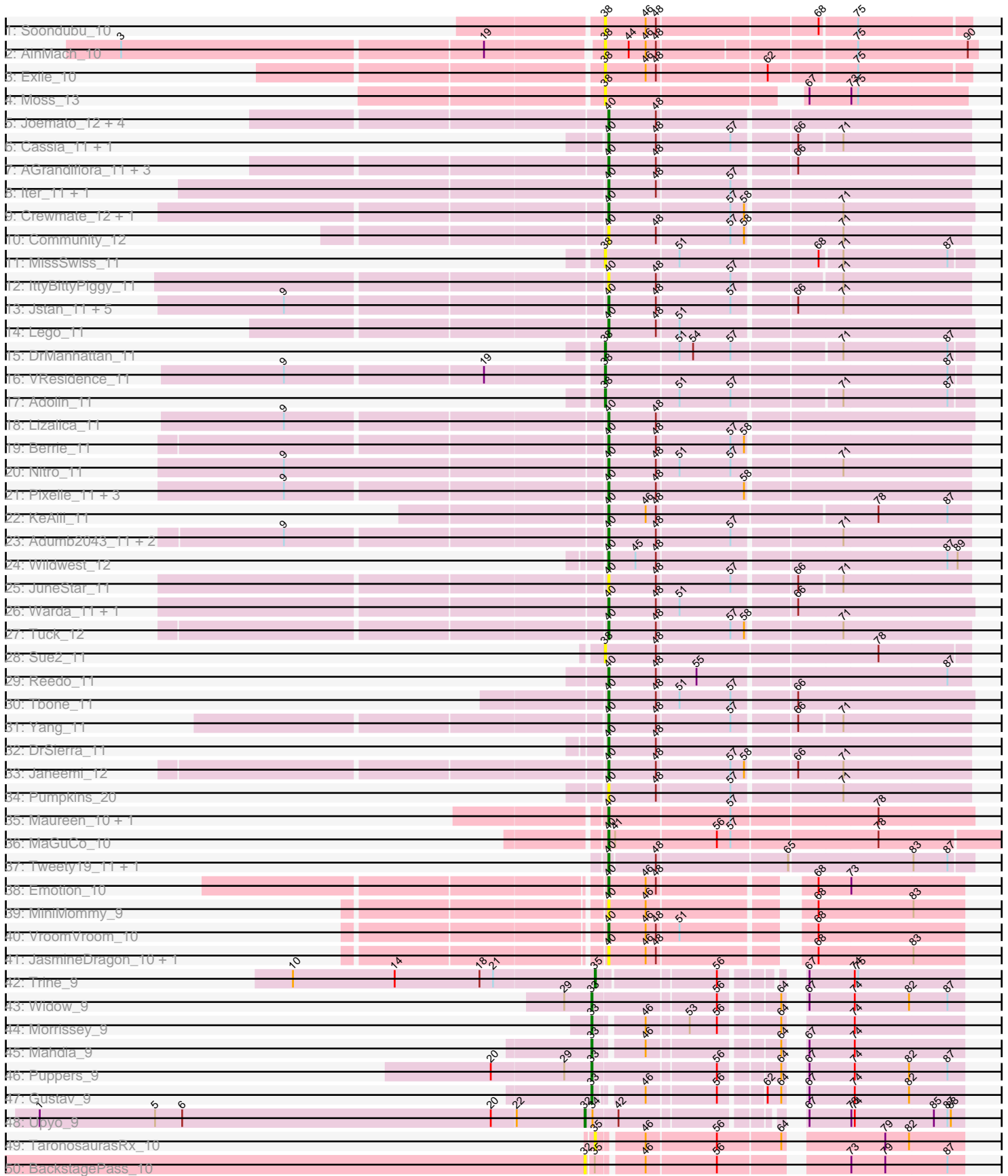
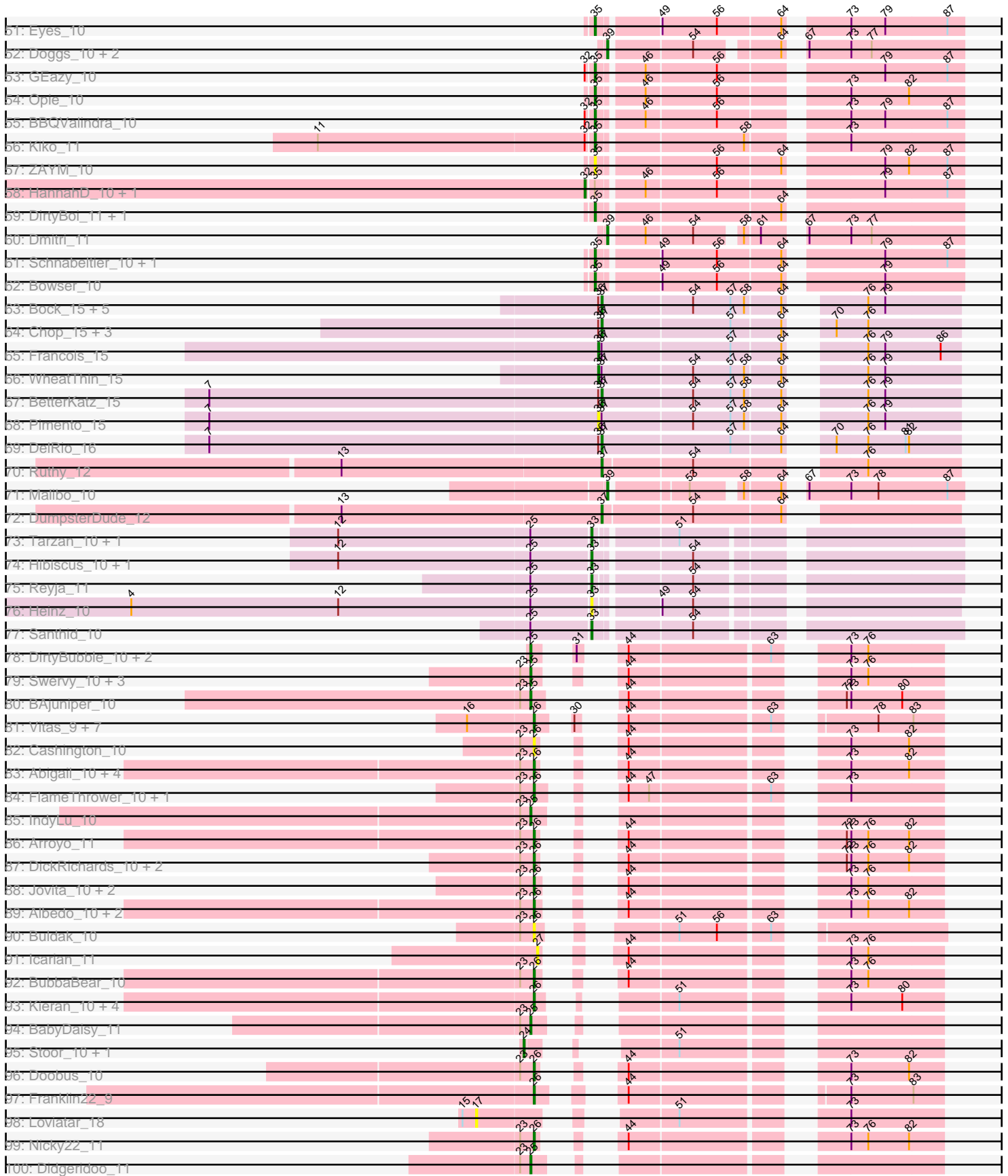


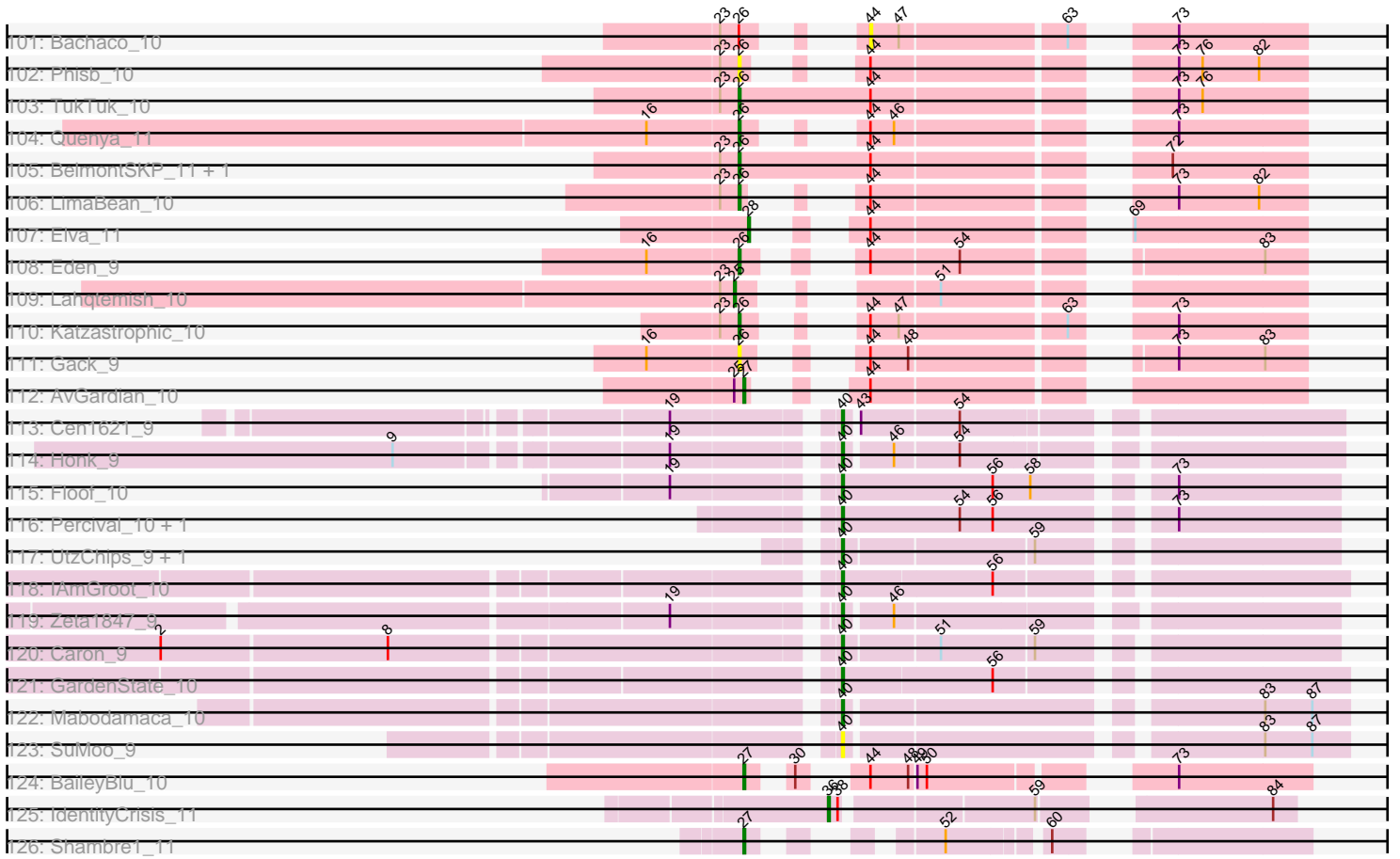
Pham 163358



Pham 163358



Pham 163358



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 163358 Report

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

Pham number 163358 has 196 members, 40 are drafts.

Phages represented in each track:

- Track 1 : Soondubu_10
- Track 2 : AinMach_10
- Track 3 : Exile_10
- Track 4 : Moss_13
- Track 5 : Joemato_12, JohnDoe_11, Cyan_11, Simpson_12, Kaylissa_11
- Track 6 : Cassia_11, TforTroy_11
- Track 7 : AGrandiflora_11, YesChef_11, Tutumahutu_11, Powerpuff_11
- Track 8 : lter_11, Ascela_11
- Track 9 : Crewmate_12, ObiToo_11
- Track 10 : Community_12
- Track 11 : MissSwiss_11
- Track 12 : IttyBittyPiggy_11
- Track 13 : Jstan_11, Elezi_11, Eraser_11, Niobe_11, Asa16_11, London_11
- Track 14 : Lego_11
- Track 15 : DrManhattan_11
- Track 16 : VResidence_11
- Track 17 : Adolin_11
- Track 18 : Lizalica_11
- Track 19 : Berrie_11
- Track 20 : Nitro_11
- Track 21 : Pixelle_11, Tian_11, Amyev_11, Phives_12
- Track 22 : KeAlii_11
- Track 23 : Adumb2043_11, AEgle_11, Turab_11
- Track 24 : Wildwest_12
- Track 25 : JuneStar_11
- Track 26 : Warda_11, Mudpuppy_11
- Track 27 : Tuck_12
- Track 28 : Sue2_11
- Track 29 : Reedo_11
- Track 30 : Tbone_11
- Track 31 : Yang_11
- Track 32 : DrSierra_11
- Track 33 : Janeemi_12
- Track 34 : Pumpkins_20
- Track 35 : Maureen_10, Liebe_10
- Track 36 : MaGuCo_10
- Track 37 : Tweety19_11, Snek_11

- Track 38 : Emotion_10
- Track 39 : MiniMommy_9
- Track 40 : VroomVroom_10
- Track 41 : JasmineDragon_10, ShakeltOph_10
- Track 42 : Trine_9
- Track 43 : Widow_9
- Track 44 : Morrissey_9
- Track 45 : Mahdia_9
- Track 46 : Puppies_9
- Track 47 : Gustav_9
- Track 48 : Upyo_9
- Track 49 : TaronosaurusRx_10
- Track 50 : BackstagePass_10
- Track 51 : Eyes_10
- Track 52 : Doggs_10, RayTheFireFly_11, Coriander_11
- Track 53 : GEazy_10
- Track 54 : Opie_10
- Track 55 : BBQValindra_10
- Track 56 : Kiko_11
- Track 57 : ZAYM_10
- Track 58 : HannahD_10, Bunker_10
- Track 59 : DirtyBoi_11, Hedwig_11
- Track 60 : Dmitri_11
- Track 61 : Schnabeltier_10, MagicMan_10
- Track 62 : Bowser_10
- Track 63 : Bock_15, Mulch_15, Nadeem_15, Brylie_15, Parada_15, NancyRae_15
- Track 64 : Chop_15, Ayotoya_15, GrandSlam_15, Hamood_15
- Track 65 : Francois_15
- Track 66 : WheatThin_15
- Track 67 : BetterKatz_15
- Track 68 : Pimento_15
- Track 69 : DelRio_16
- Track 70 : Ruthy_12
- Track 71 : Malibo_10
- Track 72 : DumpsterDude_12
- Track 73 : Tarzan_10, DonkeyMan_10
- Track 74 : Hibiscus_10, Jojo24_10
- Track 75 : Reyja_11
- Track 76 : Heinz_10
- Track 77 : Santhid_10
- Track 78 : DirtyBubble_10, BabyYoda_10, Stromboli_10
- Track 79 : Swervy_10, Finalfrontier_11, Slay_10, SarBear_10
- Track 80 : BAJuniper_10
- Track 81 : Vitas_9, Bernstein_9, Clayda5_9, Brahms_9, Rollins_9, Coltrane_9, Armstrong_9, Skylord_9
- Track 82 : Cashington_10
- Track 83 : Abigail_10, Burritobowl_10, Avocadoman_10, Albright_10, Johnathan_10
- Track 84 : FlameThrower_10, Celaena_10
- Track 85 : IndyLu_10
- Track 86 : Arroyo_11
- Track 87 : DickRichards_10, CroZenni_10, SansAfet_10
- Track 88 : Jovita_10, QMacho_11, Eula_10
- Track 89 : Albedo_10, Kenzers_10, Lynlien_10

- Track 90 : Buldak_10
- Track 91 : Icarian_11
- Track 92 : BubbaBear_10
- Track 93 : Kieran_10, Rona_10, ChiliPepper_10, Sharkboy_10, Dismas_10
- Track 94 : BabyDaisy_11
- Track 95 : Stoor_10, SanaSana_11
- Track 96 : Doobus_10
- Track 97 : Franklin22_9
- Track 98 : Loviatar_18
- Track 99 : Nicky22_11
- Track 100 : Didgeridoo_11
- Track 101 : Bachaco_10
- Track 102 : Phisb_10
- Track 103 : TukTuk_10
- Track 104 : Quenya_11
- Track 105 : BelmontSKP_11, AnnaLie_11
- Track 106 : LimaBean_10
- Track 107 : Elva_11
- Track 108 : Eden_9
- Track 109 : Lahqtemish_10
- Track 110 : Katzastrophic_10
- Track 111 : Gack_9
- Track 112 : AvGardian_10
- Track 113 : Cen1621_9
- Track 114 : Honk_9
- Track 115 : Floof_10
- Track 116 : Percival_10, Gretchen_10
- Track 117 : UtzChips_9, Barnstormer_9
- Track 118 : IAmGroot_10
- Track 119 : Zeta1847_9
- Track 120 : Caron_9
- Track 121 : GardenState_10
- Track 122 : Mabodamaca_10
- Track 123 : SuMoo_9
- Track 124 : BaileyBlu_10
- Track 125 : IdentityCrisis_11
- Track 126 : Shambre1_11

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

The start number called the most often in the published annotations is 40, it was called in 50 of the 156 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AEgle_11, AGrandiflora_11, Adumb2043_11, Amyev_11, Asa16_11, Ascela_11, Barnstormer_9, Berrie_11, Caron_9, Cassia_11, Cen1621_9, Community_12, Crewmate_12, Cyan_11, DrSierra_11, Elezi_11, Emotion_10, Eraser_11, Floof_10, GardenState_10, Gretchen_10, Honk_9, IAmGroot_10, Iter_11, IttyBittyPiggy_11, Janeemi_12, JasmineDragon_10, Joemato_12, JohnDoe_11, Jstan_11, JuneStar_11, Kaylissa_11, KeAlii_11, Lego_11, Liebe_10, Lizalica_11, London_11,

MaGuCo_10, Mabodamaca_10, Maureen_10, MiniMommy_9, Mudpuppy_11, Niobe_11, Nitro_11, ObiToo_11, Percival_10, Phives_12, Pixelle_11, Powerpuff_11, Pumpkins_20, Reedo_11, ShakeltOph_10, Simpson_12, Snek_11, SuMoo_9, Tbone_11, TforTroy_11, Tian_11, Tuck_12, Turab_11, Tutumahutu_11, Tweety19_11, UtzChips_9, VroomVroom_10, Warda_11, Wildwest_12, Yang_11, YesChef_11, Zeta1847_9,

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

-

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

- Abigail_10, Adolin_11, AinMach_10, Albedo_10, Albright_10, AnnaLie_11, Armstrong_9, Arroyo_11, AvGardian_10, Avocadoman_10, Ayotoya_15, BAjuniper_10, BBQValindra_10, BabyDaisy_11, BabyYoda_10, Bachaco_10, BackstagePass_10, BaileyBlu_10, BelmontSKP_11, Bernstein_9, BetterKatz_15, Bock_15, Bowser_10, Brahms_9, Brylie_15, BubbaBear_10, Buldak_10, Bunker_10, Burritobowl_10, Cashington_10, Celaena_10, ChiliPepper_10, Chop_15, Clayda5_9, Coltrane_9, Coriander_11, CroZenni_10, DelRio_16, DickRichards_10, Didgeridoo_11, DirtyBoi_11, DirtyBubble_10, Dismas_10, Dmitri_11, Doggs_10, DonkeyMan_10, Doobus_10, DrManhattan_11, DumpsterDude_12, Eden_9, Elva_11, Eula_10, Exile_10, Eyes_10, Finalfrontier_11, FlameThrower_10, Francois_15, Franklin22_9, GEazy_10, Gack_9, GrandSlam_15, Gustav_9, Hamood_15, HannahD_10, Hedwig_11, Heinz_10, Hibiscus_10, Icarian_11, IdentityCrisis_11, IndyLu_10, Johnathan_10, Jojo24_10, Jovita_10, Katzastrophic_10, Kenzers_10, Kieran_10, Kiko_11, Lahqtemish_10, LimaBean_10, Loviatar_18, Lynlen_10, MagicMan_10, Mahdia_9, Malibo_10, MissSwiss_11, Morrissey_9, Moss_13, Mulch_15, Nadeem_15, NancyRae_15, Nicky22_11, Opie_10, Parada_15, Phisb_10, Pimento_15, Puppies_9, QMacho_11, Quenya_11, RayTheFireFly_11, Reyja_11, Rollins_9, Rona_10, Ruthy_12, SanaSana_11, SansAfet_10, Santhid_10, SarBear_10, Schnabeltier_10, Shambre1_11, Sharkboy_10, Skylord_9, Slay_10, Soondubu_10, Stoor_10, Stromboli_10, Sue2_11, Swervy_10, TaronosaurusRx_10, Tarzan_10, Trine_9, TukTuk_10, Upyo_9, VResidence_11, Vitas_9, WheatThin_15, Widow_9, ZAYM_10,

Summary by start number:

Start 17:

- Found in 1 of 196 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Loviatar_18 (EB),

Start 24:

- Found in 2 of 196 (1.0%) of genes in pham
- Manual Annotations of this start: 2 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SanaSana_11 (EB), Stoor_10 (EB),

Start 25:

- Found in 20 of 196 (10.2%) of genes in pham
- Manual Annotations of this start: 12 of 156
- Called 60.0% of time when present

- Phage (with cluster) where this start called: BAjuniper_10 (EB), BabyDaisy_11 (EB), BabyYoda_10 (EB), Didgeridoo_11 (EB), DirtyBubble_10 (EB), Finalfrontier_11 (EB), IndyLu_10 (EB), Lahqtemish_10 (EB), SarBear_10 (EB), Slay_10 (EB), Stromboli_10 (EB), Swervy_10 (EB),

Start 26:

- Found in 46 of 196 (23.5%) of genes in pham
- Manual Annotations of this start: 41 of 156
- Called 97.8% of time when present
- Phage (with cluster) where this start called: Abigail_10 (EB), Albedo_10 (EB), Albright_10 (EB), AnnaLie_11 (EB), Armstrong_9 (EB), Arroyo_11 (EB), Avocadoman_10 (EB), BelmontSKP_11 (EB), Bernstein_9 (EB), Brahms_9 (EB), BubbaBear_10 (EB), Buldak_10 (EB), Burritobowl_10 (EB), Cashington_10 (EB), Celaena_10 (EB), ChiliPepper_10 (EB), Clayda5_9 (EB), Coltrane_9 (EB), CroZenni_10 (EB), DickRichards_10 (EB), Dismas_10 (EB), Doobus_10 (EB), Eden_9 (EB), Eula_10 (EB), FlameThrower_10 (EB), Franklin22_9 (EB), Gack_9 (EB), Johnathan_10 (EB), Jovita_10 (EB), Katzastrophic_10 (EB), Kenzers_10 (EB), Kieran_10 (EB), LimaBean_10 (EB), Lynlen_10 (EB), Nicky22_11 (EB), Phisb_10 (EB), QMacho_11 (EB), Quenya_11 (EB), Rollins_9 (EB), Rona_10 (EB), SansAfet_10 (EB), Sharkboy_10 (EB), Skylord_9 (EB), TukTuk_10 (EB), Vitas_9 (EB),

Start 27:

- Found in 4 of 196 (2.0%) of genes in pham
- Manual Annotations of this start: 3 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AvGardian_10 (EB), BaileyBlu_10 (FP), Icarian_11 (EB), Shambre1_11 (singleton),

Start 28:

- Found in 1 of 196 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Elva_11 (EB),

Start 32:

- Found in 7 of 196 (3.6%) of genes in pham
- Manual Annotations of this start: 3 of 156
- Called 57.1% of time when present
- Phage (with cluster) where this start called: BackstagePass_10 (DB), Bunker_10 (DB), HannahD_10 (DB), Upyo_9 (CD),

Start 33:

- Found in 12 of 196 (6.1%) of genes in pham
- Manual Annotations of this start: 10 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan_10 (DY), Gustav_9 (CD), Heinz_10 (DY), Hibiscus_10 (DY), Jojo24_10 (DY), Mahdia_9 (CD), Morrissey_9 (CD), Puppies_9 (CD), Reyja_11 (DY), Santhid_10 (DY), Tarzan_10 (DY), Widow_9 (CD),

Start 35:

- Found in 16 of 196 (8.2%) of genes in pham

- Manual Annotations of this start: 11 of 156
- Called 81.2% of time when present
- Phage (with cluster) where this start called: BBQValindra_10 (DB), Bowser_10 (DB), DirtyBoi_11 (DB), Eyes_10 (DB), GEazy_10 (DB), Hedwig_11 (DB), Kiko_11 (DB), MagicMan_10 (DB), Opie_10 (DB), Schnabeltier_10 (DB), TaronosaurusRx_10 (DB), Trine_9 (CD), ZAYM_10 (DB),

Start 36:

- Found in 16 of 196 (8.2%) of genes in pham
- Manual Annotations of this start: 3 of 156
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Francois_15 (DI), IdentityCrisis_11 (singleton), Pimento_15 (DI), WheatThin_15 (DI),

Start 37:

- Found in 17 of 196 (8.7%) of genes in pham
- Manual Annotations of this start: 13 of 156
- Called 82.4% of time when present
- Phage (with cluster) where this start called: Ayotoya_15 (DI), BetterKatz_15 (DI), Bock_15 (DI), Brylie_15 (DI), Chop_15 (DI), DelRio_16 (DI), DumpsterDude_12 (DW), GrandSlam_15 (DI), Hamood_15 (DI), Mulch_15 (DI), Nadeem_15 (DI), NancyRae_15 (DI), Parada_15 (DI), Ruthy_12 (DW),

Start 38:

- Found in 10 of 196 (5.1%) of genes in pham
- Manual Annotations of this start: 3 of 156
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Adolin_11 (AZ1), AinMach_10 (AZ), DrManhattan_11 (AZ1), Exile_10 (AZ), MissSwiss_11 (AZ1), Moss_13 (AZ), Soondubu_10 (AZ), Sue2_11 (AZ1), VResidence_11 (AZ1),

Start 39:

- Found in 5 of 196 (2.6%) of genes in pham
- Manual Annotations of this start: 4 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Coriander_11 (DB), Dmitri_11 (DB), Doggs_10 (DB), Malibo_10 (DW), RayTheFireFly_11 (DB),

Start 40:

- Found in 69 of 196 (35.2%) of genes in pham
- Manual Annotations of this start: 50 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_11 (AZ1), AGrandiflora_11 (AZ1), Adumb2043_11 (AZ1), Amyev_11 (AZ1), Asa16_11 (AZ1), Ascela_11 (AZ1), Barnstormer_9 (EH), Berrie_11 (AZ1), Caron_9 (EH), Cassia_11 (AZ1), Cen1621_9 (EH), Community_12 (AZ1), Crewmate_12 (AZ1), Cyan_11 (AZ1), DrSierra_11 (AZ1), Elezi_11 (AZ1), Emotion_10 (AZ4), Eraser_11 (AZ1), Floof_10 (EH), GardenState_10 (EH), Gretchen_10 (EH), Honk_9 (EH), IAmGroot_10 (EH), Iter_11 (AZ1), IttyBittyPiggy_11 (AZ1), Janeemi_12 (AZ1), JasmineDragon_10 (AZ4), Joemato_12 (AZ1), JohnDoe_11 (AZ1), Jstan_11 (AZ1), JuneStar_11 (AZ1), Kaylissa_11 (AZ1), KeAlii_11 (AZ1), Lego_11 (AZ1), Liebe_10 (AZ2), Lizalica_11 (AZ1), London_11 (AZ1), MaGuCo_10 (AZ2), Mabodamaca_10 (EH), Maureen_10 (AZ2), MiniMommy_9 (AZ4), Mudpuppy_11 (AZ1), Niobe_11 (AZ1), Nitro_11 (AZ1),

ObiToo_11 (AZ1), Percival_10 (EH), Phives_12 (AZ1), Pixelle_11 (AZ1), Powerpuff_11 (AZ1), Pumpkins_20 (AZ1), Reedo_11 (AZ1), ShakeltOph_10 (AZ4), Simpson_12 (AZ1), Snek_11 (AZ3), SuMoo_9 (EH), Tbone_11 (AZ1), TforTroy_11 (AZ1), Tian_11 (AZ1), Tuck_12 (AZ1), Turab_11 (AZ1), Tutumahutu_11 (AZ1), Tweety19_11 (AZ3), UtzChips_9 (EH), VroomVroom_10 (AZ4), Warda_11 (AZ1), Wildwest_12 (AZ1), Yang_11 (AZ1), YesChef_11 (AZ1), Zeta1847_9 (EH),

Start 44:

- Found in 53 of 196 (27.0%) of genes in pham
- No Manual Annotations of this start.
- Called 1.9% of time when present
- Phage (with cluster) where this start called: Bachaco_10 (EB),

Summary by clusters:

There are 14 clusters represented in this pham: FP, singleton, AZ, EH, DI, DB, CD, DW, DY, AZ1, AZ2, AZ3, AZ4, EB,

Info for manual annotations of cluster AZ1:

- Start number 38 was manually annotated 3 times for cluster AZ1.
- Start number 40 was manually annotated 31 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 40 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 40 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 40 was manually annotated 2 times for cluster AZ4.

Info for manual annotations of cluster CD:

- Start number 32 was manually annotated 1 time for cluster CD.
- Start number 33 was manually annotated 5 times for cluster CD.
- Start number 35 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster DB:

- Start number 32 was manually annotated 2 times for cluster DB.
- Start number 35 was manually annotated 10 times for cluster DB.
- Start number 39 was manually annotated 3 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 36 was manually annotated 2 times for cluster DI.
- Start number 37 was manually annotated 11 times for cluster DI.

Info for manual annotations of cluster DW:

- Start number 37 was manually annotated 2 times for cluster DW.
- Start number 39 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster DY:

- Start number 33 was manually annotated 5 times for cluster DY.

Info for manual annotations of cluster EB:

- Start number 24 was manually annotated 2 times for cluster EB.
- Start number 25 was manually annotated 12 times for cluster EB.
- Start number 26 was manually annotated 41 times for cluster EB.
- Start number 27 was manually annotated 1 time for cluster EB.
- Start number 28 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster EH:

- Start number 40 was manually annotated 12 times for cluster EH.

Info for manual annotations of cluster FP:

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

Gene Information:

Gene: AEgle_11 Start: 8744, Stop: 9049, Start Num: 40

Candidate Starts for AEgle_11:

(9, 8474), (Start: 40 @8744 has 50 MA's), (48, 8786), (57, 8849), (71, 8939),

Gene: AGrandiflora_11 Start: 8731, Stop: 9039, Start Num: 40

Candidate Starts for AGrandiflora_11:

(Start: 40 @8731 has 50 MA's), (48, 8773), (66, 8887),

Gene: Abigail_10 Start: 7773, Stop: 8030, Start Num: 26

Candidate Starts for Abigail_10:

(23, 7761), (Start: 26 @7773 has 41 MA's), (44, 7794), (73, 7950), (82, 8001),

Gene: Adolin_11 Start: 8716, Stop: 9024, Start Num: 38

Candidate Starts for Adolin_11:

(Start: 38 @8716 has 3 MA's), (51, 8779), (57, 8824), (71, 8914), (87, 9004),

Gene: Adumb2043_11 Start: 8743, Stop: 9048, Start Num: 40

Candidate Starts for Adumb2043_11:

(9, 8473), (Start: 40 @8743 has 50 MA's), (48, 8785), (57, 8848), (71, 8938),

Gene: AinMach_10 Start: 7842, Stop: 8153, Start Num: 38

Candidate Starts for AinMach_10:

(3, 7434), (19, 7746), (Start: 38 @7842 has 3 MA's), (44, 7863), (46, 7878), (48, 7887), (75, 8049), (90, 8145),

Gene: Albedo_10 Start: 7645, Stop: 7905, Start Num: 26

Candidate Starts for Albedo_10:

(23, 7633), (Start: 26 @7645 has 41 MA's), (44, 7669), (73, 7825), (76, 7840), (82, 7876),

Gene: Albright_10 Start: 7654, Stop: 7911, Start Num: 26

Candidate Starts for Albright_10:

(23, 7642), (Start: 26 @7654 has 41 MA's), (44, 7675), (73, 7831), (82, 7882),

Gene: Amyev_11 Start: 8759, Stop: 9064, Start Num: 40

Candidate Starts for Amyev_11:

(9, 8489), (Start: 40 @8759 has 50 MA's), (48, 8801), (58, 8876),

Gene: AnnaLie_11 Start: 8000, Stop: 8320, Start Num: 26
Candidate Starts for AnnaLie_11:
(23, 7988), (Start: 26 @8000 has 41 MA's), (44, 8084), (72, 8237),

Gene: Armstrong_9 Start: 7425, Stop: 7688, Start Num: 26
Candidate Starts for Armstrong_9:
(16, 7368), (Start: 26 @7425 has 41 MA's), (30, 7440), (44, 7455), (63, 7572), (78, 7632), (83, 7662),

Gene: Arroyo_11 Start: 8124, Stop: 8381, Start Num: 26
Candidate Starts for Arroyo_11:
(23, 8112), (Start: 26 @8124 has 41 MA's), (44, 8145), (72, 8298), (73, 8301), (76, 8316), (82, 8352),

Gene: Asa16_11 Start: 8713, Stop: 9018, Start Num: 40
Candidate Starts for Asa16_11:
(9, 8443), (Start: 40 @8713 has 50 MA's), (48, 8755), (57, 8818), (66, 8869), (71, 8908),

Gene: Ascela_11 Start: 8748, Stop: 9053, Start Num: 40
Candidate Starts for Ascela_11:
(Start: 40 @8748 has 50 MA's), (48, 8790), (57, 8853),

Gene: AvGardian_10 Start: 7705, Stop: 7968, Start Num: 27
Candidate Starts for AvGardian_10:
(Start: 25 @7699 has 12 MA's), (Start: 27 @7705 has 3 MA's), (44, 7732),

Gene: Avocadoman_10 Start: 7712, Stop: 7969, Start Num: 26
Candidate Starts for Avocadoman_10:
(23, 7700), (Start: 26 @7712 has 41 MA's), (44, 7733), (73, 7889), (82, 7940),

Gene: Ayotoya_15 Start: 9620, Stop: 9898, Start Num: 37
Candidate Starts for Ayotoya_15:
(Start: 36 @9617 has 3 MA's), (Start: 37 @9620 has 13 MA's), (57, 9731), (64, 9773), (70, 9791), (76, 9818),

Gene: BAjuniper_10 Start: 7595, Stop: 7852, Start Num: 25
Candidate Starts for BAjuniper_10:
(23, 7586), (Start: 25 @7595 has 12 MA's), (44, 7616), (72, 7769), (73, 7772), (80, 7817),

Gene: BBQValindra_10 Start: 7210, Stop: 7500, Start Num: 35
Candidate Starts for BBQValindra_10:
(Start: 32 @7204 has 3 MA's), (Start: 35 @7210 has 11 MA's), (46, 7246), (56, 7306), (73, 7402), (79, 7432), (87, 7486),

Gene: BabyDaisy_11 Start: 7870, Stop: 8133, Start Num: 25
Candidate Starts for BabyDaisy_11:
(23, 7861), (Start: 25 @7870 has 12 MA's),

Gene: BabyYoda_10 Start: 7899, Stop: 8162, Start Num: 25
Candidate Starts for BabyYoda_10:
(Start: 25 @7899 has 12 MA's), (31, 7911), (44, 7926), (63, 8043), (73, 8082), (76, 8097),

Gene: Bachaco_10 Start: 7813, Stop: 8049, Start Num: 44
Candidate Starts for Bachaco_10:

(23, 7774), (Start: 26 @7786 has 41 MA's), (44, 7813), (47, 7831), (63, 7930), (73, 7969),

Gene: BackstagePass_10 Start: 7181, Stop: 7477, Start Num: 32

Candidate Starts for BackstagePass_10:

(Start: 32 @7181 has 3 MA's), (Start: 35 @7187 has 11 MA's), (46, 7223), (56, 7283), (73, 7379), (79, 7409), (87, 7463),

Gene: BaileyBlu_10 Start: 6510, Stop: 6782, Start Num: 27

Candidate Starts for BaileyBlu_10:

(Start: 27 @6510 has 3 MA's), (30, 6525), (44, 6546), (48, 6570), (49, 6573), (50, 6579), (73, 6699),

Gene: Barnstormer_9 Start: 7938, Stop: 8219, Start Num: 40

Candidate Starts for Barnstormer_9:

(Start: 40 @7938 has 50 MA's), (59, 8052),

Gene: BelmontSKP_11 Start: 8000, Stop: 8320, Start Num: 26

Candidate Starts for BelmontSKP_11:

(23, 7988), (Start: 26 @8000 has 41 MA's), (44, 8084), (72, 8237),

Gene: Bernstein_9 Start: 7485, Stop: 7748, Start Num: 26

Candidate Starts for Bernstein_9:

(16, 7428), (Start: 26 @7485 has 41 MA's), (30, 7500), (44, 7515), (63, 7632), (78, 7692), (83, 7722),

Gene: Berrie_11 Start: 8715, Stop: 9020, Start Num: 40

Candidate Starts for Berrie_11:

(Start: 40 @8715 has 50 MA's), (48, 8757), (57, 8820), (58, 8832),

Gene: BetterKatz_15 Start: 9588, Stop: 9866, Start Num: 37

Candidate Starts for BetterKatz_15:

(7, 9243), (Start: 36 @9585 has 3 MA's), (Start: 37 @9588 has 13 MA's), (54, 9666), (57, 9699), (58, 9711), (64, 9741), (76, 9786), (79, 9801),

Gene: Bock_15 Start: 9338, Stop: 9616, Start Num: 37

Candidate Starts for Bock_15:

(Start: 36 @9335 has 3 MA's), (Start: 37 @9338 has 13 MA's), (54, 9416), (57, 9449), (58, 9461), (64, 9491), (76, 9536), (79, 9551),

Gene: Bowser_10 Start: 7208, Stop: 7498, Start Num: 35

Candidate Starts for Bowser_10:

(Start: 35 @7208 has 11 MA's), (49, 7256), (56, 7304), (64, 7358), (79, 7430),

Gene: Brahms_9 Start: 7425, Stop: 7688, Start Num: 26

Candidate Starts for Brahms_9:

(16, 7368), (Start: 26 @7425 has 41 MA's), (30, 7440), (44, 7455), (63, 7572), (78, 7632), (83, 7662),

Gene: Brylie_15 Start: 9335, Stop: 9613, Start Num: 37

Candidate Starts for Brylie_15:

(Start: 36 @9332 has 3 MA's), (Start: 37 @9335 has 13 MA's), (54, 9413), (57, 9446), (58, 9458), (64, 9488), (76, 9533), (79, 9548),

Gene: BubbaBear_10 Start: 7645, Stop: 7905, Start Num: 26

Candidate Starts for BubbaBear_10:

(23, 7633), (Start: 26 @7645 has 41 MA's), (44, 7669), (73, 7825), (76, 7840),

Gene: Buldak_10 Start: 7930, Stop: 8196, Start Num: 26
Candidate Starts for Buldak_10:
(23, 7918), (Start: 26 @7930 has 41 MA's), (51, 8002), (56, 8035), (63, 8077),

Gene: Bunker_10 Start: 7204, Stop: 7500, Start Num: 32
Candidate Starts for Bunker_10:
(Start: 32 @7204 has 3 MA's), (Start: 35 @7210 has 11 MA's), (46, 7246), (56, 7306), (79, 7432), (87, 7486),

Gene: Burritobowl_10 Start: 7681, Stop: 7938, Start Num: 26
Candidate Starts for Burritobowl_10:
(23, 7669), (Start: 26 @7681 has 41 MA's), (44, 7702), (73, 7858), (82, 7909),

Gene: Caron_9 Start: 7966, Stop: 8247, Start Num: 40
Candidate Starts for Caron_9:
(2, 7567), (8, 7708), (Start: 40 @7966 has 50 MA's), (51, 8023), (59, 8080),

Gene: Cashington_10 Start: 7671, Stop: 7928, Start Num: 26
Candidate Starts for Cashington_10:
(23, 7659), (Start: 26 @7671 has 41 MA's), (44, 7692), (73, 7848), (82, 7899),

Gene: Cassia_11 Start: 8837, Stop: 9139, Start Num: 40
Candidate Starts for Cassia_11:
(Start: 40 @8837 has 50 MA's), (48, 8879), (57, 8942), (66, 8993), (71, 9029),

Gene: Celaena_10 Start: 7723, Stop: 7986, Start Num: 26
Candidate Starts for Celaena_10:
(23, 7711), (Start: 26 @7723 has 41 MA's), (44, 7750), (47, 7768), (63, 7867), (73, 7906),

Gene: Cen1621_9 Start: 7077, Stop: 7358, Start Num: 40
Candidate Starts for Cen1621_9:
(19, 6987), (Start: 40 @7077 has 50 MA's), (43, 7083), (54, 7143),

Gene: ChiliPepper_10 Start: 7882, Stop: 8139, Start Num: 26
Candidate Starts for ChiliPepper_10:
(Start: 26 @7882 has 41 MA's), (51, 7945), (73, 8059), (80, 8104),

Gene: Chop_15 Start: 9368, Stop: 9646, Start Num: 37
Candidate Starts for Chop_15:
(Start: 36 @9365 has 3 MA's), (Start: 37 @9368 has 13 MA's), (57, 9479), (64, 9521), (70, 9539), (76, 9566),

Gene: Clayda5_9 Start: 7425, Stop: 7688, Start Num: 26
Candidate Starts for Clayda5_9:
(16, 7368), (Start: 26 @7425 has 41 MA's), (30, 7440), (44, 7455), (63, 7572), (78, 7632), (83, 7662),

Gene: Coltrane_9 Start: 7425, Stop: 7688, Start Num: 26
Candidate Starts for Coltrane_9:
(16, 7368), (Start: 26 @7425 has 41 MA's), (30, 7440), (44, 7455), (63, 7572), (78, 7632), (83, 7662),

Gene: Community_12 Start: 9794, Stop: 10099, Start Num: 40
Candidate Starts for Community_12:

(Start: 40 @9794 has 50 MA's), (48, 9836), (57, 9899), (58, 9911), (71, 9989),

Gene: Coriander_11 Start: 7607, Stop: 7876, Start Num: 39

Candidate Starts for Coriander_11:

(Start: 39 @7607 has 4 MA's), (54, 7673), (64, 7736), (67, 7742), (73, 7778), (77, 7796),

Gene: Crewmate_12 Start: 9180, Stop: 9488, Start Num: 40

Candidate Starts for Crewmate_12:

(Start: 40 @9180 has 50 MA's), (57, 9285), (58, 9297), (71, 9375),

Gene: CroZenni_10 Start: 7654, Stop: 7911, Start Num: 26

Candidate Starts for CroZenni_10:

(23, 7642), (Start: 26 @7654 has 41 MA's), (44, 7675), (72, 7828), (73, 7831), (76, 7846), (82, 7882),

Gene: Cyan_11 Start: 8735, Stop: 9040, Start Num: 40

Candidate Starts for Cyan_11:

(Start: 40 @8735 has 50 MA's), (48, 8777),

Gene: DelRio_16 Start: 9845, Stop: 10123, Start Num: 37

Candidate Starts for DelRio_16:

(7, 9500), (Start: 36 @9842 has 3 MA's), (Start: 37 @9845 has 13 MA's), (57, 9956), (64, 9998), (70, 10016), (76, 10043), (81, 10076), (82, 10079),

Gene: DickRichards_10 Start: 8148, Stop: 8405, Start Num: 26

Candidate Starts for DickRichards_10:

(23, 8136), (Start: 26 @8148 has 41 MA's), (44, 8169), (72, 8322), (73, 8325), (76, 8340), (82, 8376),

Gene: Didgeridoo_11 Start: 7870, Stop: 8133, Start Num: 25

Candidate Starts for Didgeridoo_11:

(23, 7861), (Start: 25 @7870 has 12 MA's),

Gene: DirtyBoi_11 Start: 7580, Stop: 7870, Start Num: 35

Candidate Starts for DirtyBoi_11:

(Start: 35 @7580 has 11 MA's), (64, 7730),

Gene: DirtyBubble_10 Start: 7907, Stop: 8170, Start Num: 25

Candidate Starts for DirtyBubble_10:

(Start: 25 @7907 has 12 MA's), (31, 7919), (44, 7934), (63, 8051), (73, 8090), (76, 8105),

Gene: Dismas_10 Start: 7882, Stop: 8139, Start Num: 26

Candidate Starts for Dismas_10:

(Start: 26 @7882 has 41 MA's), (51, 7945), (73, 8059), (80, 8104),

Gene: Dmitri_11 Start: 7589, Stop: 7858, Start Num: 39

Candidate Starts for Dmitri_11:

(Start: 39 @7589 has 4 MA's), (46, 7616), (54, 7655), (58, 7688), (61, 7700), (67, 7724), (73, 7760), (77, 7778),

Gene: Doggs_10 Start: 7304, Stop: 7573, Start Num: 39

Candidate Starts for Doggs_10:

(Start: 39 @7304 has 4 MA's), (54, 7370), (64, 7433), (67, 7439), (73, 7475), (77, 7493),

Gene: DonkeyMan_10 Start: 7146, Stop: 7430, Start Num: 33

Candidate Starts for DonkeyMan_10:

(12, 6927), (Start: 25 @7095 has 12 MA's), (Start: 33 @7146 has 10 MA's), (51, 7209),

Gene: Doobus_10 Start: 7885, Stop: 8142, Start Num: 26

Candidate Starts for Doobus_10:

(23, 7873), (Start: 26 @7885 has 41 MA's), (44, 7906), (73, 8062), (82, 8113),

Gene: DrManhattan_11 Start: 8706, Stop: 9014, Start Num: 38

Candidate Starts for DrManhattan_11:

(Start: 38 @8706 has 3 MA's), (51, 8769), (54, 8781), (57, 8814), (71, 8904), (87, 8994),

Gene: DrSierra_11 Start: 8737, Stop: 9042, Start Num: 40

Candidate Starts for DrSierra_11:

(Start: 40 @8737 has 50 MA's), (48, 8779),

Gene: DumpsterDude_12 Start: 8073, Stop: 8348, Start Num: 37

Candidate Starts for DumpsterDude_12:

(13, 7845), (Start: 37 @8073 has 13 MA's), (54, 8148), (64, 8223),

Gene: Eden_9 Start: 7514, Stop: 7780, Start Num: 26

Candidate Starts for Eden_9:

(16, 7457), (Start: 26 @7514 has 41 MA's), (44, 7547), (54, 7601), (83, 7754),

Gene: Elezi_11 Start: 8714, Stop: 9019, Start Num: 40

Candidate Starts for Elezi_11:

(9, 8444), (Start: 40 @8714 has 50 MA's), (48, 8756), (57, 8819), (66, 8870), (71, 8909),

Gene: Elva_11 Start: 7965, Stop: 8225, Start Num: 28

Candidate Starts for Elva_11:

(Start: 28 @7965 has 1 MA's), (44, 7989), (69, 8118),

Gene: Emotion_10 Start: 7073, Stop: 7354, Start Num: 40

Candidate Starts for Emotion_10:

(Start: 40 @7073 has 50 MA's), (46, 7106), (48, 7115), (68, 7229), (73, 7256),

Gene: Eraser_11 Start: 8714, Stop: 9019, Start Num: 40

Candidate Starts for Eraser_11:

(9, 8444), (Start: 40 @8714 has 50 MA's), (48, 8756), (57, 8819), (66, 8870), (71, 8909),

Gene: Eula_10 Start: 7652, Stop: 7912, Start Num: 26

Candidate Starts for Eula_10:

(23, 7640), (Start: 26 @7652 has 41 MA's), (44, 7676), (73, 7832), (76, 7847),

Gene: Exile_10 Start: 8625, Stop: 8930, Start Num: 38

Candidate Starts for Exile_10:

(Start: 38 @8625 has 3 MA's), (46, 8661), (48, 8670), (62, 8763), (75, 8835),

Gene: Eyes_10 Start: 7217, Stop: 7507, Start Num: 35

Candidate Starts for Eyes_10:

(Start: 35 @7217 has 11 MA's), (49, 7265), (56, 7313), (64, 7367), (73, 7409), (79, 7439), (87, 7493),

Gene: Finalfrontier_11 Start: 8160, Stop: 8423, Start Num: 25

Candidate Starts for Finalfrontier_11:

(23, 8151), (Start: 25 @8160 has 12 MA's), (44, 8187), (73, 8343), (76, 8358),

Gene: FlameThrower_10 Start: 7611, Stop: 7874, Start Num: 26

Candidate Starts for FlameThrower_10:

(23, 7599), (Start: 26 @7611 has 41 MA's), (44, 7638), (47, 7656), (63, 7755), (73, 7794),

Gene: Floof_10 Start: 7504, Stop: 7794, Start Num: 40

Candidate Starts for Floof_10:

(19, 7414), (Start: 40 @7504 has 50 MA's), (56, 7600), (58, 7624), (73, 7693),

Gene: Francois_15 Start: 9346, Stop: 9627, Start Num: 36

Candidate Starts for Francois_15:

(Start: 36 @9346 has 3 MA's), (Start: 37 @9349 has 13 MA's), (57, 9460), (64, 9502), (76, 9547), (79, 9562), (86, 9610),

Gene: Franklin22_9 Start: 7495, Stop: 7761, Start Num: 26

Candidate Starts for Franklin22_9:

(Start: 26 @7495 has 41 MA's), (44, 7528), (73, 7681), (83, 7735),

Gene: GEazy_10 Start: 7219, Stop: 7509, Start Num: 35

Candidate Starts for GEazy_10:

(Start: 32 @7213 has 3 MA's), (Start: 35 @7219 has 11 MA's), (46, 7255), (56, 7315), (79, 7441), (87, 7495),

Gene: Gack_9 Start: 7565, Stop: 7828, Start Num: 26

Candidate Starts for Gack_9:

(16, 7508), (Start: 26 @7565 has 41 MA's), (44, 7595), (48, 7619), (73, 7748), (83, 7802),

Gene: GardenState_10 Start: 8171, Stop: 8461, Start Num: 40

Candidate Starts for GardenState_10:

(Start: 40 @8171 has 50 MA's), (56, 8264),

Gene: GrandSlam_15 Start: 9368, Stop: 9646, Start Num: 37

Candidate Starts for GrandSlam_15:

(Start: 36 @9365 has 3 MA's), (Start: 37 @9368 has 13 MA's), (57, 9479), (64, 9521), (70, 9539), (76, 9566),

Gene: Gretchen_10 Start: 9050, Stop: 9340, Start Num: 40

Candidate Starts for Gretchen_10:

(Start: 40 @9050 has 50 MA's), (54, 9125), (56, 9146), (73, 9239),

Gene: Gustav_9 Start: 6894, Stop: 7172, Start Num: 33

Candidate Starts for Gustav_9:

(Start: 33 @6894 has 10 MA's), (46, 6930), (56, 6987), (62, 7020), (64, 7032), (67, 7038), (74, 7077), (82, 7125),

Gene: Hamood_15 Start: 9368, Stop: 9646, Start Num: 37

Candidate Starts for Hamood_15:

(Start: 36 @9365 has 3 MA's), (Start: 37 @9368 has 13 MA's), (57, 9479), (64, 9521), (70, 9539), (76, 9566),

Gene: HannahD_10 Start: 7213, Stop: 7509, Start Num: 32

Candidate Starts for HannahD_10:

(Start: 32 @7213 has 3 MA's), (Start: 35 @7219 has 11 MA's), (46, 7255), (56, 7315), (79, 7441), (87, 7495),

Gene: Hedwig_11 Start: 7580, Stop: 7870, Start Num: 35

Candidate Starts for Hedwig_11:

(Start: 35 @7580 has 11 MA's), (64, 7730),

Gene: Heinz_10 Start: 7185, Stop: 7466, Start Num: 33

Candidate Starts for Heinz_10:

(4, 6783), (12, 6966), (Start: 25 @7134 has 12 MA's), (Start: 33 @7185 has 10 MA's), (49, 7233), (54, 7260),

Gene: Hibiscus_10 Start: 7156, Stop: 7443, Start Num: 33

Candidate Starts for Hibiscus_10:

(12, 6937), (Start: 25 @7105 has 12 MA's), (Start: 33 @7156 has 10 MA's), (54, 7234),

Gene: Honk_9 Start: 7045, Stop: 7326, Start Num: 40

Candidate Starts for Honk_9:

(9, 6799), (19, 6955), (Start: 40 @7045 has 50 MA's), (46, 7072), (54, 7111),

Gene: IAmGroot_10 Start: 8815, Stop: 9105, Start Num: 40

Candidate Starts for IAmGroot_10:

(Start: 40 @8815 has 50 MA's), (56, 8908),

Gene: Icarian_11 Start: 7889, Stop: 8152, Start Num: 27

Candidate Starts for Icarian_11:

(Start: 27 @7889 has 3 MA's), (44, 7916), (73, 8072), (76, 8087),

Gene: IdentityCrisis_11 Start: 8164, Stop: 8412, Start Num: 36

Candidate Starts for IdentityCrisis_11:

(Start: 36 @8164 has 3 MA's), (Start: 38 @8170 has 3 MA's), (59, 8281), (84, 8398),

Gene: IndyLu_10 Start: 7694, Stop: 7957, Start Num: 25

Candidate Starts for IndyLu_10:

(23, 7685), (Start: 25 @7694 has 12 MA's),

Gene: Iter_11 Start: 8748, Stop: 9053, Start Num: 40

Candidate Starts for Iter_11:

(Start: 40 @8748 has 50 MA's), (48, 8790), (57, 8853),

Gene: IttyBittyPiggy_11 Start: 8739, Stop: 9041, Start Num: 40

Candidate Starts for IttyBittyPiggy_11:

(Start: 40 @8739 has 50 MA's), (48, 8781), (57, 8844), (71, 8931),

Gene: Janeemi_12 Start: 9825, Stop: 10130, Start Num: 40

Candidate Starts for Janeemi_12:

(Start: 40 @9825 has 50 MA's), (48, 9867), (57, 9930), (58, 9942), (66, 9981), (71, 10020),

Gene: JasmineDragon_10 Start: 7008, Stop: 7289, Start Num: 40

Candidate Starts for JasmineDragon_10:

(Start: 40 @7008 has 50 MA's), (46, 7041), (48, 7050), (68, 7164), (83, 7245),

Gene: Joemato_12 Start: 8735, Stop: 9040, Start Num: 40

Candidate Starts for Joemato_12:
(Start: 40 @8735 has 50 MA's), (48, 8777),

Gene: JohnDoe_11 Start: 8733, Stop: 9038, Start Num: 40
Candidate Starts for JohnDoe_11:
(Start: 40 @8733 has 50 MA's), (48, 8775),

Gene: Johnathan_10 Start: 7654, Stop: 7911, Start Num: 26
Candidate Starts for Johnathan_10:
(23, 7642), (Start: 26 @7654 has 41 MA's), (44, 7675), (73, 7831), (82, 7882),

Gene: Jojo24_10 Start: 7151, Stop: 7438, Start Num: 33
Candidate Starts for Jojo24_10:
(12, 6932), (Start: 25 @7100 has 12 MA's), (Start: 33 @7151 has 10 MA's), (54, 7229),

Gene: Jovita_10 Start: 7753, Stop: 8013, Start Num: 26
Candidate Starts for Jovita_10:
(23, 7741), (Start: 26 @7753 has 41 MA's), (44, 7777), (73, 7933), (76, 7948),

Gene: Jstan_11 Start: 8714, Stop: 9019, Start Num: 40
Candidate Starts for Jstan_11:
(9, 8444), (Start: 40 @8714 has 50 MA's), (48, 8756), (57, 8819), (66, 8870), (71, 8909),

Gene: JuneStar_11 Start: 8833, Stop: 9135, Start Num: 40
Candidate Starts for JuneStar_11:
(Start: 40 @8833 has 50 MA's), (48, 8875), (57, 8938), (66, 8989), (71, 9025),

Gene: Katzastrophic_10 Start: 7786, Stop: 8049, Start Num: 26
Candidate Starts for Katzastrophic_10:
(23, 7774), (Start: 26 @7786 has 41 MA's), (44, 7813), (47, 7831), (63, 7930), (73, 7969),

Gene: Kaylissa_11 Start: 8736, Stop: 9041, Start Num: 40
Candidate Starts for Kaylissa_11:
(Start: 40 @8736 has 50 MA's), (48, 8778),

Gene: KeAlii_11 Start: 8765, Stop: 9073, Start Num: 40
Candidate Starts for KeAlii_11:
(Start: 40 @8765 has 50 MA's), (46, 8798), (48, 8807), (78, 8993), (87, 9053),

Gene: Kenzers_10 Start: 7668, Stop: 7928, Start Num: 26
Candidate Starts for Kenzers_10:
(23, 7656), (Start: 26 @7668 has 41 MA's), (44, 7692), (73, 7848), (76, 7863), (82, 7899),

Gene: Kieran_10 Start: 7885, Stop: 8142, Start Num: 26
Candidate Starts for Kieran_10:
(Start: 26 @7885 has 41 MA's), (51, 7948), (73, 8062), (80, 8107),

Gene: Kiko_11 Start: 7416, Stop: 7706, Start Num: 35
Candidate Starts for Kiko_11:
(11, 7176), (Start: 32 @7410 has 3 MA's), (Start: 35 @7416 has 11 MA's), (58, 7536), (73, 7608),

Gene: Lahqtemish_10 Start: 7738, Stop: 8001, Start Num: 25
Candidate Starts for Lahqtemish_10:

(23, 7729), (Start: 25 @7738 has 12 MA's), (51, 7807),

Gene: Lego_11 Start: 8734, Stop: 9042, Start Num: 40

Candidate Starts for Lego_11:

(Start: 40 @8734 has 50 MA's), (48, 8776), (51, 8794),

Gene: Liebe_10 Start: 7184, Stop: 7495, Start Num: 40

Candidate Starts for Liebe_10:

(Start: 40 @7184 has 50 MA's), (57, 7289), (78, 7412),

Gene: LimaBean_10 Start: 7654, Stop: 7911, Start Num: 26

Candidate Starts for LimaBean_10:

(23, 7642), (Start: 26 @7654 has 41 MA's), (44, 7675), (73, 7831), (82, 7882),

Gene: Lizalica_11 Start: 8720, Stop: 9028, Start Num: 40

Candidate Starts for Lizalica_11:

(9, 8450), (Start: 40 @8720 has 50 MA's), (48, 8762),

Gene: London_11 Start: 8714, Stop: 9019, Start Num: 40

Candidate Starts for London_11:

(9, 8444), (Start: 40 @8714 has 50 MA's), (48, 8756), (57, 8819), (66, 8870), (71, 8909),

Gene: Loviatar_18 Start: 7923, Stop: 8231, Start Num: 17

Candidate Starts for Loviatar_18:

(15, 7911), (17, 7923), (51, 8037), (73, 8151),

Gene: Lynlen_10 Start: 7668, Stop: 7928, Start Num: 26

Candidate Starts for Lynlen_10:

(23, 7656), (Start: 26 @7668 has 41 MA's), (44, 7692), (73, 7848), (76, 7863), (82, 7899),

Gene: MaGuCo_10 Start: 7043, Stop: 7435, Start Num: 40

Candidate Starts for MaGuCo_10:

(Start: 40 @7043 has 50 MA's), (41, 7049), (56, 7136), (57, 7148), (78, 7271),

Gene: Mabodamaca_10 Start: 8271, Stop: 8558, Start Num: 40

Candidate Starts for Mabodamaca_10:

(Start: 40 @8271 has 50 MA's), (83, 8505), (87, 8535),

Gene: MagicMan_10 Start: 7547, Stop: 7837, Start Num: 35

Candidate Starts for MagicMan_10:

(Start: 35 @7547 has 11 MA's), (49, 7595), (56, 7643), (64, 7697), (79, 7769), (87, 7823),

Gene: Mahdia_9 Start: 6893, Stop: 7174, Start Num: 33

Candidate Starts for Mahdia_9:

(Start: 33 @6893 has 10 MA's), (46, 6932), (64, 7034), (67, 7040), (74, 7079),

Gene: Malibo_10 Start: 7477, Stop: 7743, Start Num: 39

Candidate Starts for Malibo_10:

(Start: 39 @7477 has 4 MA's), (53, 7537), (58, 7573), (64, 7603), (67, 7609), (73, 7645), (78, 7669), (87, 7729),

Gene: Maureen_10 Start: 7184, Stop: 7495, Start Num: 40

Candidate Starts for Maureen_10:

(Start: 40 @7184 has 50 MA's), (57, 7289), (78, 7412),

Gene: MiniMommy_9 Start: 7008, Stop: 7289, Start Num: 40

Candidate Starts for MiniMommy_9:

(Start: 40 @7008 has 50 MA's), (46, 7041), (68, 7164), (83, 7245),

Gene: MissSwiss_11 Start: 8710, Stop: 9018, Start Num: 38

Candidate Starts for MissSwiss_11:

(Start: 38 @8710 has 3 MA's), (51, 8773), (68, 8890), (71, 8908), (87, 8998),

Gene: Morrissey_9 Start: 6870, Stop: 7154, Start Num: 33

Candidate Starts for Morrissey_9:

(Start: 33 @6870 has 10 MA's), (46, 6909), (53, 6942), (56, 6966), (64, 7014), (74, 7059),

Gene: Moss_13 Start: 8267, Stop: 8554, Start Num: 38

Candidate Starts for Moss_13:

(Start: 38 @8267 has 3 MA's), (67, 8417), (73, 8453), (75, 8459),

Gene: Mudpuppy_11 Start: 8734, Stop: 9042, Start Num: 40

Candidate Starts for Mudpuppy_11:

(Start: 40 @8734 has 50 MA's), (48, 8776), (51, 8794), (66, 8890),

Gene: Mulch_15 Start: 9335, Stop: 9613, Start Num: 37

Candidate Starts for Mulch_15:

(Start: 36 @9332 has 3 MA's), (Start: 37 @9335 has 13 MA's), (54, 9413), (57, 9446), (58, 9458), (64, 9488), (76, 9533), (79, 9548),

Gene: Nadeem_15 Start: 9335, Stop: 9613, Start Num: 37

Candidate Starts for Nadeem_15:

(Start: 36 @9332 has 3 MA's), (Start: 37 @9335 has 13 MA's), (54, 9413), (57, 9446), (58, 9458), (64, 9488), (76, 9533), (79, 9548),

Gene: NancyRae_15 Start: 9335, Stop: 9613, Start Num: 37

Candidate Starts for NancyRae_15:

(Start: 36 @9332 has 3 MA's), (Start: 37 @9335 has 13 MA's), (54, 9413), (57, 9446), (58, 9458), (64, 9488), (76, 9533), (79, 9548),

Gene: Nicky22_11 Start: 8102, Stop: 8359, Start Num: 26

Candidate Starts for Nicky22_11:

(23, 8090), (Start: 26 @8102 has 41 MA's), (44, 8123), (73, 8279), (76, 8294), (82, 8330),

Gene: Niobe_11 Start: 8714, Stop: 9019, Start Num: 40

Candidate Starts for Niobe_11:

(9, 8444), (Start: 40 @8714 has 50 MA's), (48, 8756), (57, 8819), (66, 8870), (71, 8909),

Gene: Nitro_11 Start: 8737, Stop: 9042, Start Num: 40

Candidate Starts for Nitro_11:

(9, 8461), (Start: 40 @8737 has 50 MA's), (48, 8779), (51, 8797), (57, 8842), (71, 8932),

Gene: ObiToo_11 Start: 8917, Stop: 9225, Start Num: 40

Candidate Starts for ObiToo_11:

(Start: 40 @8917 has 50 MA's), (57, 9022), (58, 9034), (71, 9112),

Gene: Opie_10 Start: 7562, Stop: 7852, Start Num: 35
Candidate Starts for Opie_10:
(Start: 35 @7562 has 11 MA's), (46, 7598), (56, 7658), (73, 7754), (82, 7805),

Gene: Parada_15 Start: 9335, Stop: 9613, Start Num: 37
Candidate Starts for Parada_15:
(Start: 36 @9332 has 3 MA's), (Start: 37 @9335 has 13 MA's), (54, 9413), (57, 9446), (58, 9458), (64, 9488), (76, 9533), (79, 9548),

Gene: Percival_10 Start: 8884, Stop: 9174, Start Num: 40
Candidate Starts for Percival_10:
(Start: 40 @8884 has 50 MA's), (54, 8959), (56, 8980), (73, 9073),

Gene: Phisb_10 Start: 7645, Stop: 7905, Start Num: 26
Candidate Starts for Phisb_10:
(23, 7633), (Start: 26 @7645 has 41 MA's), (44, 7669), (73, 7825), (76, 7840), (82, 7876),

Gene: Phives_12 Start: 9819, Stop: 10124, Start Num: 40
Candidate Starts for Phives_12:
(9, 9549), (Start: 40 @9819 has 50 MA's), (48, 9861), (58, 9936),

Gene: Pimento_15 Start: 9536, Stop: 9817, Start Num: 36
Candidate Starts for Pimento_15:
(7, 9194), (Start: 36 @9536 has 3 MA's), (Start: 37 @9539 has 13 MA's), (54, 9617), (57, 9650), (58, 9662), (64, 9692), (76, 9737), (79, 9752),

Gene: Pixelle_11 Start: 8762, Stop: 9067, Start Num: 40
Candidate Starts for Pixelle_11:
(9, 8492), (Start: 40 @8762 has 50 MA's), (48, 8804), (58, 8879),

Gene: Powerpuff_11 Start: 8785, Stop: 9093, Start Num: 40
Candidate Starts for Powerpuff_11:
(Start: 40 @8785 has 50 MA's), (48, 8827), (66, 8941),

Gene: Pumpkins_20 Start: 8839, Stop: 9144, Start Num: 40
Candidate Starts for Pumpkins_20:
(Start: 40 @8839 has 50 MA's), (48, 8881), (57, 8944), (71, 9034),

Gene: Puppies_9 Start: 6807, Stop: 7094, Start Num: 33
Candidate Starts for Puppies_9:
(20, 6720), (29, 6783), (Start: 33 @6807 has 10 MA's), (56, 6909), (64, 6954), (67, 6960), (74, 6999), (82, 7047), (87, 7080),

Gene: QMacho_11 Start: 8135, Stop: 8395, Start Num: 26
Candidate Starts for QMacho_11:
(23, 8123), (Start: 26 @8135 has 41 MA's), (44, 8159), (73, 8315), (76, 8330),

Gene: Quenya_11 Start: 7781, Stop: 8044, Start Num: 26
Candidate Starts for Quenya_11:
(16, 7724), (Start: 26 @7781 has 41 MA's), (44, 7808), (46, 7823), (73, 7964),

Gene: RayTheFireFly_11 Start: 7613, Stop: 7882, Start Num: 39
Candidate Starts for RayTheFireFly_11:

(Start: 39 @7613 has 4 MA's), (54, 7679), (64, 7742), (67, 7748), (73, 7784), (77, 7802),

Gene: Reedo_11 Start: 8786, Stop: 9091, Start Num: 40

Candidate Starts for Reedo_11:

(Start: 40 @8786 has 50 MA's), (48, 8828), (55, 8861), (87, 9071),

Gene: Reyja_11 Start: 7295, Stop: 7579, Start Num: 33

Candidate Starts for Reyja_11:

(Start: 25 @7244 has 12 MA's), (Start: 33 @7295 has 10 MA's), (54, 7370),

Gene: Rollins_9 Start: 7485, Stop: 7748, Start Num: 26

Candidate Starts for Rollins_9:

(16, 7428), (Start: 26 @7485 has 41 MA's), (30, 7500), (44, 7515), (63, 7632), (78, 7692), (83, 7722),

Gene: Rona_10 Start: 7882, Stop: 8139, Start Num: 26

Candidate Starts for Rona_10:

(Start: 26 @7882 has 41 MA's), (51, 7945), (73, 8059), (80, 8104),

Gene: Ruthy_12 Start: 8144, Stop: 8419, Start Num: 37

Candidate Starts for Ruthy_12:

(13, 7916), (Start: 37 @8144 has 13 MA's), (54, 8219), (76, 8339),

Gene: SanaSana_11 Start: 7900, Stop: 8160, Start Num: 24

Candidate Starts for SanaSana_11:

(Start: 24 @7900 has 2 MA's), (51, 7966),

Gene: SansAfet_10 Start: 7665, Stop: 7922, Start Num: 26

Candidate Starts for SansAfet_10:

(23, 7653), (Start: 26 @7665 has 41 MA's), (44, 7686), (72, 7839), (73, 7842), (76, 7857), (82, 7893),

Gene: Santhid_10 Start: 7160, Stop: 7447, Start Num: 33

Candidate Starts for Santhid_10:

(Start: 25 @7109 has 12 MA's), (Start: 33 @7160 has 10 MA's), (54, 7238),

Gene: SarBear_10 Start: 7625, Stop: 7888, Start Num: 25

Candidate Starts for SarBear_10:

(23, 7616), (Start: 25 @7625 has 12 MA's), (44, 7652), (73, 7808), (76, 7823),

Gene: Schnabeltier_10 Start: 7548, Stop: 7838, Start Num: 35

Candidate Starts for Schnabeltier_10:

(Start: 35 @7548 has 11 MA's), (49, 7596), (56, 7644), (64, 7698), (79, 7770), (87, 7824),

Gene: ShakeltOph_10 Start: 7008, Stop: 7289, Start Num: 40

Candidate Starts for ShakeltOph_10:

(Start: 40 @7008 has 50 MA's), (46, 7041), (48, 7050), (68, 7164), (83, 7245),

Gene: Shambre1_11 Start: 8534, Stop: 8782, Start Num: 27

Candidate Starts for Shambre1_11:

(Start: 27 @8534 has 3 MA's), (52, 8600), (60, 8654),

Gene: Sharkboy_10 Start: 7881, Stop: 8138, Start Num: 26

Candidate Starts for Sharkboy_10:

(Start: 26 @7881 has 41 MA's), (51, 7944), (73, 8058), (80, 8103),

Gene: Simpson_12 Start: 8735, Stop: 9040, Start Num: 40

Candidate Starts for Simpson_12:

(Start: 40 @8735 has 50 MA's), (48, 8777),

Gene: Skylord_9 Start: 7425, Stop: 7688, Start Num: 26

Candidate Starts for Skylord_9:

(16, 7368), (Start: 26 @7425 has 41 MA's), (30, 7440), (44, 7455), (63, 7572), (78, 7632), (83, 7662),

Gene: Slay_10 Start: 8101, Stop: 8364, Start Num: 25

Candidate Starts for Slay_10:

(23, 8092), (Start: 25 @8101 has 12 MA's), (44, 8128), (73, 8284), (76, 8299),

Gene: Snek_11 Start: 7822, Stop: 8127, Start Num: 40

Candidate Starts for Snek_11:

(Start: 40 @7822 has 50 MA's), (48, 7861), (65, 7972), (83, 8077), (87, 8107),

Gene: Soondubu_10 Start: 8626, Stop: 8931, Start Num: 38

Candidate Starts for Soondubu_10:

(Start: 38 @8626 has 3 MA's), (46, 8662), (48, 8671), (68, 8806), (75, 8836),

Gene: Stoor_10 Start: 7897, Stop: 8157, Start Num: 24

Candidate Starts for Stoor_10:

(Start: 24 @7897 has 2 MA's), (51, 7963),

Gene: Stromboli_10 Start: 7898, Stop: 8161, Start Num: 25

Candidate Starts for Stromboli_10:

(Start: 25 @7898 has 12 MA's), (31, 7910), (44, 7925), (63, 8042), (73, 8081), (76, 8096),

Gene: SuMoo_9 Start: 7231, Stop: 7518, Start Num: 40

Candidate Starts for SuMoo_9:

(Start: 40 @7231 has 50 MA's), (83, 7465), (87, 7495),

Gene: Sue2_11 Start: 8727, Stop: 9035, Start Num: 38

Candidate Starts for Sue2_11:

(Start: 38 @8727 has 3 MA's), (48, 8772), (78, 8958),

Gene: Swervy_10 Start: 7625, Stop: 7888, Start Num: 25

Candidate Starts for Swervy_10:

(23, 7616), (Start: 25 @7625 has 12 MA's), (44, 7652), (73, 7808), (76, 7823),

Gene: TaronosaurusRx_10 Start: 7561, Stop: 7851, Start Num: 35

Candidate Starts for TaronosaurusRx_10:

(Start: 35 @7561 has 11 MA's), (46, 7597), (56, 7657), (64, 7711), (79, 7783), (82, 7804),

Gene: Tarzan_10 Start: 7151, Stop: 7435, Start Num: 33

Candidate Starts for Tarzan_10:

(12, 6932), (Start: 25 @7100 has 12 MA's), (Start: 33 @7151 has 10 MA's), (51, 7214),

Gene: Tbone_11 Start: 8728, Stop: 9036, Start Num: 40

Candidate Starts for Tbone_11:

(Start: 40 @8728 has 50 MA's), (48, 8770), (51, 8788), (57, 8833), (66, 8884),

Gene: TforTroy_11 Start: 8862, Stop: 9164, Start Num: 40
Candidate Starts for TforTroy_11:
(Start: 40 @8862 has 50 MA's), (48, 8904), (57, 8967), (66, 9018), (71, 9054),

Gene: Tian_11 Start: 8759, Stop: 9064, Start Num: 40
Candidate Starts for Tian_11:
(9, 8489), (Start: 40 @8759 has 50 MA's), (48, 8801), (58, 8876),

Gene: Trine_9 Start: 6815, Stop: 7090, Start Num: 35
Candidate Starts for Trine_9:
(10, 6551), (14, 6641), (18, 6716), (21, 6728), (Start: 35 @6815 has 11 MA's), (56, 6911), (67, 6956),
(74, 6995), (75, 6998),

Gene: Tuck_12 Start: 9774, Stop: 10079, Start Num: 40
Candidate Starts for Tuck_12:
(Start: 40 @9774 has 50 MA's), (48, 9816), (57, 9879), (58, 9891), (71, 9969),

Gene: TukTuk_10 Start: 7628, Stop: 7948, Start Num: 26
Candidate Starts for TukTuk_10:
(23, 7616), (Start: 26 @7628 has 41 MA's), (44, 7712), (73, 7868), (76, 7883),

Gene: Turab_11 Start: 8743, Stop: 9048, Start Num: 40
Candidate Starts for Turab_11:
(9, 8473), (Start: 40 @8743 has 50 MA's), (48, 8785), (57, 8848), (71, 8938),

Gene: Tutumahutu_11 Start: 8785, Stop: 9093, Start Num: 40
Candidate Starts for Tutumahutu_11:
(Start: 40 @8785 has 50 MA's), (48, 8827), (66, 8941),

Gene: Tweety19_11 Start: 7821, Stop: 8126, Start Num: 40
Candidate Starts for Tweety19_11:
(Start: 40 @7821 has 50 MA's), (48, 7860), (65, 7971), (83, 8076), (87, 8106),

Gene: Upyo_9 Start: 6827, Stop: 7114, Start Num: 32
Candidate Starts for Upyo_9:
(1, 6347), (5, 6449), (6, 6473), (20, 6746), (22, 6767), (Start: 32 @6827 has 3 MA's), (34, 6833), (42,
6854), (67, 6980), (73, 7016), (74, 7019), (85, 7088), (87, 7100), (88, 7103),

Gene: UtzChips_9 Start: 7926, Stop: 8207, Start Num: 40
Candidate Starts for UtzChips_9:
(Start: 40 @7926 has 50 MA's), (59, 8040),

Gene: VResidence_11 Start: 8797, Stop: 9105, Start Num: 38
Candidate Starts for VResidence_11:
(9, 8530), (19, 8698), (Start: 38 @8797 has 3 MA's), (87, 9088),

Gene: Vitas_9 Start: 7425, Stop: 7688, Start Num: 26
Candidate Starts for Vitas_9:
(16, 7368), (Start: 26 @7425 has 41 MA's), (30, 7440), (44, 7455), (63, 7572), (78, 7632), (83, 7662),

Gene: VroomVroom_10 Start: 7020, Stop: 7301, Start Num: 40
Candidate Starts for VroomVroom_10:
(Start: 40 @7020 has 50 MA's), (46, 7053), (48, 7062), (51, 7080), (68, 7176),

Gene: Warda_11 Start: 8731, Stop: 9039, Start Num: 40
Candidate Starts for Warda_11:
(Start: 40 @8731 has 50 MA's), (48, 8773), (51, 8791), (66, 8887),

Gene: WheatThin_15 Start: 9332, Stop: 9613, Start Num: 36
Candidate Starts for WheatThin_15:
(Start: 36 @9332 has 3 MA's), (Start: 37 @9335 has 13 MA's), (54, 9413), (57, 9446), (58, 9458), (64, 9488), (76, 9533), (79, 9548),

Gene: Widow_9 Start: 6798, Stop: 7085, Start Num: 33
Candidate Starts for Widow_9:
(29, 6774), (Start: 33 @6798 has 10 MA's), (56, 6900), (64, 6945), (67, 6951), (74, 6990), (82, 7038), (87, 7071),

Gene: Wildwest_12 Start: 9644, Stop: 9949, Start Num: 40
Candidate Starts for Wildwest_12:
(Start: 40 @9644 has 50 MA's), (45, 9668), (48, 9686), (87, 9929), (89, 9938),

Gene: Yang_11 Start: 8832, Stop: 9134, Start Num: 40
Candidate Starts for Yang_11:
(Start: 40 @8832 has 50 MA's), (48, 8874), (57, 8937), (66, 8988), (71, 9024),

Gene: YesChef_11 Start: 8785, Stop: 9093, Start Num: 40
Candidate Starts for YesChef_11:
(Start: 40 @8785 has 50 MA's), (48, 8827), (66, 8941),

Gene: ZAYM_10 Start: 7554, Stop: 7844, Start Num: 35
Candidate Starts for ZAYM_10:
(Start: 35 @7554 has 11 MA's), (56, 7650), (64, 7704), (79, 7776), (82, 7797), (87, 7830),

Gene: Zeta1847_9 Start: 7022, Stop: 7303, Start Num: 40
Candidate Starts for Zeta1847_9:
(19, 6935), (Start: 40 @7022 has 50 MA's), (46, 7049),