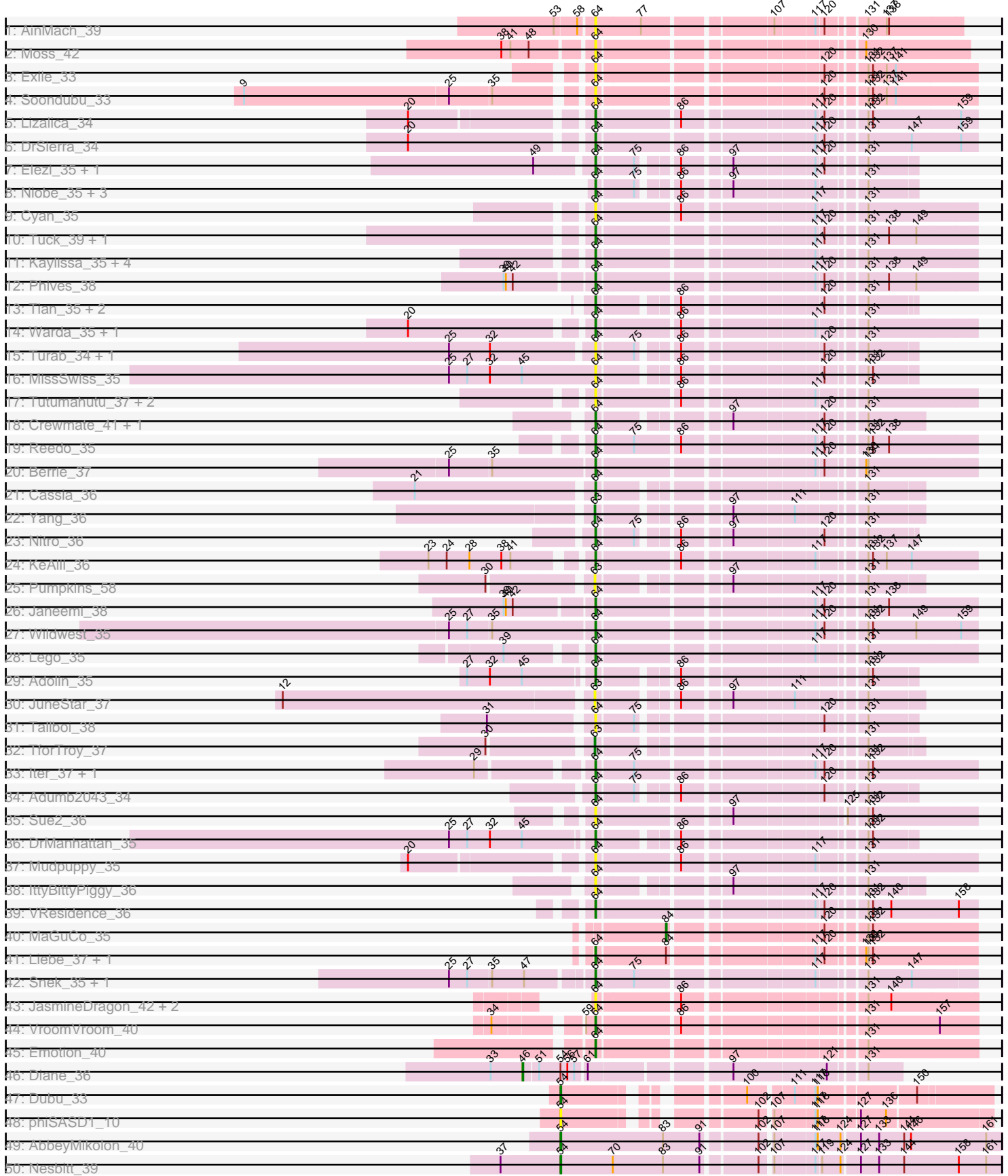
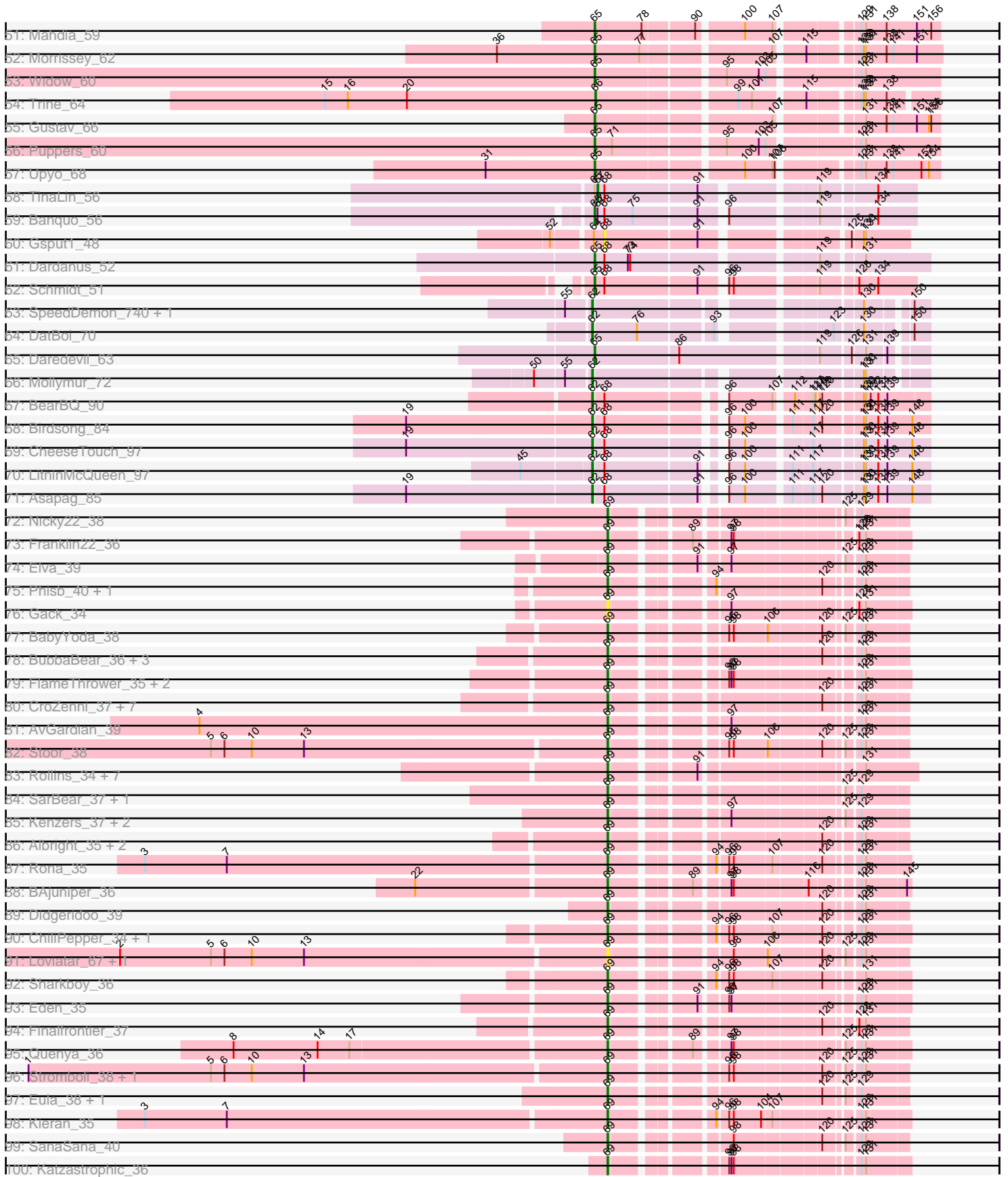


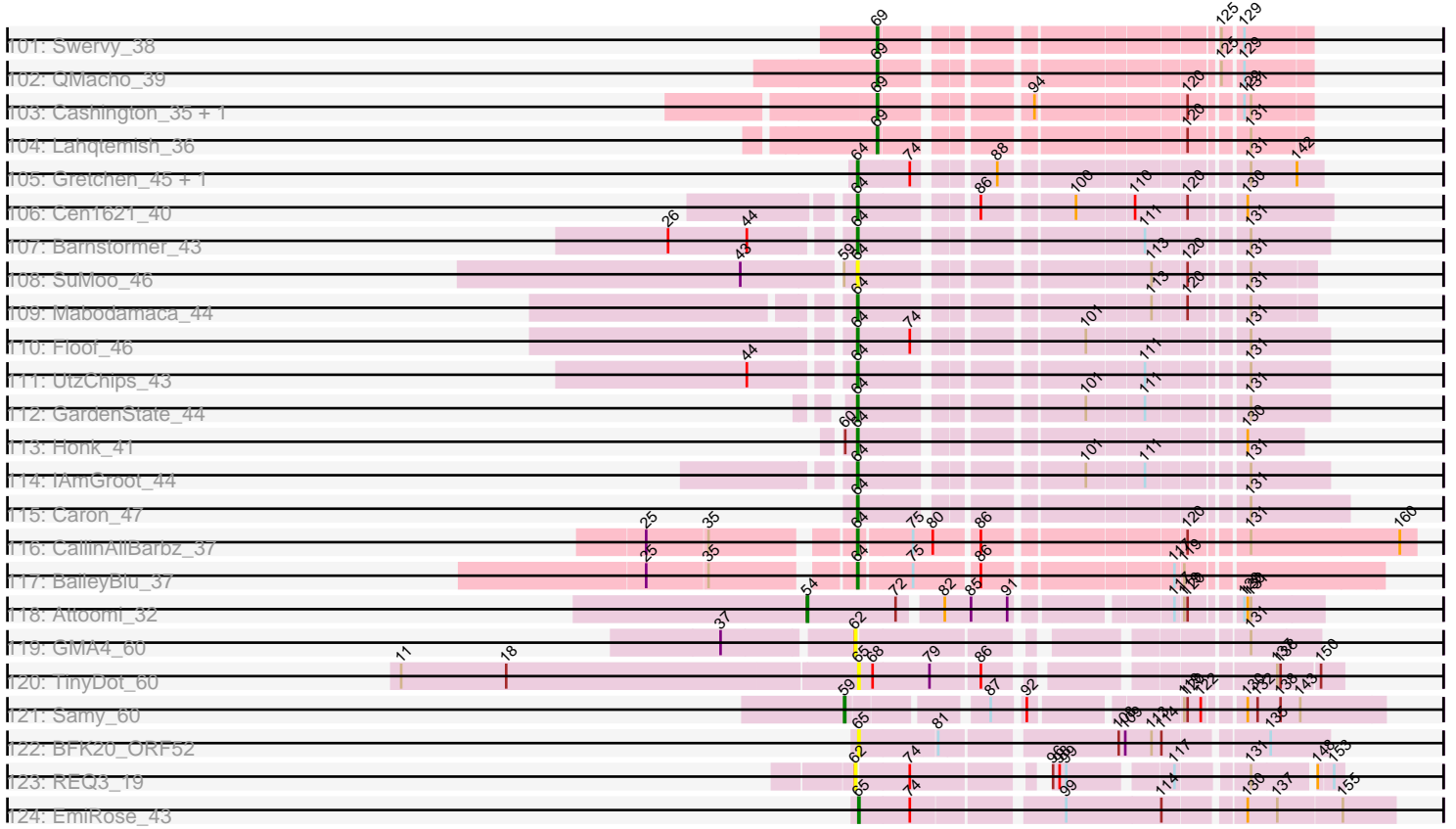
Pham 163377



Pham 163377



Pham 163377



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 163377 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163377 has 177 members, 38 are drafts.

Phages represented in each track:

- Track 1 : AinMach_39
- Track 2 : Moss_42
- Track 3 : Exile_33
- Track 4 : Soondubu_33
- Track 5 : Lizalica_34
- Track 6 : DrSierra_34
- Track 7 : Elezi_35, London_35
- Track 8 : Niobe_35, Eraser_35, Jstan_37, Asa16_35
- Track 9 : Cyan_35
- Track 10 : Tuck_39, Community_38
- Track 11 : Kaylissa_35, JohnDoe_35, AGrandiflora_36, Powerpuff_37, YesChef_35
- Track 12 : Phives_38
- Track 13 : Tian_35, Pixelle_36, Amyev_35
- Track 14 : Warda_35, Tbone_34
- Track 15 : Turab_34, AEgle_34
- Track 16 : MissSwiss_35
- Track 17 : Tutumahutu_37, Joemato_37, Simpson_37
- Track 18 : Crewmate_41, ObiToo_40
- Track 19 : Reedo_35
- Track 20 : Berrie_37
- Track 21 : Cassia_36
- Track 22 : Yang_36
- Track 23 : Nitro_36
- Track 24 : KeAlii_36
- Track 25 : Pumpkins_58
- Track 26 : Janeemi_38
- Track 27 : Wildwest_35
- Track 28 : Lego_35
- Track 29 : Adolin_35
- Track 30 : JuneStar_37
- Track 31 : Tallboi_38
- Track 32 : TforTroy_37
- Track 33 : Iter_37, Ascela_37
- Track 34 : Adumb2043_34
- Track 35 : Sue2_36
- Track 36 : DrManhattan_35
- Track 37 : Mudpuppy_35

- Track 38 : IttyBittyPiggy_36
- Track 39 : VResidence_36
- Track 40 : MaGuCo_35
- Track 41 : Liebe_37, Maureen_37
- Track 42 : Snek_35, Tweety19_35
- Track 43 : JasmineDragon_42, ShakeltOph_42, MiniMommy_42
- Track 44 : VroomVroom_40
- Track 45 : Emotion_40
- Track 46 : Diane_36
- Track 47 : Dubu_33
- Track 48 : phiSASD1_10
- Track 49 : AbbeyMikolon_40
- Track 50 : Nesbitt_39
- Track 51 : Mahdia_59
- Track 52 : Morrissey_62
- Track 53 : Widow_60
- Track 54 : Trine_64
- Track 55 : Gustav_66
- Track 56 : Puppies_60
- Track 57 : Upyo_68
- Track 58 : TinaLin_56
- Track 59 : Banquo_56
- Track 60 : Gspu1_48
- Track 61 : Dardanus_52
- Track 62 : Schmidt_51
- Track 63 : SpeedDemon_740, Bantam_72
- Track 64 : DatBoi_70
- Track 65 : Daredevil_63
- Track 66 : Mollymur_72
- Track 67 : BearBQ_90
- Track 68 : Birdsong_84
- Track 69 : CheeseTouch_97
- Track 70 : LitninMcQueen_97
- Track 71 : Asapag_85
- Track 72 : Nicky22_38
- Track 73 : Franklin22_36
- Track 74 : Elva_39
- Track 75 : Phisb_40, TukTuk_38
- Track 76 : Gack_34
- Track 77 : BabyYoda_38
- Track 78 : BubbaBear_36, Abigail_36, SansAfet_38, LimaBean_36
- Track 79 : FlameThrower_35, Celaena_35, Bachaco_36
- Track 80 : CroZenni_37, AnnaLie_38, Burritobowl_37, BelmontSKP_38, Arroyo_38, Johnathan_36, DickRichards_36, IndyLu_36
- Track 81 : AvGardian_39
- Track 82 : Stoor_38
- Track 83 : Rollins_34, Coltrane_34, Skylord_34, Brahms_34, Armstrong_34, Vitas_34, Clayda5_35, Bernstein_34
- Track 84 : SarBear_37, Slay_38
- Track 85 : Kenzers_37, Lynlen_37, Albedo_37
- Track 86 : Albright_35, Doobus_36, Avocadoman_36
- Track 87 : Rona_35
- Track 88 : BAJuniper_36

- Track 89 : Didgeridoo_39
- Track 90 : ChiliPepper_34, Dismas_35
- Track 91 : Loviatar_67, Icarian_42
- Track 92 : Sharkboy_36
- Track 93 : Eden_35
- Track 94 : Finalfrontier_37
- Track 95 : Quenya_36
- Track 96 : Stromboli_38, DirtyBubble_37
- Track 97 : Eula_38, Jovita_38
- Track 98 : Kieran_35
- Track 99 : SanaSana_40
- Track 100 : Katzastrophic_36
- Track 101 : Swervy_38
- Track 102 : QMacho_39
- Track 103 : Cashington_35, BabyDaisy_36
- Track 104 : Lahqtemish_36
- Track 105 : Gretchen_45, Percival_46
- Track 106 : Cen1621_40
- Track 107 : Barnstormer_43
- Track 108 : SuMoo_46
- Track 109 : Mabodamaca_44
- Track 110 : Floof_46
- Track 111 : UtzChips_43
- Track 112 : GardenState_44
- Track 113 : Honk_41
- Track 114 : IAmGroot_44
- Track 115 : Caron_47
- Track 116 : CallinAllBarbz_37
- Track 117 : BaileyBlu_37
- Track 118 : Attoomi_32
- Track 119 : GMA4_60
- Track 120 : TinyDot_60
- Track 121 : Samy_60
- Track 122 : BFK20_ORF52
- Track 123 : REQ3_19
- Track 124 : EmiRose_43

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

The start number called the most often in the published annotations is 69, it was called in 57 of the 139 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail_36, Albedo_37, Albright_35, AnnaLie_38, Armstrong_34, Arroyo_38, AvGardian_39, Avocadoman_36, BAjuniper_36, BabyDaisy_36, BabyYoda_38, Bachaco_36, BelmontSKP_38, Bernstein_34, Brahms_34, BubbaBear_36, Burritobowl_37, Cashington_35, Celaena_35, ChiliPepper_34, Clayda5_35, Coltrane_34, CroZenni_37, DickRichards_36, Didgeridoo_39, DirtyBubble_37, Dismas_35, Doobus_36, Eden_35, Elva_39, Eula_38, Finalfrontier_37, FlameThrower_35, Franklin22_36, Gack_34, Icarian_42, IndyLu_36, Johnathan_36,

Jovita_38, Katzastrophic_36, Kenzers_37, Kieran_35, Lahqtemish_36, LimaBean_36, Loviatar_67, Lynlen_37, Nicky22_38, Phisb_40, QMacho_39, Quenya_36, Rollins_34, Rona_35, SanaSana_40, SansAfet_38, SarBear_37, Sharkboy_36, Skylord_34, Slay_38, Stoor_38, Stromboli_38, Swervy_38, TukTuk_38, Vitas_34,

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

-

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

- AEgle_34, AGrandiflora_36, AbbeyMikolon_40, Adolin_35, Adumb2043_34, AinMach_39, Amyev_35, Asa16_35, Asapag_85, Ascela_37, Attoomi_32, BFK20_ORF52, BaileyBlu_37, Banquo_56, Bantam_72, Barnstormer_43, BearBQ_90, Berrie_37, Birdsong_84, CallinAllBarbz_37, Caron_47, Cassia_36, Cen1621_40, CheeseTouch_97, Community_38, Crewmate_41, Cyan_35, Dardanus_52, Daredevil_63, DatBoi_70, Diane_36, DrManhattan_35, DrSierra_34, Dubu_33, Elezi_35, EmiRose_43, Emotion_40, Eraser_35, Exile_33, Floof_46, GMA4_60, GardenState_44, Gretchen_45, Gsput1_48, Gustav_66, Honk_41, IAmGroot_44, Iter_37, IttyBittyPiggy_36, Janeemi_38, JasmineDragon_42, Joemato_37, JohnDoe_35, Jstan_37, JuneStar_37, Kaylissa_35, KeAlii_36, Lego_35, Liebe_37, LitninMcQueen_97, Lizalica_34, London_35, MaGuCo_35, Mabodamaca_44, Mahdia_59, Maureen_37, MiniMommy_42, MissSwiss_35, Mollymur_72, Morrissey_62, Moss_42, Mudpuppy_35, Nesbitt_39, Niobe_35, Nitro_36, ObiToo_40, Percival_46, Phives_38, Pixelle_36, Powerpuff_37, Pumpkins_58, Puppies_60, REQ3_19, Reedo_35, Samy_60, Schmidt_51, ShakeltOph_42, Simpson_37, Snek_35, Soondubu_33, SpeedDemon_740, SuMoo_46, Sue2_36, Tallboi_38, Tbone_34, TforTroy_37, Tian_35, TinaLin_56, TinyDot_60, Trine_64, Tuck_39, Turab_34, Tutumahutu_37, Tweety19_35, Upyo_68, UtzChips_43, VResidence_36, VroomVroom_40, Warda_35, Widow_60, Wildwest_35, Yang_36, YesChef_35, phiSASD1_10,

Summary by start number:

Start 46:

- Found in 1 of 177 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 139
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Diane_36 (BD2),

Start 54:

- Found in 6 of 177 (3.4%) of genes in pham
- Manual Annotations of this start: 4 of 139
- Called 83.3% of time when present
- Phage (with cluster) where this start called: AbbeyMikolon_40 (BL), Attoomi_32 (singleton), Dubu_33 (BJ), Nesbitt_39 (BL), phiSASD1_10 (BJ),

Start 59:

- Found in 3 of 177 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 139
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Samy_60 (singleton),

Start 62:

- Found in 11 of 177 (6.2%) of genes in pham

- Manual Annotations of this start: 9 of 139
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Asapag_85 (DN1), Bantam_72 (DL), BearBQ_90 (DN), Birdsong_84 (DN), CheeseTouch_97 (DN1), DatBoi_70 (DL), GMA4_60 (singleton), LitninMcQueen_97 (DN1), Mollymur_72 (DL), REQ3_19 (singleton), SpeedDemon_740 (DL),

Start 63:

- Found in 4 of 177 (2.3%) of genes in pham
- Manual Annotations of this start: 2 of 139
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JuneStar_37 (AZ1), Pumpkins_58 (AZ1), TforTroy_37 (AZ1), Yang_36 (AZ1),

Start 64:

- Found in 76 of 177 (42.9%) of genes in pham
- Manual Annotations of this start: 51 of 139
- Called 98.7% of time when present
- Phage (with cluster) where this start called: AEgle_34 (AZ1), AGrandiflora_36 (AZ1), Adolin_35 (AZ1), Adumb2043_34 (AZ1), AinMach_39 (AZ), Amyev_35 (AZ1), Asa16_35 (AZ1), Ascela_37 (AZ1), BaileyBlu_37 (FP), Barnstormer_43 (EH), Berrie_37 (AZ1), CallinAllBarbz_37 (FP), Caron_47 (EH), Cassia_36 (AZ1), Cen1621_40 (EH), Community_38 (AZ1), Crewmate_41 (AZ1), Cyan_35 (AZ1), DrManhattan_35 (AZ1), DrSierra_34 (AZ1), Elezi_35 (AZ1), Emotion_40 (AZ4), Eraser_35 (AZ1), Exile_33 (AZ), Floof_46 (EH), GardenState_44 (EH), Gretchen_45 (EH), Honk_41 (EH), IAmGroot_44 (EH), Iter_37 (AZ1), IttyBittyPiggy_36 (AZ1), Janeemi_38 (AZ1), JasmineDragon_42 (AZ4), Joemato_37 (AZ1), JohnDoe_35 (AZ1), Jstan_37 (AZ1), Kaylissa_35 (AZ1), KeAlii_36 (AZ1), Lego_35 (AZ1), Liebe_37 (AZ2), Lizalica_34 (AZ1), London_35 (AZ1), Mabodamaca_44 (EH), Maureen_37 (AZ2), MiniMommy_42 (AZ4), MissSwiss_35 (AZ1), Moss_42 (AZ), Mudpuppy_35 (AZ1), Niobe_35 (AZ1), Nitro_36 (AZ1), ObiToo_40 (AZ1), Percival_46 (EH), Phives_38 (AZ1), Pixelle_36 (AZ1), Powerpuff_37 (AZ1), Reedo_35 (AZ1), ShakeltOph_42 (AZ4), Simpson_37 (AZ1), Snek_35 (AZ3), Soondubu_33 (AZ), SuMoo_46 (EH), Sue2_36 (AZ1), Tallboi_38 (AZ1), Tbone_34 (AZ1), Tian_35 (AZ1), Tuck_39 (AZ1), Turab_34 (AZ1), Tutumahutu_37 (AZ1), Tweety19_35 (AZ3), UtzChips_43 (EH), VResidence_36 (AZ1), VroomVroom_40 (AZ4), Warda_35 (AZ1), Wildwest_35 (AZ1), YesChef_35 (AZ1),

Start 65:

- Found in 14 of 177 (7.9%) of genes in pham
- Manual Annotations of this start: 11 of 139
- Called 92.9% of time when present
- Phage (with cluster) where this start called: BFK20_ORF52 (singleton), Banquo_56 (CU1), Dardanus_52 (CU3), Daredevil_63 (DL), EmiRose_43 (singleton), Gustav_66 (CD), Mahdia_59 (CD), Morrissey_62 (CD), Puppies_60 (CD), Schmidt_51 (CU4), TinyDot_60 (singleton), Upyo_68 (CD), Widow_60 (CD),

Start 66:

- Found in 1 of 177 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 139
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trine_64 (CD),

Start 67:

- Found in 2 of 177 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 139
- Called 50.0% of time when present
- Phage (with cluster) where this start called: TinaLin_56 (CU1),

Start 68:

- Found in 11 of 177 (6.2%) of genes in pham
- No Manual Annotations of this start.
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Gsput1_48 (CU2),

Start 69:

- Found in 63 of 177 (35.6%) of genes in pham
- Manual Annotations of this start: 57 of 139
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abigail_36 (EB), Albedo_37 (EB), Albright_35 (EB), AnnaLie_38 (EB), Armstrong_34 (EB), Arroyo_38 (EB), AvGardian_39 (EB), Avocadoman_36 (EB), BAjuniper_36 (EB), BabyDaisy_36 (EB), BabyYoda_38 (EB), Bachaco_36 (EB), BelmontSKP_38 (EB), Bernstein_34 (EB), Brahms_34 (EB), BubbaBear_36 (EB), Burritobowl_37 (EB), Cashington_35 (EB), Celaena_35 (EB), ChiliPepper_34 (EB), Clayda5_35 (EB), Coltrane_34 (EB), CroZenni_37 (EB), DickRichards_36 (EB), Didgeridoo_39 (EB), DirtyBubble_37 (EB), Dismas_35 (EB), Doobus_36 (EB), Eden_35 (EB), Elva_39 (EB), Eula_38 (EB), Finalfrontier_37 (EB), FlameThrower_35 (EB), Franklin22_36 (EB), Gack_34 (EB), Icarian_42 (EB), IndyLu_36 (EB), Johnathan_36 (EB), Jovita_38 (EB), Katzastrophic_36 (EB), Kenzers_37 (EB), Kieran_35 (EB), Lahqtemish_36 (EB), LimaBean_36 (EB), Loviatar_67 (EB), Lynlen_37 (EB), Nicky22_38 (EB), Phisb_40 (EB), QMacho_39 (EB), Quenya_36 (EB), Rollins_34 (EB), Rona_35 (EB), SanaSana_40 (EB), SansAfet_38 (EB), SarBear_37 (EB), Sharkboy_36 (EB), Skylord_34 (EB), Slay_38 (EB), Stoor_38 (EB), Stromboli_38 (EB), Swervy_38 (EB), TukTuk_38 (EB), Vitas_34 (EB),

Start 84:

- Found in 3 of 177 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 139
- Called 33.3% of time when present
- Phage (with cluster) where this start called: MaGuCo_35 (AZ2),

Summary by clusters:

There are 20 clusters represented in this pham: FP, DN, DL, AZ, CU3, EH, CU1, BL, AZ3, singleton, BJ, CD, CU4, DN1, BD2, AZ1, AZ2, EB, AZ4, CU2,

Info for manual annotations of cluster AZ1:

- Start number 63 was manually annotated 2 times for cluster AZ1.
- Start number 64 was manually annotated 32 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 64 was manually annotated 2 times for cluster AZ2.
- Start number 84 was manually annotated 1 time for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 64 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 64 was manually annotated 2 times for cluster AZ4.

Info for manual annotations of cluster BD2:

- Start number 46 was manually annotated 1 time for cluster BD2.

Info for manual annotations of cluster BJ:

- Start number 54 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster BL:

- Start number 54 was manually annotated 2 times for cluster BL.

Info for manual annotations of cluster CD:

- Start number 65 was manually annotated 6 times for cluster CD.
- Start number 66 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CU1:

- Start number 65 was manually annotated 1 time for cluster CU1.
- Start number 67 was manually annotated 1 time for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 65 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 65 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster DL:

- Start number 62 was manually annotated 4 times for cluster DL.
- Start number 65 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DN:

- Start number 62 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 62 was manually annotated 3 times for cluster DN1.

Info for manual annotations of cluster EB:

- Start number 69 was manually annotated 57 times for cluster EB.

Info for manual annotations of cluster EH:

- Start number 64 was manually annotated 11 times for cluster EH.

Info for manual annotations of cluster FP:

- Start number 64 was manually annotated 2 times for cluster FP.

Gene Information:

Gene: AEgle_34 Start: 25272, Stop: 25622, Start Num: 64
Candidate Starts for AEgle_34:
(25, 25092), (32, 25146), (Start: 64 @25272 has 51 MA's), (75, 25317), (86, 25356), (120, 25518),
(131, 25560),

Gene: AGrandiflora_36 Start: 25133, Stop: 25576, Start Num: 64
Candidate Starts for AGrandiflora_36:
(Start: 64 @25133 has 51 MA's), (117, 25385), (131, 25436),

Gene: AbbeyMikolon_40 Start: 26256, Stop: 26795, Start Num: 54
Candidate Starts for AbbeyMikolon_40:
(Start: 54 @26256 has 4 MA's), (83, 26391), (91, 26439), (102, 26499), (107, 26511), (117, 26559),
(118, 26562), (124, 26589), (127, 26610), (133, 26634), (144, 26667), (146, 26676), (161, 26775),

Gene: Abigail_36 Start: 25222, Stop: 25548, Start Num: 69
Candidate Starts for Abigail_36:
(Start: 69 @25222 has 57 MA's), (120, 25453), (129, 25489), (131, 25495),

Gene: Adolin_35 Start: 24126, Stop: 24476, Start Num: 64
Candidate Starts for Adolin_35:
(27, 23973), (32, 24003), (45, 24045), (Start: 64 @24126 has 51 MA's), (86, 24210), (131, 24414),
(132, 24420),

Gene: Adumb2043_34 Start: 25291, Stop: 25641, Start Num: 64
Candidate Starts for Adumb2043_34:
(Start: 64 @25291 has 51 MA's), (75, 25336), (86, 25375), (120, 25537), (131, 25579),

Gene: AinMach_39 Start: 26488, Stop: 26916, Start Num: 64
Candidate Starts for AinMach_39:
(53, 26443), (58, 26470), (Start: 64 @26488 has 51 MA's), (77, 26545), (107, 26695), (117, 26743),
(120, 26752), (131, 26794), (137, 26818), (138, 26821),

Gene: Albedo_37 Start: 25772, Stop: 26098, Start Num: 69
Candidate Starts for Albedo_37:
(Start: 69 @25772 has 57 MA's), (97, 25895), (125, 26024), (129, 26039),

Gene: Albright_35 Start: 24924, Stop: 25250, Start Num: 69
Candidate Starts for Albright_35:
(Start: 69 @24924 has 57 MA's), (120, 25155), (129, 25191), (131, 25197),

Gene: Amyev_35 Start: 26817, Stop: 27164, Start Num: 64
Candidate Starts for Amyev_35:
(Start: 64 @26817 has 51 MA's), (86, 26901), (120, 27063), (131, 27105),

Gene: AnnaLie_38 Start: 26045, Stop: 26371, Start Num: 69
Candidate Starts for AnnaLie_38:
(Start: 69 @26045 has 57 MA's), (120, 26276), (129, 26312), (131, 26318),

Gene: Armstrong_34 Start: 23647, Stop: 23988, Start Num: 69
Candidate Starts for Armstrong_34:
(Start: 69 @23647 has 57 MA's), (91, 23740), (131, 23920),

Gene: Arroyo_38 Start: 26083, Stop: 26409, Start Num: 69

Candidate Starts for Arroyo_38:

(Start: 69 @26083 has 57 MA's), (120, 26314), (129, 26350), (131, 26356),

Gene: Asa16_35 Start: 26861, Stop: 27211, Start Num: 64

Candidate Starts for Asa16_35:

(Start: 64 @26861 has 51 MA's), (75, 26906), (86, 26945), (97, 26999), (117, 27098), (131, 27149),

Gene: Asapag_85 Start: 49353, Stop: 49730, Start Num: 62

Candidate Starts for Asapag_85:

(19, 49113), (Start: 62 @49353 has 9 MA's), (68, 49365), (91, 49482), (96, 49494), (100, 49515), (111, 49566), (117, 49590), (120, 49599), (130, 49644), (131, 49647), (134, 49662), (139, 49674), (148, 49707),

Gene: Ascela_37 Start: 25854, Stop: 26297, Start Num: 64

Candidate Starts for Ascela_37:

(29, 25725), (Start: 64 @25854 has 51 MA's), (75, 25899), (117, 26106), (120, 26115), (131, 26157), (132, 26163),

Gene: Attoomi_32 Start: 23857, Stop: 24264, Start Num: 54

Candidate Starts for Attoomi_32:

(Start: 54 @23857 has 4 MA's), (72, 23938), (82, 23971), (85, 23995), (91, 24028), (117, 24148), (119, 24154), (120, 24157), (129, 24193), (130, 24196), (131, 24199),

Gene: AvGardian_39 Start: 26215, Stop: 26541, Start Num: 69

Candidate Starts for AvGardian_39:

(4, 25681), (Start: 69 @26215 has 57 MA's), (97, 26338), (129, 26482), (131, 26488),

Gene: Avocadoman_36 Start: 25161, Stop: 25487, Start Num: 69

Candidate Starts for Avocadoman_36:

(Start: 69 @25161 has 57 MA's), (120, 25392), (129, 25428), (131, 25434),

Gene: BAjuniper_36 Start: 26884, Stop: 27216, Start Num: 69

Candidate Starts for BAjuniper_36:

(22, 26641), (Start: 69 @26884 has 57 MA's), (89, 26974), (97, 27010), (98, 27013), (116, 27103), (129, 27154), (131, 27160), (145, 27211),

Gene: BFK20_ORF52 Start: 41172, Stop: 41558, Start Num: 65

Candidate Starts for BFK20_ORF52:

(Start: 65 @41172 has 11 MA's), (81, 41238), (108, 41385), (109, 41391), (113, 41415), (114, 41421), (135, 41505),

Gene: BabyDaisy_36 Start: 25684, Stop: 26010, Start Num: 69

Candidate Starts for BabyDaisy_36:

(Start: 69 @25684 has 57 MA's), (94, 25792), (120, 25915), (129, 25951), (131, 25957),

Gene: BabyYoda_38 Start: 26829, Stop: 27155, Start Num: 69

Candidate Starts for BabyYoda_38:

(Start: 69 @26829 has 57 MA's), (96, 26949), (98, 26955), (106, 26997), (120, 27060), (125, 27081), (129, 27096), (131, 27102),

Gene: Bachaco_36 Start: 26844, Stop: 27173, Start Num: 69

Candidate Starts for Bachaco_36:

(Start: 69 @26844 has 57 MA's), (96, 26964), (97, 26967), (98, 26970), (129, 27111), (131, 27117),

Gene: BaileyBlu_37 Start: 25414, Stop: 25836, Start Num: 64
Candidate Starts for BaileyBlu_37:
(25, 25246), (35, 25300), (Start: 64 @25414 has 51 MA's), (75, 25459), (86, 25513), (117, 25666),
(119, 25672),

Gene: Banquo_56 Start: 37048, Stop: 37422, Start Num: 65
Candidate Starts for Banquo_56:
(Start: 65 @37048 has 11 MA's), (Start: 67 @37051 has 1 MA's), (68, 37060), (75, 37096), (91,
37177), (96, 37204), (119, 37306), (134, 37372),

Gene: Bantam_72 Start: 52490, Stop: 52125, Start Num: 62
Candidate Starts for Bantam_72:
(55, 52520), (Start: 62 @52490 has 9 MA's), (130, 52193), (150, 52145),

Gene: Barnstormer_43 Start: 27456, Stop: 27818, Start Num: 64
Candidate Starts for Barnstormer_43:
(26, 27303), (44, 27375), (Start: 64 @27456 has 51 MA's), (111, 27672), (131, 27747),

Gene: BearBQ_90 Start: 50811, Stop: 51185, Start Num: 62
Candidate Starts for BearBQ_90:
(Start: 62 @50811 has 9 MA's), (68, 50823), (96, 50952), (107, 51009), (112, 51027), (117, 51048),
(118, 51051), (119, 51054), (120, 51057), (130, 51102), (131, 51105), (132, 51111), (134, 51120),
(139, 51132),

Gene: BelmontSKP_38 Start: 26045, Stop: 26371, Start Num: 69
Candidate Starts for BelmontSKP_38:
(Start: 69 @26045 has 57 MA's), (120, 26276), (129, 26312), (131, 26318),

Gene: Bernstein_34 Start: 23702, Stop: 24043, Start Num: 69
Candidate Starts for Bernstein_34:
(Start: 69 @23702 has 57 MA's), (91, 23795), (131, 23975),

Gene: Berrie_37 Start: 26747, Stop: 27190, Start Num: 64
Candidate Starts for Berrie_37:
(25, 26564), (35, 26618), (Start: 64 @26747 has 51 MA's), (117, 26999), (120, 27008), (130, 27047),
(131, 27050),

Gene: Birdsong_84 Start: 49089, Stop: 49466, Start Num: 62
Candidate Starts for Birdsong_84:
(19, 48849), (Start: 62 @49089 has 9 MA's), (68, 49101), (96, 49230), (100, 49251), (111, 49302),
(117, 49326), (120, 49335), (130, 49380), (131, 49383), (134, 49398), (139, 49410), (148, 49443),

Gene: Brahms_34 Start: 23649, Stop: 23990, Start Num: 69
Candidate Starts for Brahms_34:
(Start: 69 @23649 has 57 MA's), (91, 23742), (131, 23922),

Gene: BubbaBear_36 Start: 25617, Stop: 25943, Start Num: 69
Candidate Starts for BubbaBear_36:
(Start: 69 @25617 has 57 MA's), (120, 25848), (129, 25884), (131, 25890),

Gene: Burritobowl_37 Start: 25618, Stop: 25944, Start Num: 69
Candidate Starts for Burritobowl_37:

(Start: 69 @25618 has 57 MA's), (120, 25849), (129, 25885), (131, 25891),

Gene: CallinAllBarbz_37 Start: 25811, Stop: 26263, Start Num: 64

Candidate Starts for CallinAllBarbz_37:

(25, 25643), (35, 25697), (Start: 64 @25811 has 51 MA's), (75, 25856), (80, 25874), (86, 25910), (120, 26072), (131, 26114), (160, 26249),

Gene: Caron_47 Start: 28859, Stop: 29239, Start Num: 64

Candidate Starts for Caron_47:

(Start: 64 @28859 has 51 MA's), (131, 29150),

Gene: Cashington_35 Start: 24964, Stop: 25290, Start Num: 69

Candidate Starts for Cashington_35:

(Start: 69 @24964 has 57 MA's), (94, 25072), (120, 25195), (129, 25231), (131, 25237),

Gene: Cassia_36 Start: 25737, Stop: 26096, Start Num: 64

Candidate Starts for Cassia_36:

(21, 25515), (Start: 64 @25737 has 51 MA's), (131, 26025),

Gene: Celaena_35 Start: 26594, Stop: 26923, Start Num: 69

Candidate Starts for Celaena_35:

(Start: 69 @26594 has 57 MA's), (96, 26714), (97, 26717), (98, 26720), (129, 26861), (131, 26867),

Gene: Cen1621_40 Start: 25799, Stop: 26167, Start Num: 64

Candidate Starts for Cen1621_40:

(Start: 64 @25799 has 51 MA's), (86, 25886), (100, 25958), (110, 26006), (120, 26051), (130, 26090),

Gene: CheeseTouch_97 Start: 48676, Stop: 49053, Start Num: 62

Candidate Starts for CheeseTouch_97:

(19, 48436), (Start: 62 @48676 has 9 MA's), (68, 48688), (96, 48817), (100, 48838), (117, 48913), (130, 48967), (131, 48970), (134, 48985), (139, 48997), (148, 49030),

Gene: ChiliPepper_34 Start: 26048, Stop: 26380, Start Num: 69

Candidate Starts for ChiliPepper_34:

(Start: 69 @26048 has 57 MA's), (94, 26159), (96, 26171), (98, 26177), (107, 26225), (120, 26282), (129, 26318), (131, 26324),

Gene: Clayda5_35 Start: 23636, Stop: 23977, Start Num: 69

Candidate Starts for Clayda5_35:

(Start: 69 @23636 has 57 MA's), (91, 23729), (131, 23909),

Gene: Coltrane_34 Start: 23649, Stop: 23990, Start Num: 69

Candidate Starts for Coltrane_34:

(Start: 69 @23649 has 57 MA's), (91, 23742), (131, 23922),

Gene: Community_38 Start: 27474, Stop: 27917, Start Num: 64

Candidate Starts for Community_38:

(Start: 64 @27474 has 51 MA's), (117, 27726), (120, 27735), (131, 27777), (138, 27804), (149, 27840),

Gene: Crewmate_41 Start: 26389, Stop: 26751, Start Num: 64

Candidate Starts for Crewmate_41:

(Start: 64 @26389 has 51 MA's), (97, 26527), (120, 26635), (131, 26677),

Gene: CroZenni_37 Start: 25508, Stop: 25834, Start Num: 69

Candidate Starts for CroZenni_37:

(Start: 69 @25508 has 57 MA's), (120, 25739), (129, 25775), (131, 25781),

Gene: Cyan_35 Start: 25187, Stop: 25630, Start Num: 64

Candidate Starts for Cyan_35:

(Start: 64 @25187 has 51 MA's), (86, 25286), (117, 25439), (131, 25490),

Gene: Dardanus_52 Start: 35477, Stop: 35866, Start Num: 65

Candidate Starts for Dardanus_52:

(Start: 65 @35477 has 11 MA's), (68, 35489), (73, 35519), (74, 35522), (119, 35735), (131, 35783),

Gene: Daredevil_63 Start: 48481, Stop: 48092, Start Num: 65

Candidate Starts for Daredevil_63:

(Start: 65 @48481 has 11 MA's), (86, 48376), (119, 48208), (126, 48172), (131, 48157), (139, 48133),

Gene: DatBoi_70 Start: 52480, Stop: 52115, Start Num: 62

Candidate Starts for DatBoi_70:

(Start: 62 @52480 has 9 MA's), (76, 52426), (93, 52336), (123, 52213), (130, 52183), (150, 52135),

Gene: Diane_36 Start: 27972, Stop: 28412, Start Num: 46

Candidate Starts for Diane_36:

(33, 27930), (Start: 46 @27972 has 1 MA's), (51, 27990), (Start: 54 @28017 has 4 MA's), (56, 28026), (57, 28035), (61, 28047), (97, 28209), (121, 28329), (131, 28368),

Gene: DickRichards_36 Start: 25947, Stop: 26273, Start Num: 69

Candidate Starts for DickRichards_36:

(Start: 69 @25947 has 57 MA's), (120, 26178), (129, 26214), (131, 26220),

Gene: Didgeridoo_39 Start: 26093, Stop: 26419, Start Num: 69

Candidate Starts for Didgeridoo_39:

(Start: 69 @26093 has 57 MA's), (120, 26324), (129, 26360), (131, 26366),

Gene: DirtyBubble_37 Start: 26477, Stop: 26803, Start Num: 69

Candidate Starts for DirtyBubble_37:

(1, 25724), (5, 25964), (6, 25982), (10, 26018), (13, 26087), (Start: 69 @26477 has 57 MA's), (96, 26597), (98, 26603), (120, 26708), (125, 26729), (129, 26744), (131, 26750),

Gene: Dismas_35 Start: 26219, Stop: 26551, Start Num: 69

Candidate Starts for Dismas_35:

(Start: 69 @26219 has 57 MA's), (94, 26330), (96, 26342), (98, 26348), (107, 26396), (120, 26453), (129, 26489), (131, 26495),

Gene: Doobus_36 Start: 25328, Stop: 25654, Start Num: 69

Candidate Starts for Doobus_36:

(Start: 69 @25328 has 57 MA's), (120, 25559), (129, 25595), (131, 25601),

Gene: DrManhattan_35 Start: 24117, Stop: 24467, Start Num: 64

Candidate Starts for DrManhattan_35:

(25, 23940), (27, 23964), (32, 23994), (45, 24036), (Start: 64 @24117 has 51 MA's), (86, 24201), (131, 24405), (132, 24411),

Gene: DrSierra_34 Start: 24046, Stop: 24489, Start Num: 64

Candidate Starts for DrSierra_34:

(20, 23824), (Start: 64 @24046 has 51 MA's), (117, 24298), (120, 24307), (131, 24349), (147, 24406), (159, 24469),

Gene: Dubu_33 Start: 24220, Stop: 24681, Start Num: 54

Candidate Starts for Dubu_33:

(Start: 54 @24220 has 4 MA's), (100, 24400), (111, 24451), (117, 24475), (118, 24478), (150, 24589),

Gene: Eden_35 Start: 24432, Stop: 24761, Start Num: 69

Candidate Starts for Eden_35:

(Start: 69 @24432 has 57 MA's), (91, 24525), (96, 24552), (97, 24555), (129, 24699), (131, 24705),

Gene: Elezi_35 Start: 26877, Stop: 27227, Start Num: 64

Candidate Starts for Elezi_35:

(49, 26808), (Start: 64 @26877 has 51 MA's), (75, 26922), (86, 26961), (97, 27015), (117, 27114), (120, 27123), (131, 27165),

Gene: Elva_39 Start: 26539, Stop: 26865, Start Num: 69

Candidate Starts for Elva_39:

(Start: 69 @26539 has 57 MA's), (91, 26632), (97, 26662), (125, 26791), (129, 26806), (131, 26812),

Gene: EmiRose_43 Start: 35914, Stop: 36360, Start Num: 65

Candidate Starts for EmiRose_43:

(Start: 65 @35914 has 11 MA's), (74, 35959), (99, 36082), (114, 36166), (130, 36229), (137, 36256), (155, 36313),

Gene: Emotion_40 Start: 26793, Stop: 27239, Start Num: 64

Candidate Starts for Emotion_40:

(Start: 64 @26793 has 51 MA's), (131, 27096),

Gene: Eraser_35 Start: 26868, Stop: 27218, Start Num: 64

Candidate Starts for Eraser_35:

(Start: 64 @26868 has 51 MA's), (75, 26913), (86, 26952), (97, 27006), (117, 27105), (131, 27156),

Gene: Eula_38 Start: 25719, Stop: 26045, Start Num: 69

Candidate Starts for Eula_38:

(Start: 69 @25719 has 57 MA's), (120, 25950), (125, 25971), (129, 25986),

Gene: Exile_33 Start: 27350, Stop: 27793, Start Num: 64

Candidate Starts for Exile_33:

(Start: 64 @27350 has 51 MA's), (120, 27611), (131, 27653), (132, 27659), (137, 27677), (141, 27689),

Gene: Finalfrontier_37 Start: 26331, Stop: 26657, Start Num: 69

Candidate Starts for Finalfrontier_37:

(Start: 69 @26331 has 57 MA's), (120, 26562), (128, 26595), (131, 26604),

Gene: FlameThrower_35 Start: 26044, Stop: 26373, Start Num: 69

Candidate Starts for FlameThrower_35:

(Start: 69 @26044 has 57 MA's), (96, 26164), (97, 26167), (98, 26170), (129, 26311), (131, 26317),

Gene: Floop_46 Start: 28537, Stop: 28899, Start Num: 64

Candidate Starts for Floof_46:

(Start: 64 @28537 has 51 MA's), (74, 28582), (101, 28705), (131, 28828),

Gene: Franklin22_36 Start: 24418, Stop: 24747, Start Num: 69

Candidate Starts for Franklin22_36:

(Start: 69 @24418 has 57 MA's), (89, 24505), (97, 24541), (98, 24544), (128, 24682), (129, 24685), (131, 24691),

Gene: GMA4_60 Start: 40216, Stop: 40572, Start Num: 62

Candidate Starts for GMA4_60:

(37, 40105), (Start: 62 @40216 has 9 MA's), (131, 40510),

Gene: Gack_34 Start: 24169, Stop: 24498, Start Num: 69

Candidate Starts for Gack_34:

(Start: 69 @24169 has 57 MA's), (97, 24292), (128, 24433), (131, 24442),

Gene: GardenState_44 Start: 27681, Stop: 28043, Start Num: 64

Candidate Starts for GardenState_44:

(Start: 64 @27681 has 51 MA's), (101, 27849), (111, 27897), (131, 27972),

Gene: Gretchen_45 Start: 29159, Stop: 29515, Start Num: 64

Candidate Starts for Gretchen_45:

(Start: 64 @29159 has 51 MA's), (74, 29204), (88, 29261), (131, 29450), (142, 29492),

Gene: Gspu1_48 Start: 35124, Stop: 35474, Start Num: 68

Candidate Starts for Gspu1_48:

(52, 35067), (Start: 64 @35112 has 51 MA's), (68, 35124), (91, 35241), (126, 35403), (130, 35415), (131, 35418),

Gene: Gustav_66 Start: 43170, Stop: 43571, Start Num: 65

Candidate Starts for Gustav_66:

(Start: 65 @43170 has 11 MA's), (107, 43383), (131, 43476), (138, 43503), (141, 43512), (151, 43542), (154, 43557), (156, 43560),

Gene: Honk_41 Start: 24866, Stop: 25207, Start Num: 64

Candidate Starts for Honk_41:

(60, 24857), (Start: 64 @24866 has 51 MA's), (130, 25157),

Gene: IAmGroot_44 Start: 28148, Stop: 28510, Start Num: 64

Candidate Starts for IAmGroot_44:

(Start: 64 @28148 has 51 MA's), (101, 28316), (111, 28364), (131, 28439),

Gene: Icarian_42 Start: 27112, Stop: 27438, Start Num: 69

Candidate Starts for Icarian_42:

(2, 26479), (5, 26599), (6, 26617), (10, 26653), (13, 26722), (Start: 69 @27112 has 57 MA's), (98, 27238), (106, 27280), (120, 27343), (125, 27364), (129, 27379), (131, 27385),

Gene: IndyLu_36 Start: 25645, Stop: 25971, Start Num: 69

Candidate Starts for IndyLu_36:

(Start: 69 @25645 has 57 MA's), (120, 25876), (129, 25912), (131, 25918),

Gene: Iter_37 Start: 25853, Stop: 26296, Start Num: 64

Candidate Starts for Iter_37:

(29, 25724), (Start: 64 @25853 has 51 MA's), (75, 25898), (117, 26105), (120, 26114), (131, 26156), (132, 26162),

Gene: IttyBittyPiggy_36 Start: 25503, Stop: 25862, Start Num: 64

Candidate Starts for IttyBittyPiggy_36:

(Start: 64 @25503 has 51 MA's), (97, 25641), (131, 25791),

Gene: Janeemi_38 Start: 27485, Stop: 27928, Start Num: 64

Candidate Starts for Janeemi_38:

(39, 27377), (40, 27380), (42, 27389), (Start: 64 @27485 has 51 MA's), (117, 27737), (120, 27746), (131, 27788), (138, 27815),

Gene: JasmineDragon_42 Start: 26737, Stop: 27180, Start Num: 64

Candidate Starts for JasmineDragon_42:

(Start: 64 @26737 has 51 MA's), (86, 26836), (131, 27040), (140, 27070),

Gene: Joemato_37 Start: 25218, Stop: 25661, Start Num: 64

Candidate Starts for Joemato_37:

(Start: 64 @25218 has 51 MA's), (86, 25317), (117, 25470), (131, 25521),

Gene: JohnDoe_35 Start: 25209, Stop: 25652, Start Num: 64

Candidate Starts for JohnDoe_35:

(Start: 64 @25209 has 51 MA's), (117, 25461), (131, 25512),

Gene: Johnathan_36 Start: 25051, Stop: 25377, Start Num: 69

Candidate Starts for Johnathan_36:

(Start: 69 @25051 has 57 MA's), (120, 25282), (129, 25318), (131, 25324),

Gene: Jovita_38 Start: 25821, Stop: 26147, Start Num: 69

Candidate Starts for Jovita_38:

(Start: 69 @25821 has 57 MA's), (120, 26052), (125, 26073), (129, 26088),

Gene: Jstan_37 Start: 26862, Stop: 27212, Start Num: 64

Candidate Starts for Jstan_37:

(Start: 64 @26862 has 51 MA's), (75, 26907), (86, 26946), (97, 27000), (117, 27099), (131, 27150),

Gene: JuneStar_37 Start: 27633, Stop: 27992, Start Num: 63

Candidate Starts for JuneStar_37:

(12, 27243), (Start: 63 @27633 has 2 MA's), (86, 27717), (97, 27771), (111, 27846), (131, 27921),

Gene: Katzastrophic_36 Start: 26173, Stop: 26502, Start Num: 69

Candidate Starts for Katzastrophic_36:

(Start: 69 @26173 has 57 MA's), (96, 26293), (97, 26296), (98, 26299), (129, 26440), (131, 26446),

Gene: Kaylissa_35 Start: 25154, Stop: 25597, Start Num: 64

Candidate Starts for Kaylissa_35:

(Start: 64 @25154 has 51 MA's), (117, 25406), (131, 25457),

Gene: KeAlii_36 Start: 25807, Stop: 26250, Start Num: 64

Candidate Starts for KeAlii_36:

(23, 25615), (24, 25639), (28, 25669), (38, 25711), (41, 25723), (Start: 64 @25807 has 51 MA's), (86, 25906), (117, 26059), (131, 26110), (132, 26116), (137, 26134), (147, 26167),

Gene: Kenzers_37 Start: 25644, Stop: 25970, Start Num: 69
Candidate Starts for Kenzers_37:
(Start: 69 @25644 has 57 MA's), (97, 25767), (125, 25896), (129, 25911),

Gene: Kieran_35 Start: 26228, Stop: 26560, Start Num: 69
Candidate Starts for Kieran_35:
(3, 25631), (7, 25739), (Start: 69 @26228 has 57 MA's), (94, 26339), (96, 26351), (98, 26357), (104, 26393), (107, 26405), (129, 26498), (131, 26504),

Gene: Lahqtemish_36 Start: 25690, Stop: 26016, Start Num: 69
Candidate Starts for Lahqtemish_36:
(Start: 69 @25690 has 57 MA's), (120, 25921), (131, 25963),

Gene: Lego_35 Start: 25100, Stop: 25543, Start Num: 64
Candidate Starts for Lego_35:
(39, 25007), (Start: 64 @25100 has 51 MA's), (117, 25352), (131, 25403),

Gene: Liebe_37 Start: 26991, Stop: 27434, Start Num: 64
Candidate Starts for Liebe_37:
(Start: 64 @26991 has 51 MA's), (Start: 84 @27078 has 1 MA's), (117, 27243), (120, 27252), (130, 27291), (131, 27294), (132, 27300),

Gene: LimaBean_36 Start: 25100, Stop: 25426, Start Num: 69
Candidate Starts for LimaBean_36:
(Start: 69 @25100 has 57 MA's), (120, 25331), (129, 25367), (131, 25373),

Gene: LitninMcQueen_97 Start: 51856, Stop: 52233, Start Num: 62
Candidate Starts for LitninMcQueen_97:
(45, 51772), (Start: 62 @51856 has 9 MA's), (68, 51868), (91, 51985), (96, 51997), (100, 52018), (111, 52069), (117, 52093), (130, 52147), (131, 52150), (134, 52165), (139, 52177), (148, 52210),

Gene: Lizalica_34 Start: 25001, Stop: 25444, Start Num: 64
Candidate Starts for Lizalica_34:
(20, 24788), (Start: 64 @25001 has 51 MA's), (86, 25100), (117, 25253), (120, 25262), (131, 25304), (132, 25310), (159, 25424),

Gene: London_35 Start: 26877, Stop: 27227, Start Num: 64
Candidate Starts for London_35:
(49, 26808), (Start: 64 @26877 has 51 MA's), (75, 26922), (86, 26961), (97, 27015), (117, 27114), (120, 27123), (131, 27165),

Gene: Loviatar_67 Start: 27664, Stop: 27990, Start Num: 69
Candidate Starts for Loviatar_67:
(2, 27031), (5, 27151), (6, 27169), (10, 27205), (13, 27274), (Start: 69 @27664 has 57 MA's), (98, 27790), (106, 27832), (120, 27895), (125, 27916), (129, 27931), (131, 27937),

Gene: Lynlen_37 Start: 25644, Stop: 25970, Start Num: 69
Candidate Starts for Lynlen_37:
(Start: 69 @25644 has 57 MA's), (97, 25767), (125, 25896), (129, 25911),

Gene: MaGuCo_35 Start: 25925, Stop: 26281, Start Num: 84
Candidate Starts for MaGuCo_35:
(Start: 84 @25925 has 1 MA's), (120, 26099), (131, 26141), (132, 26147),

Gene: Mabodamaca_44 Start: 28805, Stop: 29152, Start Num: 64

Candidate Starts for Mabodamaca_44:

(Start: 64 @28805 has 51 MA's), (113, 29027), (120, 29054), (131, 29096),

Gene: Mahdia_59 Start: 41385, Stop: 41786, Start Num: 65

Candidate Starts for Mahdia_59:

(Start: 65 @41385 has 11 MA's), (78, 41445), (90, 41508), (100, 41562), (107, 41598), (129, 41685), (131, 41691), (138, 41718), (151, 41757), (156, 41775),

Gene: Maureen_37 Start: 26991, Stop: 27434, Start Num: 64

Candidate Starts for Maureen_37:

(Start: 64 @26991 has 51 MA's), (Start: 84 @27078 has 1 MA's), (117, 27243), (120, 27252), (130, 27291), (131, 27294), (132, 27300),

Gene: MiniMommy_42 Start: 26738, Stop: 27181, Start Num: 64

Candidate Starts for MiniMommy_42:

(Start: 64 @26738 has 51 MA's), (86, 26837), (131, 27041), (140, 27071),

Gene: MissSwiss_35 Start: 24190, Stop: 24540, Start Num: 64

Candidate Starts for MissSwiss_35:

(25, 23998), (27, 24022), (32, 24052), (45, 24094), (Start: 64 @24190 has 51 MA's), (86, 24274), (120, 24436), (131, 24478), (132, 24484),

Gene: Mollymur_72 Start: 52998, Stop: 52633, Start Num: 62

Candidate Starts for Mollymur_72:

(50, 53064), (55, 53028), (Start: 62 @52998 has 9 MA's), (130, 52701), (131, 52698),

Gene: Morrissey_62 Start: 43281, Stop: 43685, Start Num: 65

Candidate Starts for Morrissey_62:

(36, 43155), (Start: 65 @43281 has 11 MA's), (77, 43338), (107, 43494), (115, 43524), (129, 43581), (130, 43584), (131, 43587), (138, 43614), (141, 43623), (151, 43653),

Gene: Moss_42 Start: 24158, Stop: 24592, Start Num: 64

Candidate Starts for Moss_42:

(38, 24050), (41, 24062), (48, 24086), (Start: 64 @24158 has 51 MA's), (130, 24458),

Gene: Mudpuppy_35 Start: 24965, Stop: 25408, Start Num: 64

Candidate Starts for Mudpuppy_35:

(20, 24752), (Start: 64 @24965 has 51 MA's), (86, 25064), (117, 25217), (131, 25268),

Gene: Nesbitt_39 Start: 26358, Stop: 26897, Start Num: 54

Candidate Starts for Nesbitt_39:

(37, 26283), (Start: 54 @26358 has 4 MA's), (70, 26427), (83, 26493), (91, 26541), (102, 26601), (107, 26613), (117, 26661), (119, 26667), (124, 26691), (127, 26712), (133, 26736), (144, 26769), (158, 26841), (161, 26877),

Gene: Nicky22_38 Start: 26183, Stop: 26509, Start Num: 69

Candidate Starts for Nicky22_38:

(Start: 69 @26183 has 57 MA's), (125, 26435), (129, 26450),

Gene: Niobe_35 Start: 26862, Stop: 27212, Start Num: 64

Candidate Starts for Niobe_35:

(Start: 64 @26862 has 51 MA's), (75, 26907), (86, 26946), (97, 27000), (117, 27099), (131, 27150),

Gene: Nitro_36 Start: 26582, Stop: 26929, Start Num: 64

Candidate Starts for Nitro_36:

(Start: 64 @26582 has 51 MA's), (75, 26627), (86, 26666), (97, 26720), (120, 26828), (131, 26870),

Gene: ObiToo_40 Start: 26129, Stop: 26491, Start Num: 64

Candidate Starts for ObiToo_40:

(Start: 64 @26129 has 51 MA's), (97, 26267), (120, 26375), (131, 26417),

Gene: Percival_46 Start: 28994, Stop: 29350, Start Num: 64

Candidate Starts for Percival_46:

(Start: 64 @28994 has 51 MA's), (74, 29039), (88, 29096), (131, 29285), (142, 29327),

Gene: Phisb_40 Start: 25777, Stop: 26103, Start Num: 69

Candidate Starts for Phisb_40:

(Start: 69 @25777 has 57 MA's), (94, 25885), (120, 26008), (129, 26044), (131, 26050),

Gene: Phives_38 Start: 27302, Stop: 27745, Start Num: 64

Candidate Starts for Phives_38:

(39, 27194), (40, 27197), (42, 27206), (Start: 64 @27302 has 51 MA's), (117, 27554), (120, 27563), (131, 27605), (138, 27632), (149, 27668),

Gene: Pixelle_36 Start: 26837, Stop: 27184, Start Num: 64

Candidate Starts for Pixelle_36:

(Start: 64 @26837 has 51 MA's), (86, 26921), (120, 27083), (131, 27125),

Gene: Powerpuff_37 Start: 26303, Stop: 26746, Start Num: 64

Candidate Starts for Powerpuff_37:

(Start: 64 @26303 has 51 MA's), (117, 26555), (131, 26606),

Gene: Pumpkins_58 Start: 26180, Stop: 26539, Start Num: 63

Candidate Starts for Pumpkins_58:

(30, 26060), (Start: 63 @26180 has 2 MA's), (97, 26318), (131, 26468),

Gene: Puppies_60 Start: 41273, Stop: 41683, Start Num: 65

Candidate Starts for Puppies_60:

(Start: 65 @41273 has 11 MA's), (71, 41294), (95, 41426), (103, 41468), (105, 41477), (129, 41582), (131, 41588),

Gene: QMacho_39 Start: 26201, Stop: 26527, Start Num: 69

Candidate Starts for QMacho_39:

(Start: 69 @26201 has 57 MA's), (125, 26453), (129, 26468),

Gene: Quenya_36 Start: 25890, Stop: 26219, Start Num: 69

Candidate Starts for Quenya_36:

(8, 25413), (14, 25524), (17, 25566), (Start: 69 @25890 has 57 MA's), (89, 25977), (97, 26013), (98, 26016), (125, 26142), (129, 26157), (131, 26163),

Gene: REQ3_19 Start: 8920, Stop: 9282, Start Num: 62

Candidate Starts for REQ3_19:

(Start: 62 @8920 has 9 MA's), (74, 8965), (96, 9061), (98, 9067), (99, 9073), (117, 9157), (131, 9211), (148, 9262), (153, 9274),

Gene: Reedo_35 Start: 24148, Stop: 24591, Start Num: 64
Candidate Starts for Reedo_35:
(Start: 64 @24148 has 51 MA's), (75, 24193), (86, 24247), (117, 24400), (120, 24409), (131, 24451),
(132, 24457), (138, 24478),

Gene: Rollins_34 Start: 23702, Stop: 24043, Start Num: 69
Candidate Starts for Rollins_34:
(Start: 69 @23702 has 57 MA's), (91, 23795), (131, 23975),

Gene: Rona_35 Start: 26210, Stop: 26542, Start Num: 69
Candidate Starts for Rona_35:
(3, 25613), (7, 25721), (Start: 69 @26210 has 57 MA's), (94, 26321), (96, 26333), (98, 26339), (107,
26387), (120, 26444), (129, 26480), (131, 26486),

Gene: Samy_60 Start: 37282, Stop: 37698, Start Num: 59
Candidate Starts for Samy_60:
(Start: 59 @37282 has 1 MA's), (87, 37390), (92, 37414), (119, 37534), (120, 37537), (122, 37549),
(130, 37576), (132, 37585), (138, 37606), (143, 37624),

Gene: SanaSana_40 Start: 27314, Stop: 27640, Start Num: 69
Candidate Starts for SanaSana_40:
(Start: 69 @27314 has 57 MA's), (98, 27440), (120, 27545), (125, 27566), (129, 27581), (131, 27587),

Gene: SansAfet_38 Start: 25631, Stop: 25957, Start Num: 69
Candidate Starts for SansAfet_38:
(Start: 69 @25631 has 57 MA's), (120, 25862), (129, 25898), (131, 25904),

Gene: SarBear_37 Start: 25498, Stop: 25824, Start Num: 69
Candidate Starts for SarBear_37:
(Start: 69 @25498 has 57 MA's), (125, 25750), (129, 25765),

Gene: Schmidt_51 Start: 34772, Stop: 35146, Start Num: 65
Candidate Starts for Schmidt_51:
(Start: 65 @34772 has 11 MA's), (68, 34784), (91, 34901), (96, 34928), (98, 34934), (119, 35030),
(128, 35072), (134, 35096),

Gene: ShakeltOph_42 Start: 26737, Stop: 27180, Start Num: 64
Candidate Starts for ShakeltOph_42:
(Start: 64 @26737 has 51 MA's), (86, 26836), (131, 27040), (140, 27070),

Gene: Sharkboy_36 Start: 26309, Stop: 26641, Start Num: 69
Candidate Starts for Sharkboy_36:
(Start: 69 @26309 has 57 MA's), (94, 26420), (96, 26432), (98, 26438), (107, 26486), (120, 26543),
(131, 26585),

Gene: Simpson_37 Start: 25218, Stop: 25661, Start Num: 64
Candidate Starts for Simpson_37:
(Start: 64 @25218 has 51 MA's), (86, 25317), (117, 25470), (131, 25521),

Gene: Skylord_34 Start: 23633, Stop: 23974, Start Num: 69
Candidate Starts for Skylord_34:
(Start: 69 @23633 has 57 MA's), (91, 23726), (131, 23906),

Gene: Slay_38 Start: 26179, Stop: 26505, Start Num: 69
Candidate Starts for Slay_38:
(Start: 69 @26179 has 57 MA's), (125, 26431), (129, 26446),

Gene: Snek_35 Start: 24475, Stop: 24915, Start Num: 64
Candidate Starts for Snek_35:
(25, 24304), (27, 24328), (35, 24358), (47, 24400), (Start: 64 @24475 has 51 MA's), (75, 24520), (117, 24727), (131, 24778), (147, 24835),

Gene: Soondubu_33 Start: 27354, Stop: 27797, Start Num: 64
Candidate Starts for Soondubu_33:
(9, 26925), (25, 27192), (35, 27246), (Start: 64 @27354 has 51 MA's), (120, 27615), (131, 27657), (132, 27663), (137, 27681), (141, 27693),

Gene: SpeedDemon_740 Start: 54721, Stop: 54356, Start Num: 62
Candidate Starts for SpeedDemon_740:
(55, 54751), (Start: 62 @54721 has 9 MA's), (130, 54424), (150, 54376),

Gene: Stoor_38 Start: 26983, Stop: 27309, Start Num: 69
Candidate Starts for Stoor_38:
(5, 26470), (6, 26488), (10, 26524), (13, 26593), (Start: 69 @26983 has 57 MA's), (96, 27103), (98, 27109), (106, 27151), (120, 27214), (125, 27235), (129, 27250), (131, 27256),

Gene: Stromboli_38 Start: 26847, Stop: 27173, Start Num: 69
Candidate Starts for Stromboli_38:
(1, 26094), (5, 26334), (6, 26352), (10, 26388), (13, 26457), (Start: 69 @26847 has 57 MA's), (96, 26967), (98, 26973), (120, 27078), (125, 27099), (129, 27114), (131, 27120),

Gene: SuMoo_46 Start: 28468, Stop: 28815, Start Num: 64
Candidate Starts for SuMoo_46:
(43, 28372), (Start: 59 @28456 has 1 MA's), (Start: 64 @28468 has 51 MA's), (113, 28690), (120, 28717), (131, 28759),

Gene: Sue2_36 Start: 26239, Stop: 26682, Start Num: 64
Candidate Starts for Sue2_36:
(Start: 64 @26239 has 51 MA's), (97, 26392), (125, 26521), (131, 26542), (132, 26548),

Gene: Swervy_38 Start: 25698, Stop: 26024, Start Num: 69
Candidate Starts for Swervy_38:
(Start: 69 @25698 has 57 MA's), (125, 25950), (129, 25965),

Gene: Tallboi_38 Start: 27029, Stop: 27379, Start Num: 64
Candidate Starts for Tallboi_38:
(31, 26903), (Start: 64 @27029 has 51 MA's), (75, 27074), (120, 27275), (131, 27317),

Gene: Tbone_34 Start: 25013, Stop: 25456, Start Num: 64
Candidate Starts for Tbone_34:
(20, 24791), (Start: 64 @25013 has 51 MA's), (86, 25112), (117, 25265), (131, 25316),

Gene: TforTroy_37 Start: 26052, Stop: 26408, Start Num: 63
Candidate Starts for TforTroy_37:
(30, 25932), (Start: 63 @26052 has 2 MA's), (131, 26340),

Gene: Tian_35 Start: 26817, Stop: 27164, Start Num: 64
Candidate Starts for Tian_35:
(Start: 64 @26817 has 51 MA's), (86, 26901), (120, 27063), (131, 27105),

Gene: TinaLin_56 Start: 36975, Stop: 37346, Start Num: 67
Candidate Starts for TinaLin_56:
(Start: 65 @36972 has 11 MA's), (Start: 67 @36975 has 1 MA's), (68, 36984), (91, 37101), (119, 37230), (134, 37296),

Gene: TinyDot_60 Start: 38014, Stop: 38394, Start Num: 65
Candidate Starts for TinyDot_60:
(11, 37603), (18, 37699), (Start: 65 @38014 has 11 MA's), (68, 38026), (79, 38077), (86, 38119), (137, 38338), (138, 38341), (150, 38374),

Gene: Trine_64 Start: 42629, Stop: 43021, Start Num: 66
Candidate Starts for Trine_64:
(15, 42272), (16, 42302), (20, 42380), (Start: 66 @42629 has 1 MA's), (99, 42797), (101, 42815), (115, 42872), (129, 42929), (130, 42932), (131, 42935), (138, 42962),

Gene: Tuck_39 Start: 27855, Stop: 28298, Start Num: 64
Candidate Starts for Tuck_39:
(Start: 64 @27855 has 51 MA's), (117, 28107), (120, 28116), (131, 28158), (138, 28185), (149, 28221),

Gene: TukTuk_38 Start: 25769, Stop: 26095, Start Num: 69
Candidate Starts for TukTuk_38:
(Start: 69 @25769 has 57 MA's), (94, 25877), (120, 26000), (129, 26036), (131, 26042),

Gene: Turab_34 Start: 25291, Stop: 25641, Start Num: 64
Candidate Starts for Turab_34:
(25, 25111), (32, 25165), (Start: 64 @25291 has 51 MA's), (75, 25336), (86, 25375), (120, 25537), (131, 25579),

Gene: Tutumahutu_37 Start: 25185, Stop: 25628, Start Num: 64
Candidate Starts for Tutumahutu_37:
(Start: 64 @25185 has 51 MA's), (86, 25284), (117, 25437), (131, 25488),

Gene: Tweety19_35 Start: 24474, Stop: 24914, Start Num: 64
Candidate Starts for Tweety19_35:
(25, 24303), (27, 24327), (35, 24357), (47, 24399), (Start: 64 @24474 has 51 MA's), (75, 24519), (117, 24726), (131, 24777), (147, 24834),

Gene: Upyo_68 Start: 44581, Stop: 44982, Start Num: 65
Candidate Starts for Upyo_68:
(31, 44440), (Start: 65 @44581 has 11 MA's), (100, 44758), (107, 44794), (108, 44797), (129, 44881), (131, 44887), (138, 44914), (141, 44923), (152, 44959), (154, 44968),

Gene: UtzChips_43 Start: 27442, Stop: 27804, Start Num: 64
Candidate Starts for UtzChips_43:
(44, 27361), (Start: 64 @27442 has 51 MA's), (111, 27658), (131, 27733),

Gene: VResidence_36 Start: 25348, Stop: 25791, Start Num: 64

Candidate Starts for VResidence_36:

(Start: 64 @25348 has 51 MA's), (117, 25600), (120, 25609), (131, 25651), (132, 25657), (140, 25681), (158, 25768),

Gene: Vitas_34 Start: 23642, Stop: 23983, Start Num: 69

Candidate Starts for Vitas_34:

(Start: 69 @23642 has 57 MA's), (91, 23735), (131, 23915),

Gene: VroomVroom_40 Start: 26879, Stop: 27325, Start Num: 64

Candidate Starts for VroomVroom_40:

(34, 26771), (Start: 59 @26867 has 1 MA's), (Start: 64 @26879 has 51 MA's), (86, 26978), (131, 27182), (157, 27275),

Gene: Warda_35 Start: 25189, Stop: 25632, Start Num: 64

Candidate Starts for Warda_35:

(20, 24967), (Start: 64 @25189 has 51 MA's), (86, 25288), (117, 25441), (131, 25492),

Gene: Widow_60 Start: 41819, Stop: 42229, Start Num: 65

Candidate Starts for Widow_60:

(Start: 65 @41819 has 11 MA's), (95, 41972), (103, 42014), (105, 42023), (129, 42128), (131, 42134),

Gene: Wildwest_35 Start: 25377, Stop: 25820, Start Num: 64

Candidate Starts for Wildwest_35:

(25, 25194), (27, 25218), (35, 25248), (Start: 64 @25377 has 51 MA's), (117, 25629), (120, 25638), (131, 25680), (132, 25686), (149, 25743), (159, 25800),

Gene: Yang_36 Start: 25545, Stop: 25904, Start Num: 63

Candidate Starts for Yang_36:

(Start: 63 @25545 has 2 MA's), (97, 25683), (111, 25758), (131, 25833),

Gene: YesChef_35 Start: 25162, Stop: 25605, Start Num: 64

Candidate Starts for YesChef_35:

(Start: 64 @25162 has 51 MA's), (117, 25414), (131, 25465),

Gene: phiSASD1_10 Start: 25051, Stop: 25515, Start Num: 54

Candidate Starts for phiSASD1_10:

(Start: 54 @25051 has 4 MA's), (102, 25246), (107, 25258), (117, 25306), (118, 25309), (127, 25351), (136, 25384),