Start: 27 @42141 has 80 MA's),

Gene: Cyan_63 Start: 41471, Stop: 41785, Start Num: 27

Candidate Starts for Cyan_63:

(Start: 27 @41471 has 80 MA's),

Gene: DanSyl44_43 Start: 32293, Stop: 32592, Start Num: 21

Candidate Starts for DanSyl44_43:

(Start: 21 @32293 has 14 MA's), (33, 32329), (38, 32374), (41, 32392), (44, 32413), (46, 32449), (51, 32482), (56, 32554),

Gene: Donkey_58 Start: 37919, Stop: 38245, Start Num: 27

Candidate Starts for Donkey_58:

(1, 37262), (10, 37778), (15, 37841), (Start: 27 @37919 has 80 MA's), (56, 38159), (58, 38207),

Gene: DrManhattan_65 Start: 40175, Stop: 40489, Start Num: 27

Candidate Starts for DrManhattan_65:

(Start: 27 @40175 has 80 MA's),

Gene: DrSierra_59 Start: 40307, Stop: 40618, Start Num: 27

Candidate Starts for DrSierra_59:

(19, 40280), (Start: 27 @40307 has 80 MA's),

Gene: Elezi_61 Start: 41176, Stop: 41487, Start Num: 27

Candidate Starts for Elezi_61:

(Start: 27 @41176 has 80 MA's),

Gene: Elfy_69 Start: 40687, Stop: 41013, Start Num: 18

Candidate Starts for Elfy_69:

(18, 40687), (49, 40852), (55, 40933),

Gene: Eponine_42 Start: 32180, Stop: 32479, Start Num: 21

Candidate Starts for Eponine_42:

(Start: 21 @32180 has 14 MA's), (33, 32216), (38, 32261), (41, 32279), (44, 32300), (46, 32336), (51, 32369), (56, 32441),

Gene: Eraser_62 Start: 41426, Stop: 41737, Start Num: 27

Candidate Starts for Eraser_62:

(Start: 27 @41426 has 80 MA's),

Gene: Exile_56 Start: 42346, Stop: 42639, Start Num: 30

Candidate Starts for Exile_56:

(Start: 25 @42331 has 1 MA's), (30, 42346), (40, 42397), (46, 42466), (54, 42538), (55, 42562),

Gene: Fionnbharth_40 Start: 31415, Stop: 31714, Start Num: 21

Candidate Starts for Fionnbharth_40:

(Start: 21 @31415 has 14 MA's), (33, 31451), (38, 31496), (41, 31514), (44, 31535), (46, 31571), (51, 31604), (56, 31676),

Gene: Flutur_62 Start: 41752, Stop: 42066, Start Num: 27

Candidate Starts for Flutur_62:

(Start: 27 @41752 has 80 MA's),

Gene: Gambol_59 Start: 37938, Stop: 38264, Start Num: 27

Candidate Starts for Gambol_59:

(1, 37281), (10, 37797), (15, 37860), (Start: 27 @37938 has 80 MA's), (42, 38016), (56, 38178), (58, 38226),

Gene: Giorgio_57 Start: 37872, Stop: 38198, Start Num: 27

Candidate Starts for Giorgio_57:

(13, 37773), (15, 37794), (Start: 27 @37872 has 80 MA's), (42, 37950), (56, 38112),

Gene: GrimEater_58 Start: 38861, Stop: 39160, Start Num: 32

Candidate Starts for GrimEater_58:

(5, 38597), (6, 38600), (7, 38642), (32, 38861), (40, 38906), (49, 38990),

Gene: Gumpizza_57 Start: 37828, Stop: 38154, Start Num: 27

Candidate Starts for Gumpizza_57:

(13, 37729), (15, 37750), (Start: 27 @37828 has 80 MA's), (42, 37906), (56, 38068),

Gene: Halsey_58 Start: 38069, Stop: 38395, Start Num: 27
Candidate Starts for Halsey_58:
(15, 37991), (Start: 27 @38069 has 80 MA's), (42, 38147), (56, 38309),

Gene: IUFootball_64 Start: 43444, Stop: 43758, Start Num: 27
Candidate Starts for IUFootball_64:
(Start: 27 @43444 has 80 MA's), (37, 43489), (40, 43507), (48, 43588), (59, 43735),

Gene: Iter_63 Start: 41678, Stop: 41992, Start Num: 27
Candidate Starts for Iter_63:
(Start: 27 @41678 has 80 MA's),

Gene: IttyBittyPiggy_62 Start: 39776, Stop: 40090, Start Num: 27
Candidate Starts for IttyBittyPiggy_62:
(Start: 27 @39776 has 80 MA's),

Gene: JF1_40 Start: 31413, Stop: 31712, Start Num: 22
Candidate Starts for JF1_40:
(Start: 22 @31413 has 5 MA's), (33, 31449), (38, 31494), (41, 31512), (46, 31569), (51, 31602), (56, 31674),

Gene: Janeemi_61 Start: 41291, Stop: 41602, Start Num: 27
Candidate Starts for Janeemi_61:
(16, 41237), (19, 41264), (Start: 27 @41291 has 80 MA's), (52, 41456),

Gene: Jankie_60 Start: 39043, Stop: 39342, Start Num: 32
Candidate Starts for Jankie_60:
(5, 38779), (6, 38782), (7, 38824), (32, 39043), (40, 39088), (49, 39172),

Gene: Joemato_63 Start: 41527, Stop: 41841, Start Num: 27
Candidate Starts for Joemato_63:
(Start: 27 @41527 has 80 MA's),

Gene: JohnDoe_63 Start: 41565, Stop: 41879, Start Num: 27
Candidate Starts for JohnDoe_63:
(Start: 27 @41565 has 80 MA's),

Gene: Jstan_63 Start: 41180, Stop: 41491, Start Num: 27
Candidate Starts for Jstan_63:
(Start: 27 @41180 has 80 MA's),

Gene: Juliette_42 Start: 31572, Stop: 31871, Start Num: 22
Candidate Starts for Juliette_42:
(Start: 22 @31572 has 5 MA's), (33, 31608), (38, 31653), (41, 31671), (46, 31728), (51, 31761), (56, 31833),

Gene: JuneStar_62 Start: 42627, Stop: 42941, Start Num: 27
Candidate Starts for JuneStar_62:
(Start: 27 @42627 has 80 MA's),

Gene: Kaylissa_64 Start: 41927, Stop: 42241, Start Num: 27
Candidate Starts for Kaylissa_64:
(Start: 27 @41927 has 80 MA's),

Gene: KeAlii_60 Start: 39873, Stop: 40187, Start Num: 27

Candidate Starts for KeAlii_60:

(19, 39846), (Start: 27 @39873 has 80 MA's),

Gene: KiSi_78 Start: 50706, Stop: 50978, Start Num: 27

Candidate Starts for KiSi_78:

(Start: 24 @50691 has 1 MA's), (Start: 27 @50706 has 80 MA's), (31, 50721), (38, 50760), (39, 50763), (40, 50766), (41, 50778), (44, 50799), (50, 50865), (56, 50940),

Gene: Kraw_40 Start: 31339, Stop: 31638, Start Num: 21

Candidate Starts for Kraw_40:

(Start: 21 @31339 has 14 MA's), (33, 31375), (38, 31420), (41, 31438), (44, 31459), (46, 31495), (51, 31528), (56, 31600),

Gene: Krueger_80 Start: 50443, Stop: 50730, Start Num: 24

Candidate Starts for Krueger_80:

(Start: 24 @50443 has 1 MA's), (Start: 27 @50458 has 80 MA's), (31, 50473), (35, 50491), (40, 50518), (41, 50530), (44, 50551),

Gene: Lebo14_40 Start: 31428, Stop: 31727, Start Num: 21

Candidate Starts for Lebo14_40:

(Start: 21 @31428 has 14 MA's), (33, 31464), (38, 31509), (41, 31527), (44, 31548), (46, 31584), (51, 31617), (56, 31689),

Gene: Lego_62 Start: 41246, Stop: 41560, Start Num: 27

Candidate Starts for Lego_62:

(Start: 27 @41246 has 80 MA's),

Gene: Liebe_64 Start: 43443, Stop: 43757, Start Num: 27

Candidate Starts for Liebe_64:

(Start: 27 @43443 has 80 MA's), (37, 43488), (40, 43506), (48, 43587), (59, 43734),

Gene: Lizalica_61 Start: 40721, Stop: 41032, Start Num: 27

Candidate Starts for Lizalica_61:

(Start: 27 @40721 has 80 MA's),

Gene: London_62 Start: 41417, Stop: 41728, Start Num: 27

Candidate Starts for London_62:

(Start: 27 @41417 has 80 MA's),

Gene: MaGuCo_57 Start: 41443, Stop: 41757, Start Num: 27

Candidate Starts for MaGuCo_57:

(Start: 27 @41443 has 80 MA's), (34, 41464), (37, 41488), (48, 41587), (59, 41734),

Gene: Malthus_41 Start: 31339, Stop: 31638, Start Num: 21

Candidate Starts for Malthus_41:

(Start: 21 @31339 has 14 MA's), (33, 31375), (38, 31420), (41, 31438), (44, 31459), (46, 31495), (51, 31528), (56, 31600),

Gene: Maureen_64 Start: 43442, Stop: 43756, Start Num: 27

Candidate Starts for Maureen_64:

(Start: 27 @43442 has 80 MA's), (37, 43487), (40, 43505), (48, 43586), (59, 43733),

Gene: MissSwiss_63 Start: 40182, Stop: 40493, Start Num: 27

Candidate Starts for MissSwiss_63:

(Start: 27 @40182 has 80 MA's),

Gene: Mitti_40 Start: 31340, Stop: 31639, Start Num: 21

Candidate Starts for Mitti_40:

(Start: 21 @31340 has 14 MA's), (33, 31376), (38, 31421), (41, 31439), (44, 31460), (46, 31496), (51, 31529), (56, 31601),

Gene: Moss_58 Start: 38016, Stop: 38342, Start Num: 27

Candidate Starts for Moss_58:

(15, 37938), (Start: 27 @38016 has 80 MA's), (42, 38094), (56, 38256),

Gene: Mudpuppy_60 Start: 41493, Stop: 41807, Start Num: 27

Candidate Starts for Mudpuppy_60:

(Start: 27 @41493 has 80 MA's),

Gene: Mysterium_57 Start: 37857, Stop: 38183, Start Num: 27

Candidate Starts for Mysterium_57:

(13, 37758), (15, 37779), (Start: 27 @37857 has 80 MA's), (42, 37935), (56, 38097),

Gene: Nanosmite_147 Start: 72834, Stop: 72535, Start Num: 29

Candidate Starts for Nanosmite_147:

(20, 72867), (Start: 29 @72834 has 1 MA's), (43, 72753), (45, 72735), (53, 72660), (55, 72603),

Gene: Niobe_62 Start: 41420, Stop: 41731, Start Num: 27

Candidate Starts for Niobe_62:

(Start: 27 @41420 has 80 MA's),

Gene: Nitro_63 Start: 42114, Stop: 42428, Start Num: 27

Candidate Starts for Nitro_63:

(Start: 27 @42114 has 80 MA's),

Gene: ObiToo_67 Start: 41757, Stop: 42068, Start Num: 27

Candidate Starts for ObiToo_67:

(Start: 27 @41757 has 80 MA's),

Gene: OmniCritical_39 Start: 31324, Stop: 31623, Start Num: 21

Candidate Starts for OmniCritical_39:

(Start: 21 @31324 has 14 MA's), (33, 31360), (38, 31405), (41, 31423), (44, 31444), (46, 31480), (51, 31513), (56, 31585),

Gene: PandaPo_63 Start: 40189, Stop: 40500, Start Num: 27

Candidate Starts for PandaPo_63:

(Start: 27 @40189 has 80 MA's),

Gene: Pharb_74 Start: 49614, Stop: 49889, Start Num: 27

Candidate Starts for Pharb_74:

(8, 49416), (9, 49473), (11, 49497), (Start: 27 @49614 has 80 MA's), (31, 49629), (35, 49647), (36, 49653), (39, 49671), (40, 49674), (41, 49686), (42, 49689), (44, 49707), (51, 49776), (56, 49848), (57, 49857),

Gene: PhelpsODU_78 Start: 50059, Stop: 50331, Start Num: 27
Candidate Starts for PhelpsODU_78:
(17, 49996), (Start: 24 @50044 has 1 MA's), (Start: 27 @50059 has 80 MA's), (40, 50119), (41, 50131),
(44, 50152),

Gene: Phives_63 Start: 41905, Stop: 42216, Start Num: 27
Candidate Starts for Phives_63:
(Start: 27 @41905 has 80 MA's),

Gene: Phrank_79 Start: 49919, Stop: 50191, Start Num: 27
Candidate Starts for Phrank_79:
(Start: 24 @49904 has 1 MA's), (Start: 27 @49919 has 80 MA's), (40, 49979), (44, 50012),

Gene: Pixelle_62 Start: 42519, Stop: 42833, Start Num: 27
Candidate Starts for Pixelle_62:
(19, 42492), (Start: 27 @42519 has 80 MA's),

Gene: Pixie_75 Start: 49917, Stop: 50186, Start Num: 27
Candidate Starts for Pixie_75:
(Start: 27 @49917 has 80 MA's), (31, 49932), (41, 49986), (42, 49989), (44, 50007), (51, 50076),

Gene: Powerpuff_64 Start: 42450, Stop: 42764, Start Num: 27
Candidate Starts for Powerpuff_64:
(Start: 27 @42450 has 80 MA's),

Gene: Pumpkins_61 Start: 42050, Stop: 42364, Start Num: 27
Candidate Starts for Pumpkins_61:
(Start: 27 @42050 has 80 MA's),

Gene: Qhanda_41 Start: 31436, Stop: 31735, Start Num: 21
Candidate Starts for Qhanda_41:
(Start: 21 @31436 has 14 MA's), (33, 31472), (38, 31517), (41, 31535), (44, 31556), (46, 31592), (51,
31625), (56, 31697),

Gene: Reedo_63 Start: 40030, Stop: 40344, Start Num: 27
Candidate Starts for Reedo_63:
(Start: 27 @40030 has 80 MA's), (60, 40339),

Gene: RockScotty_57 Start: 37852, Stop: 38178, Start Num: 27
Candidate Starts for RockScotty_57:
(13, 37753), (15, 37774), (Start: 27 @37852 has 80 MA's), (42, 37930), (56, 38092),

Gene: Ruthiejr_41 Start: 31304, Stop: 31603, Start Num: 22
Candidate Starts for Ruthiejr_41:
(Start: 22 @31304 has 5 MA's), (33, 31340), (38, 31385), (41, 31403), (46, 31460), (51, 31493), (56,
31565),

Gene: SamScheppers_39 Start: 31818, Stop: 32117, Start Num: 21
Candidate Starts for SamScheppers_39:
(Start: 21 @31818 has 14 MA's), (33, 31854), (38, 31899), (41, 31917), (44, 31938), (46, 31974), (51,
32007), (56, 32079),

Gene: Scarlett_78 Start: 50566, Stop: 50838, Start Num: 27

Candidate Starts for Scarlett_78:

(Start: 24 @50551 has 1 MA's), (Start: 27 @50566 has 80 MA's), (31, 50581), (38, 50620), (39, 50623), (40, 50626), (41, 50638), (44, 50659), (50, 50725), (56, 50800),

Gene: Schaffner_61 Start: 41733, Stop: 42047, Start Num: 27

Candidate Starts for Schaffner_61:

(Start: 27 @41733 has 80 MA's),

Gene: Shadow1_80 Start: 50598, Stop: 50870, Start Num: 27

Candidate Starts for Shadow1_80:

(Start: 24 @50583 has 1 MA's), (Start: 27 @50598 has 80 MA's), (31, 50613), (35, 50631), (40, 50658), (41, 50670), (44, 50691),

Gene: Simpson_66 Start: 41531, Stop: 41845, Start Num: 27

Candidate Starts for Simpson_66:

(Start: 27 @41531 has 80 MA's),

Gene: SirPhilip_75 Start: 50824, Stop: 51099, Start Num: 27

Candidate Starts for SirPhilip_75:

(Start: 24 @50809 has 1 MA's), (Start: 27 @50824 has 80 MA's), (31, 50839), (35, 50857), (38, 50878), (41, 50896), (42, 50899), (44, 50917),

Gene: Skelbel_63 Start: 41420, Stop: 41731, Start Num: 27

Candidate Starts for Skelbel_63:

(Start: 27 @41420 has 80 MA's),

Gene: Slarp_40 Start: 31427, Stop: 31726, Start Num: 21

Candidate Starts for Slarp_40:

(Start: 21 @31427 has 14 MA's), (33, 31463), (38, 31508), (41, 31526), (44, 31547), (46, 31583), (51, 31616), (56, 31688),

Gene: Snek_61 Start: 38593, Stop: 38904, Start Num: 27

Candidate Starts for Snek_61:

(4, 38203), (Start: 27 @38593 has 80 MA's),

Gene: Soondubu_58 Start: 42991, Stop: 43305, Start Num: 25

Candidate Starts for Soondubu_58:

(Start: 25 @42991 has 1 MA's), (30, 43006), (40, 43057), (46, 43126), (52, 43162), (54, 43198), (55, 43222),

Gene: Sooty_58 Start: 37931, Stop: 38257, Start Num: 27

Candidate Starts for Sooty_58:

(1, 37274), (3, 37514), (10, 37790), (15, 37853), (Start: 27 @37931 has 80 MA's), (42, 38009), (56, 38171), (58, 38219),

Gene: SpecialK_58 Start: 37925, Stop: 38251, Start Num: 27

Candidate Starts for SpecialK_58:

(15, 37847), (Start: 27 @37925 has 80 MA's), (42, 38003), (56, 38165),

Gene: Stuu_58 Start: 38034, Stop: 38360, Start Num: 27

Candidate Starts for Stuu_58:

(13, 37935), (15, 37956), (Start: 27 @38034 has 80 MA's), (42, 38112), (56, 38274),

Gene: Subaru_62 Start: 41176, Stop: 41487, Start Num: 27
Candidate Starts for Subaru_62:
(Start: 27 @41176 has 80 MA's),

Gene: Sue2_60 Start: 39873, Stop: 40190, Start Num: 26
Candidate Starts for Sue2_60:
(Start: 26 @39873 has 1 MA's),

Gene: Sunflower1121_81 Start: 50744, Stop: 51016, Start Num: 27
Candidate Starts for Sunflower1121_81:
(Start: 24 @50729 has 1 MA's), (Start: 27 @50744 has 80 MA's), (31, 50759), (35, 50777), (40, 50804),
(41, 50816), (44, 50837),

Gene: Syra333_79 Start: 50472, Stop: 50744, Start Num: 27
Candidate Starts for Syra333_79:
(Start: 24 @50457 has 1 MA's), (Start: 27 @50472 has 80 MA's), (31, 50487), (35, 50505), (40, 50532),
(41, 50544), (44, 50565),

Gene: TBond007_72 Start: 49916, Stop: 50185, Start Num: 27
Candidate Starts for TBond007_72:
(Start: 27 @49916 has 80 MA's), (31, 49931), (41, 49985), (42, 49988), (44, 50006), (51, 50075),

Gene: TClif_77 Start: 50210, Stop: 50482, Start Num: 27
Candidate Starts for TClif_77:
(Start: 24 @50195 has 1 MA's), (Start: 27 @50210 has 80 MA's), (31, 50225), (39, 50267), (40, 50270),
(44, 50303), (51, 50372),

Gene: Tallboi_62 Start: 41422, Stop: 41733, Start Num: 27
Candidate Starts for Tallboi_62:
(Start: 27 @41422 has 80 MA's),

Gene: Taquito_40 Start: 31813, Stop: 32112, Start Num: 21
Candidate Starts for Taquito_40:
(Start: 21 @31813 has 14 MA's), (33, 31849), (38, 31894), (41, 31912), (44, 31933), (46, 31969), (51,
32002), (56, 32074),

Gene: Tbone_62 Start: 41901, Stop: 42215, Start Num: 27
Candidate Starts for Tbone_62:
(Start: 27 @41901 has 80 MA's),

Gene: TforTroy_63 Start: 41704, Stop: 42018, Start Num: 27
Candidate Starts for TforTroy_63:
(Start: 27 @41704 has 80 MA's),

Gene: Tian_61 Start: 42417, Stop: 42731, Start Num: 27
Candidate Starts for Tian_61:
(19, 42390), (Start: 27 @42417 has 80 MA's),

Gene: Tierra_79 Start: 50730, Stop: 51002, Start Num: 27
Candidate Starts for Tierra_79:
(Start: 24 @50715 has 1 MA's), (Start: 27 @50730 has 80 MA's), (40, 50790), (44, 50823),

Gene: Tigress9_81 Start: 50787, Stop: 51059, Start Num: 27

Candidate Starts for Tigress9_81:

(Start: 24 @50772 has 1 MA's), (Start: 27 @50787 has 80 MA's), (31, 50802), (35, 50820), (40, 50847), (41, 50859), (44, 50880),

Gene: Tuck_62 Start: 41693, Stop: 42004, Start Num: 27

Candidate Starts for Tuck_62:

(Start: 27 @41693 has 80 MA's),

Gene: Turab_61 Start: 40878, Stop: 41189, Start Num: 27

Candidate Starts for Turab_61:

(19, 40851), (Start: 27 @40878 has 80 MA's),

Gene: Tutumahutu_64 Start: 41493, Stop: 41807, Start Num: 27

Candidate Starts for Tutumahutu_64:

(Start: 27 @41493 has 80 MA's),

Gene: Tweety19_62 Start: 38594, Stop: 38905, Start Num: 27

Candidate Starts for Tweety19_62:

(Start: 27 @38594 has 80 MA's),

Gene: Unicorn_78 Start: 50059, Stop: 50331, Start Num: 27

Candidate Starts for Unicorn_78:

(17, 49996), (Start: 24 @50044 has 1 MA's), (Start: 27 @50059 has 80 MA's), (40, 50119), (41, 50131), (44, 50152),

Gene: VResidence_62 Start: 39424, Stop: 39738, Start Num: 27

Candidate Starts for VResidence_62:

(Start: 27 @39424 has 80 MA's),

Gene: Warda_63 Start: 41627, Stop: 41941, Start Num: 27

Candidate Starts for Warda_63:

(Start: 27 @41627 has 80 MA's),

Gene: Wildwest_58 Start: 41296, Stop: 41607, Start Num: 27

Candidate Starts for Wildwest_58:

(19, 41269), (Start: 27 @41296 has 80 MA's),

Gene: Wintermute_40 Start: 31413, Stop: 31712, Start Num: 21

Candidate Starts for Wintermute_40:

(Start: 21 @31413 has 14 MA's), (33, 31449), (38, 31494), (41, 31512), (44, 31533), (46, 31569), (51, 31602), (56, 31674),

Gene: Y10_39 Start: 31413, Stop: 31712, Start Num: 22

Candidate Starts for Y10_39:

(Start: 22 @31413 has 5 MA's), (33, 31449), (38, 31494), (41, 31512), (46, 31569), (51, 31602), (56, 31674),

Gene: Y2_39 Start: 31413, Stop: 31712, Start Num: 22

Candidate Starts for Y2_39:

(Start: 22 @31413 has 5 MA's), (33, 31449), (38, 31494), (41, 31512), (46, 31569), (51, 31602), (56, 31674),

Gene: Yang_62 Start: 41347, Stop: 41661, Start Num: 27

Candidate Starts for Yang_62:
(2, 40882), (Start: 27 @41347 has 80 MA's),

Gene: YasnayaPolyana_40 Start: 31415, Stop: 31714, Start Num: 21

Candidate Starts for YasnayaPolyana_40:
(Start: 21 @31415 has 14 MA's), (33, 31451), (38, 31496), (41, 31514), (44, 31535), (46, 31571), (51, 31604), (56, 31676),

Gene: YesChef_62 Start: 41309, Stop: 41623, Start Num: 27

Candidate Starts for YesChef_62:
(Start: 27 @41309 has 80 MA's),