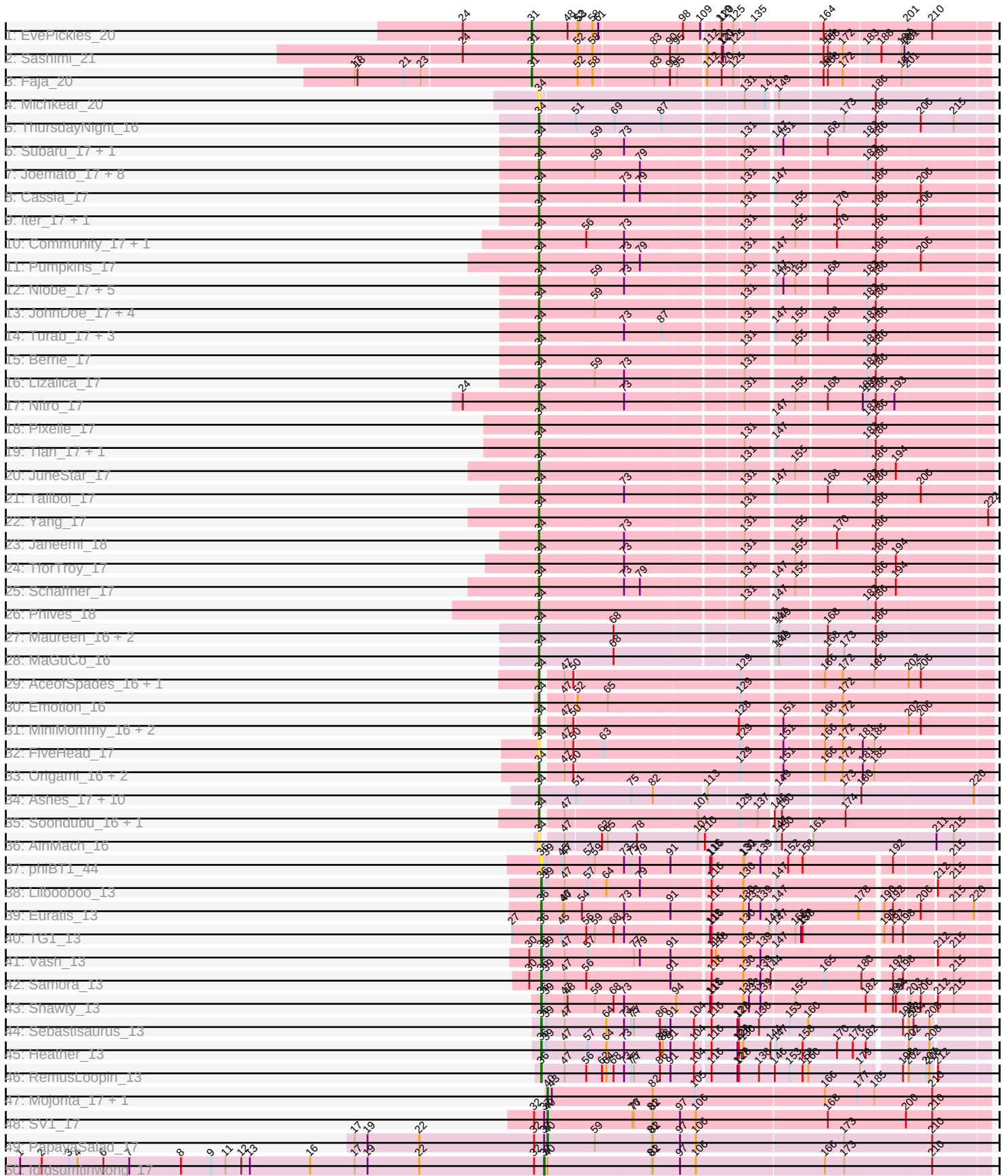
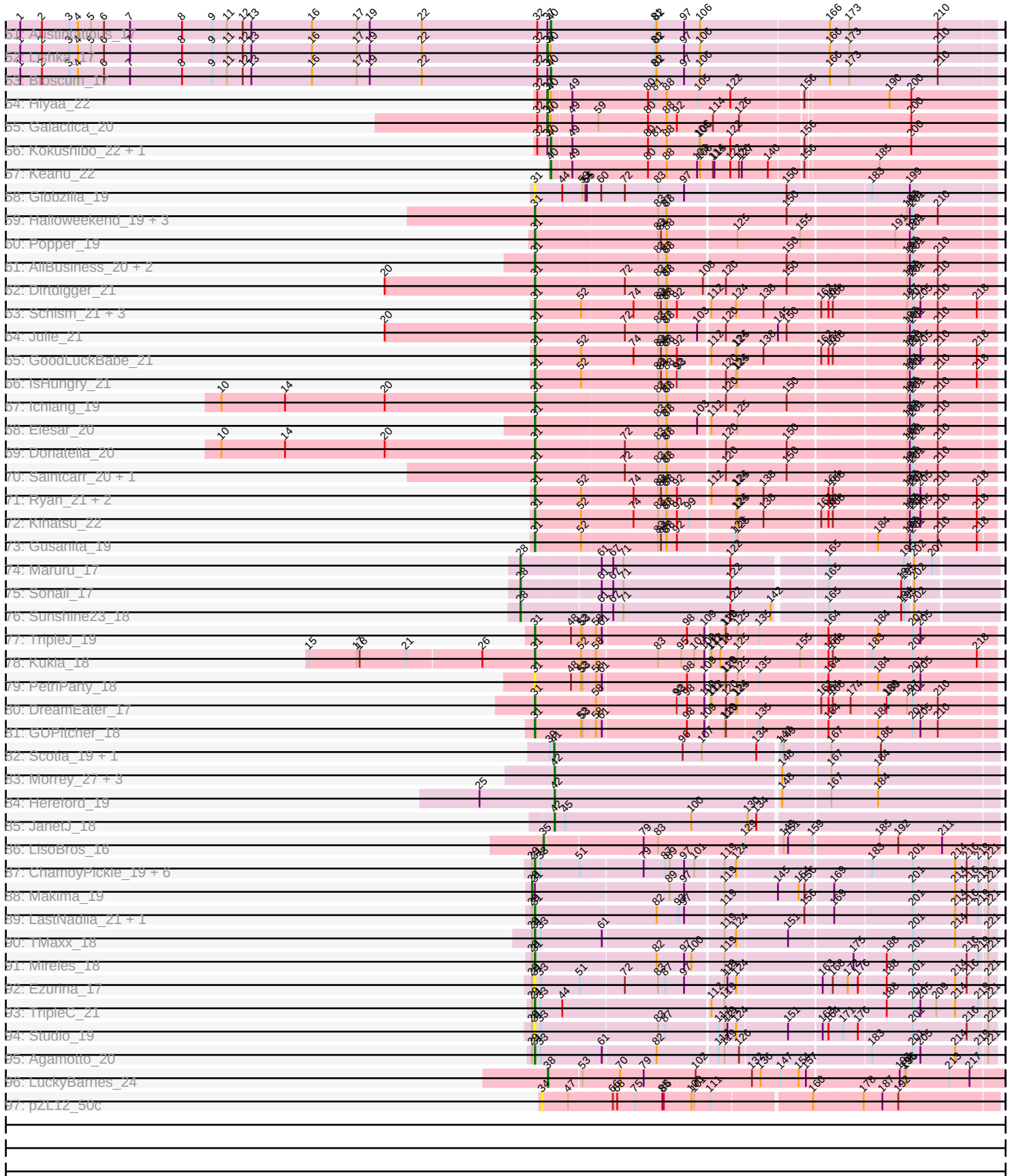






Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 330545 Report

This analysis was run 09/05/26 on database version 662.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 330545 has 163 members, 26 are drafts.

Phages represented in each track:

- Track 1 : EvePickles_20
- Track 2 : Sashimi_21
- Track 3 : Faja_20
- Track 4 : Michkear_20
- Track 5 : ThursdayNight_16
- Track 6 : Subaru_17, Elezi_17
- Track 7 : Joemato_17, AGrandiflora_17, Lego_17, YesChef_17, Kaylissa_17, Simpson_19, Flutur_17, Cyan_17, Powerpuff_17
- Track 8 : Cassia_17
- Track 9 : Iter_17, Ascela_17
- Track 10 : Community_17, Tuck_18
- Track 11 : Pumpkins_17
- Track 12 : Niobe_17, Jstan_18, Eraser_17, London_17, Skelbel_18, Asa16_17
- Track 13 : JohnDoe_17, Warda_17, Tutumahutu_17, Tbone_17, Mudpuppy_17
- Track 14 : Turab_17, Adumb2043_17, Amploria_17, AEgle_17
- Track 15 : Berrie_17
- Track 16 : Lizalica_17
- Track 17 : Nitro_17
- Track 18 : Pixelle_17
- Track 19 : Tian_17, Amyev_17
- Track 20 : JuneStar_17
- Track 21 : Tallboi_17
- Track 22 : Yang_17
- Track 23 : Janeemi_18
- Track 24 : TforTroy_17
- Track 25 : Schaffner_17
- Track 26 : Phives_18
- Track 27 : Maureen_16, IUFootball_16, Liebe_16
- Track 28 : MaGuCo_16
- Track 29 : AceofSpades_16, VroomVroom_16
- Track 30 : Emotion_16
- Track 31 : MiniMommy_16, JasmineDragon_16, ShakeltOph_16
- Track 32 : FiveHead_17

- Track 33 : Origami_16, JohnThicc_16, LadyAstra_16
- Track 34 : Ashes_17, RockScotty_17, Kalimba_17, Halsey_17, Cappuccino_17, Donkey_17, Sabourin_17, Beaupre_17, Moss_17, Gambol_17, Sooty_17
- Track 35 : Soondubu_16, Exile_16
- Track 36 : AinMach_16
- Track 37 : phiBT1_44
- Track 38 : Lilbooboo_13
- Track 39 : Euratis_13
- Track 40 : TG1_13
- Track 41 : Vash_13
- Track 42 : Samora_13
- Track 43 : Shawty_13
- Track 44 : Sebastisaurus_13
- Track 45 : Heather_13
- Track 46 : RemusLoopin_13
- Track 47 : Mojorita_17, Picard_17
- Track 48 : SV1_17
- Track 49 : PapayaSalad_17
- Track 50 : Ididsumtinwong_17
- Track 51 : Austintatious_17
- Track 52 : Lishka_17
- Track 53 : Bioscum_17
- Track 54 : Hiya_22
- Track 55 : Galactica_20
- Track 56 : Kokushibo_22, Spocter_22
- Track 57 : Keanu_22
- Track 58 : Gibbzilla_19
- Track 59 : Halloween_19, QuinnAvery_21, Cole_19, BigSherm_21
- Track 60 : Popper_19
- Track 61 : AllBusiness_20, Toodles_21, MillySue_21
- Track 62 : Dirdigger_21
- Track 63 : Schism_21, Guinevere_21, Nandita_21, Lenoxika_21
- Track 64 : Julie_21
- Track 65 : GoodLuckBabe_21
- Track 66 : IsHungry_21
- Track 67 : Chiang_19
- Track 68 : Elesar_20
- Track 69 : Donatella_20
- Track 70 : Saintcarr_20, ToastyOats_23
- Track 71 : Ryan_21, Zaheer_21, Yonex_21
- Track 72 : Kihatsu_22
- Track 73 : Gusanita_19
- Track 74 : Maruru_17
- Track 75 : Sonali_17
- Track 76 : Sunshine23_18
- Track 77 : TripleJ_19
- Track 78 : Kukla_18
- Track 79 : PetriParty_18
- Track 80 : DreamEater_17
- Track 81 : GUPitcher_18
- Track 82 : Scotia_19, NoSwimming_19
- Track 83 : Morrey_27, PrairieDogTown_18, Aoka_18, EvenBluerMoon_18
- Track 84 : Hereford_19

- Track 85 : JanetJ_18
- Track 86 : LisoBros_16
- Track 87 : ChamoyPickle_19, AnnabelLee_18, Roberts_18, Gerri43_18, Neuville_18, CardboardBox_19, ChipsNGuac_18
- Track 88 : Makima_19
- Track 89 : LastNadia_21, Audell_21
- Track 90 : TMaxx_18
- Track 91 : Mireles_18
- Track 92 : Ezurina_17
- Track 93 : TripleC_21
- Track 94 : Studio_19
- Track 95 : Agamoto_20
- Track 96 : LuckyBarnes_24
- Track 97 : pZL12_50c

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

The start number called the most often in the published annotations is 34, it was called in 62 of the 137 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_17, AGrandiflora_17, AceofSpades_16, Adumb2043_17, AinMach_16, Amploria_17, Amyev_17, Asa16_17, Ascela_17, Ashes_17, Beaupre_17, Berrie_17, Cappuccino_17, Cassia_17, Community_17, Cyan_17, Donkey_17, Elezi_17, Emotion_16, Eraser_17, Exile_16, FiveHead_17, Flutur_17, Gambol_17, Halsey_17, IUFootball_16, Iter_17, Janeemi_18, JasmineDragon_16, Joemato_17, JohnDoe_17, JohnThicc_16, Jstan_18, JuneStar_17, Kalimba_17, Kaylissa_17, LadyAstra_16, Lego_17, Liebe_16, Lizalica_17, London_17, MaGuCo_16, Maureen_16, Michkear_20, MiniMommy_16, Moss_17, Mudpuppy_17, Niobe_17, Nitro_17, Origami_16, Phives_18, Pixelle_17, Powerpuff_17, Pumpkins_17, RockScotty_17, Sabourin_17, Schaffner_17, ShakeltOph_16, Simpson_19, Skelbel_18, Soondubu_16, Sooty_17, Subaru_17, Tallboi_17, Tbone_17, TforTroy_17, ThursdayNight_16, Tian_17, Tuck_18, Turab_17, Tutumahutu_17, VroomVroom_16, Warda_17, Yang_17, YesChef_17, pZL12_50c,

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

•

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

- Agamoto_20, AllBusiness_20, AnnabelLee_18, Aoka_18, Audell_21, Austintatious_17, BigSherm_21, Bioscum_17, CardboardBox_19, ChamoyPickle_19, ChipsNGuac_18, Cole_19, Dirdigger_21, Donatella_20, DreamEater_17, Elesar_20, Euratis_13, EvePickles_20, EvenBluerMoon_18, Ezurina_17, Faja_20, GUPitcher_18, Galactica_20, Gerri43_18, Gibbzilla_19, GoodLuckBabe_21, Guinevere_21, Gusanita_19, Halloweekend_19, Heather_13, Hereford_19, Hiya_22, Ichiang_19, Ididsuntinwong_17, IsHungry_21, JanetJ_18, Julie_21, Keanu_22, Kihatsu_22, Kokushibo_22, Kukla_18, LastNadia_21, Lenoxika_21, Lilbooboo_13, Lishka_17, LisoBros_16, LuckyBarnes_24, Makima_19, Maruru_17, MillySue_21, Mireles_18, Mojarita_17, Morrey_27, Nandita_21, Neuville_18, NoSwimming_19, PapayaSalad_17, PetriParty_18, Picard_17, Popper_19, PrairieDogTown_18,

QuinnAvery_21, RemusLoopin_13, Roberts_18, Ryan_21, SV1_17, Saintcarr_20, Samora_13, Sashimi_21, Schism_21, Scotia_19, Sebastisaurus_13, Shawty_13, Sonali_17, Spocter_22, Studio_19, Sunshine23_18, TG1_13, TMaxx_18, ToastyOats_23, Toodles_21, TripleC_21, TripleJ_19, Vash_13, Yonex_21, Zaheer_21, phiBT1_44,

Summary by start number:

Start 28:

- Found in 3 of 163 (1.8%) of genes in pham
- Manual Annotations of this start: 3 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru_17 (FG), Sonali_17 (FG), Sunshine23_18 (FG),

Start 29:

- Found in 16 of 163 (9.8%) of genes in pham
- Manual Annotations of this start: 1 of 137
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Makima_19 (FR),

Start 31:

- Found in 51 of 163 (31.3%) of genes in pham
- Manual Annotations of this start: 40 of 137
- Called 98.0% of time when present
- Phage (with cluster) where this start called: Agamotto_20 (FR), AllBusiness_20 (FF), AnnabelLee_18 (FR), Audell_21 (FR), BigSherm_21 (FF), CardboardBox_19 (FR), ChamoyPickle_19 (FR), ChipsNGuac_18 (FR), Cole_19 (FF), DirtDigger_21 (FF), Donatella_20 (FF), DreamEater_17 (FJ), Elesar_20 (FF), EvePickles_20 (AY), Ezurina_17 (FR), Faja_20 (AY), GUPitcher_18 (FJ), Gerri43_18 (FR), Gibbzilla_19 (FB), GoodLuckBabe_21 (FF), Guinevere_21 (FF), Gusanita_19 (FF), Halloween_19 (FF), Ichang_19 (FF), IsHungry_21 (FF), Julie_21 (FF), Kihatsu_22 (FF), Kukla_18 (FJ), LastNadia_21 (FR), Lenoxika_21 (FF), MillySue_21 (FF), Mireles_18 (FR), Nandita_21 (FF), Neuville_18 (FR), PetriParty_18 (FJ), Popper_19 (FF), QuinnAvery_21 (FF), Roberts_18 (FR), Ryan_21 (FF), Saintcarr_20 (FF), Sashimi_21 (AY), Schism_21 (FF), Studio_19 (FR), TMaxx_18 (FR), ToastyOats_23 (FF), Toodles_21 (FF), TripleC_21 (FR), TripleJ_19 (FJ), Yonex_21 (FF), Zaheer_21 (FF),

Start 34:

- Found in 76 of 163 (46.6%) of genes in pham
- Manual Annotations of this start: 62 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_17 (AZ1), AGrandiflora_17 (AZ1), AceofSpades_16 (AZ4), Adumb2043_17 (AZ1), AinMach_16 (AZ7), Amploria_17 (AZ1), Amyev_17 (AZ1), Asa16_17 (AZ1), Ascela_17 (AZ1), Ashes_17 (AZ5), Beaupre_17 (AZ5), Berrie_17 (AZ1), Cappuccino_17 (AZ5), Cassia_17 (AZ1), Community_17 (AZ1), Cyan_17 (AZ1), Donkey_17 (AZ5), Elezi_17 (AZ1), Emotion_16 (AZ4), Eraser_17 (AZ1), Exile_16 (AZ6), FiveHead_17 (AZ4), Flutur_17 (AZ), Gambol_17 (AZ5), Halsey_17 (AZ5), IUFootball_16 (AZ2), Iter_17 (AZ1), Janeemi_18 (AZ1), JasmineDragon_16 (AZ4), Joemato_17 (AZ1), JohnDoe_17 (AZ1), JohnThicc_16 (AZ4), Jstan_18 (AZ1), JuneStar_17 (AZ1), Kalimba_17 (AZ5), Kaylissa_17 (AZ1), LadyAstra_16 (AZ4), Lego_17 (AZ1), Liebe_16 (AZ2), Lizalica_17

(AZ1), London_17 (AZ1), MaGuCo_16 (AZ2), Maureen_16 (AZ2), Michkear_20 (AZ), MiniMommy_16 (AZ4), Moss_17 (AZ5), Mudpuppy_17 (AZ1), Niobe_17 (AZ1), Nitro_17 (AZ1), Origami_16 (AZ4), Phives_18 (AZ1), Pixelle_17 (AZ1), Powerpuff_17 (AZ1), Pumpkins_17 (AZ1), RockScotty_17 (AZ5), Sabourin_17 (AZ5), Schaffner_17 (AZ1), ShakeltOph_16 (AZ4), Simpson_19 (AZ1), Skelbel_18 (AZ1), Soondubu_16 (AZ6), Sooty_17 (AZ5), Subaru_17 (AZ1), Tallboi_17 (AZ1), Tbone_17 (AZ1), TforTroy_17 (AZ1), ThursdayNight_16 (AZ), Tian_17 (AZ1), Tuck_18 (AZ1), Turab_17 (AZ1), Tutumahutu_17 (AZ1), VroomVroom_16 (AZ4), Warda_17 (AZ1), Yang_17 (AZ1), YesChef_17 (AZ1), pZL12_50c (singleton),

Start 35:

- Found in 1 of 163 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LisoBros_16 (FP),

Start 36:

- Found in 10 of 163 (6.1%) of genes in pham
- Manual Annotations of this start: 9 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Euratis_13 (BB1), Heather_13 (BB2), Lilbooboo_13 (BB1), RemusLoopin_13 (BB2), Samora_13 (BB1), Sebastisaurus_13 (BB2), Shawty_13 (BB1), TG1_13 (BB1), Vash_13 (BB1), phiBT1_44 (BB1),

Start 37:

- Found in 10 of 163 (6.1%) of genes in pham
- Manual Annotations of this start: 4 of 137
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Galactica_20 (BQ), Hiyaa_22 (BQ), Ididsumtinwong_17 (BC3), Lishka_17 (BC3),

Start 38:

- Found in 1 of 163 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LuckyBarnes_24 (singleton),

Start 40:

- Found in 13 of 163 (8.0%) of genes in pham
- Manual Annotations of this start: 9 of 137
- Called 69.2% of time when present
- Phage (with cluster) where this start called: Austintatious_17 (BC3), Bioscum_17 (BC3), Keanu_22 (BQ), Kokushibo_22 (BQ), Moajorita_17 (BC1), PapayaSalad_17 (BC3), Picard_17 (BC1), SV1_17 (BC1), Spocter_22 (BQ),

Start 41:

- Found in 2 of 163 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoSwimming_19 (FO), Scotia_19 (FO),

Start 42:

- Found in 6 of 163 (3.7%) of genes in pham

- Manual Annotations of this start: 5 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aoka_18 (FO), EvenBluerMoon_18 (FO), Hereford_19 (FO), JanetJ_18 (FO), Morrey_27 (FO), PrairieDogTown_18 (FO),

Summary by clusters:

There are 21 clusters represented in this pham: FP, FR, AZ, BB2, AZ7, AZ6, singleton, AZ5, AZ2, FB, BQ, FF, FG, AY, AZ1, FJ, FO, AZ4, BC1, BB1, BC3,

Info for manual annotations of cluster AY:

- Start number 31 was manually annotated 3 times for cluster AY.

Info for manual annotations of cluster AZ:

- Start number 34 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster AZ1:

- Start number 34 was manually annotated 37 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 34 was manually annotated 4 times for cluster AZ2.

Info for manual annotations of cluster AZ4:

- Start number 34 was manually annotated 8 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 34 was manually annotated 11 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 34 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster BB1:

- Start number 36 was manually annotated 6 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 36 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster BC1:

- Start number 40 was manually annotated 3 times for cluster BC1.

Info for manual annotations of cluster BC3:

- Start number 37 was manually annotated 2 times for cluster BC3.
- Start number 40 was manually annotated 3 times for cluster BC3.

Info for manual annotations of cluster BQ:

- Start number 37 was manually annotated 2 times for cluster BQ.
- Start number 40 was manually annotated 3 times for cluster BQ.

Info for manual annotations of cluster FF:

- Start number 31 was manually annotated 23 times for cluster FF.

Info for manual annotations of cluster FG:

- Start number 28 was manually annotated 3 times for cluster FG.

Info for manual annotations of cluster FJ:

- Start number 31 was manually annotated 4 times for cluster FJ.

Info for manual annotations of cluster FO:

- Start number 41 was manually annotated 2 times for cluster FO.
- Start number 42 was manually annotated 5 times for cluster FO.

Info for manual annotations of cluster FP:

- Start number 35 was manually annotated 1 time for cluster FP.

Info for manual annotations of cluster FR:

- Start number 29 was manually annotated 1 time for cluster FR.
- Start number 31 was manually annotated 10 times for cluster FR.

Gene Information:

Gene: AEgle_17 Start: 13051, Stop: 13926, Start Num: 34

Candidate Starts for AEgle_17:

(Start: 34 @13051 has 62 MA's), (73, 13222), (87, 13297), (131, 13447), (147, 13501), (155, 13540), (168, 13597), (183, 13675), (186, 13690),

Gene: AGrandiflora_17 Start: 13035, Stop: 13910, Start Num: 34

Candidate Starts for AGrandiflora_17:

(Start: 34 @13035 has 62 MA's), (59, 13146), (79, 13239), (131, 13431), (183, 13659), (186, 13674),

Gene: AceofSpades_16 Start: 11238, Stop: 12098, Start Num: 34

Candidate Starts for AceofSpades_16:

(Start: 34 @11238 has 62 MA's), (47, 11274), (50, 11292), (129, 11613), (166, 11769), (172, 11805), (185, 11865), (202, 11931), (206, 11955),

Gene: Adumb2043_17 Start: 13050, Stop: 13925, Start Num: 34

Candidate Starts for Adumb2043_17:

(Start: 34 @13050 has 62 MA's), (73, 13221), (87, 13296), (131, 13446), (147, 13500), (155, 13539), (168, 13596), (183, 13674), (186, 13689),

Gene: Agamoto_20 Start: 14950, Stop: 15855, Start Num: 31

Candidate Starts for Agamoto_20:

(Start: 29 @14944 has 1 MA's), (Start: 31 @14950 has 40 MA's), (33, 14962), (61, 15082), (82, 15190), (117, 15310), (119, 15322), (126, 15352), (183, 15607), (201, 15688), (205, 15703), (214, 15775), (219, 15823), (221, 15838),

Gene: AinMach_16 Start: 12225, Stop: 13082, Start Num: 34

Candidate Starts for AinMach_16:

(Start: 34 @12225 has 62 MA's), (47, 12261), (62, 12330), (65, 12342), (78, 12402), (107, 12516), (110, 12531), (147, 12663), (150, 12675), (161, 12732), (211, 12969), (215, 13005),

Gene: AllBusiness_20 Start: 15893, Stop: 16813, Start Num: 31

Candidate Starts for AllBusiness_20:

(Start: 31 @15893 has 40 MA's), (83, 16145), (87, 16160), (88, 16163), (150, 16403), (197, 16634), (199, 16640), (201, 16646), (210, 16697),

Gene: Amploria_17 Start: 13050, Stop: 13925, Start Num: 34

Candidate Starts for Amploria_17:

(Start: 34 @13050 has 62 MA's), (73, 13221), (87, 13296), (131, 13446), (147, 13500), (155, 13539), (168, 13596), (183, 13674), (186, 13689),

Gene: Amyev_17 Start: 13063, Stop: 13938, Start Num: 34

Candidate Starts for Amyev_17:

(Start: 34 @13063 has 62 MA's), (131, 13459), (147, 13513), (183, 13687), (186, 13702),

Gene: AnnabelLee_18 Start: 11910, Stop: 12815, Start Num: 31

Candidate Starts for AnnabelLee_18:

(Start: 29 @11904 has 1 MA's), (Start: 31 @11910 has 40 MA's), (33, 11922), (51, 12000), (79, 12123), (87, 12168), (89, 12177), (97, 12207), (101, 12228), (119, 12282), (124, 12306), (183, 12567), (201, 12648), (214, 12735), (216, 12759), (219, 12783), (221, 12798),

Gene: Aoka_18 Start: 14198, Stop: 15058, Start Num: 42

Candidate Starts for Aoka_18:

(Start: 42 @14198 has 5 MA's), (148, 14639), (167, 14732), (184, 14822),

Gene: Asa16_17 Start: 13020, Stop: 13895, Start Num: 34

Candidate Starts for Asa16_17:

(Start: 34 @13020 has 62 MA's), (59, 13131), (73, 13191), (131, 13416), (147, 13470), (151, 13485), (155, 13509), (168, 13566), (183, 13644), (186, 13659),

Gene: Ascela_17 Start: 13047, Stop: 13922, Start Num: 34

Candidate Starts for Ascela_17:

(Start: 34 @13047 has 62 MA's), (131, 13443), (155, 13536), (170, 13611), (186, 13686), (206, 13776),

Gene: Ashes_17 Start: 12748, Stop: 13623, Start Num: 34

Candidate Starts for Ashes_17:

(Start: 34 @12748 has 62 MA's), (51, 12826), (75, 12937), (82, 12979), (113, 13078), (149, 13204), (173, 13327), (180, 13360), (220, 13588),

Gene: Audell_21 Start: 15231, Stop: 16136, Start Num: 31

Candidate Starts for Audell_21:

(Start: 29 @15225 has 1 MA's), (Start: 31 @15231 has 40 MA's), (82, 15471), (93, 15516), (97, 15528), (119, 15603), (156, 15762), (169, 15816), (201, 15969), (214, 16056), (216, 16080), (219, 16104), (221, 16119),

Gene: Austintatious_17 Start: 12200, Stop: 13096, Start Num: 40

Candidate Starts for Austintatious_17:

(1, 11099), (2, 11144), (3, 11201), (4, 11219), (5, 11246), (6, 11273), (7, 11327), (8, 11435), (9, 11498), (11, 11528), (12, 11561), (13, 11579), (16, 11705), (17, 11798), (19, 11825), (22, 11933), (32, 12173), (Start: 37 @12194 has 4 MA's), (Start: 40 @12200 has 9 MA's), (81, 12416), (82, 12419), (97, 12476), (106, 12506), (166, 12770), (173, 12809), (210, 12983),

Gene: Beaupre_17 Start: 12749, Stop: 13624, Start Num: 34

Candidate Starts for Beaupre_17:

(Start: 34 @12749 has 62 MA's), (51, 12827), (75, 12938), (82, 12980), (113, 13079), (149, 13205), (173, 13328), (180, 13361), (220, 13589),

Gene: Berrie_17 Start: 13181, Stop: 14056, Start Num: 34

Candidate Starts for Berrie_17:

(Start: 34 @13181 has 62 MA's), (131, 13577), (155, 13670), (183, 13805), (186, 13820),

Gene: BigSherm_21 Start: 15821, Stop: 16741, Start Num: 31

Candidate Starts for BigSherm_21:

(Start: 31 @15821 has 40 MA's), (83, 16073), (87, 16088), (88, 16091), (150, 16331), (197, 16562), (199, 16568), (201, 16574), (210, 16625),

Gene: Bioscum_17 Start: 12236, Stop: 13132, Start Num: 40

Candidate Starts for Bioscum_17:

(1, 11135), (2, 11180), (3, 11237), (4, 11255), (6, 11309), (7, 11363), (8, 11471), (9, 11534), (11, 11564), (12, 11597), (13, 11615), (16, 11741), (17, 11834), (19, 11861), (22, 11969), (32, 12209), (Start: 37 @12230 has 4 MA's), (Start: 40 @12236 has 9 MA's), (81, 12452), (82, 12455), (97, 12512), (106, 12542), (166, 12806), (173, 12845), (210, 13019),

Gene: Cappuccino_17 Start: 12656, Stop: 13531, Start Num: 34

Candidate Starts for Cappuccino_17:

(Start: 34 @12656 has 62 MA's), (51, 12734), (75, 12845), (82, 12887), (113, 12986), (149, 13112), (173, 13235), (180, 13268), (220, 13496),

Gene: CardboardBox_19 Start: 11910, Stop: 12815, Start Num: 31

Candidate Starts for CardboardBox_19:

(Start: 29 @11904 has 1 MA's), (Start: 31 @11910 has 40 MA's), (33, 11922), (51, 12000), (79, 12123), (87, 12168), (89, 12177), (97, 12207), (101, 12228), (119, 12282), (124, 12306), (183, 12567), (201, 12648), (214, 12735), (216, 12759), (219, 12783), (221, 12798),

Gene: Cassia_17 Start: 13143, Stop: 14018, Start Num: 34

Candidate Starts for Cassia_17:

(Start: 34 @13143 has 62 MA's), (73, 13314), (79, 13347), (131, 13539), (147, 13593), (186, 13782), (206, 13872),

Gene: ChamoyPickle_19 Start: 11910, Stop: 12815, Start Num: 31

Candidate Starts for ChamoyPickle_19:

(Start: 29 @11904 has 1 MA's), (Start: 31 @11910 has 40 MA's), (33, 11922), (51, 12000), (79, 12123), (87, 12168), (89, 12177), (97, 12207), (101, 12228), (119, 12282), (124, 12306), (183, 12567), (201, 12648), (214, 12735), (216, 12759), (219, 12783), (221, 12798),

Gene: ChipsNGuac_18 Start: 11910, Stop: 12815, Start Num: 31

Candidate Starts for ChipsNGuac_18:

(Start: 29 @11904 has 1 MA's), (Start: 31 @11910 has 40 MA's), (33, 11922), (51, 12000), (79, 12123), (87, 12168), (89, 12177), (97, 12207), (101, 12228), (119, 12282), (124, 12306), (183, 12567), (201, 12648), (214, 12735), (216, 12759), (219, 12783), (221, 12798),

Gene: Cole_19 Start: 15483, Stop: 16403, Start Num: 31

Candidate Starts for Cole_19:

(Start: 31 @15483 has 40 MA's), (83, 15735), (87, 15750), (88, 15753), (150, 15993), (197, 16224), (199, 16230), (201, 16236), (210, 16287),

Gene: Community_17 Start: 14263, Stop: 15138, Start Num: 34

Candidate Starts for Community_17:

(Start: 34 @14263 has 62 MA's), (56, 14359), (73, 14434), (131, 14659), (155, 14752), (170, 14827), (186, 14902),

Gene: Cyan_17 Start: 13038, Stop: 13913, Start Num: 34

Candidate Starts for Cyan_17:

(Start: 34 @13038 has 62 MA's), (59, 13149), (79, 13242), (131, 13434), (183, 13662), (186, 13677),

Gene: Dirdigger_21 Start: 15801, Stop: 16721, Start Num: 31

Candidate Starts for Dirdigger_21:

(20, 15489), (Start: 31 @15801 has 40 MA's), (72, 15984), (83, 16053), (87, 16068), (88, 16071), (108, 16146), (120, 16185), (150, 16311), (197, 16542), (199, 16548), (201, 16554), (210, 16605),

Gene: Donatella_20 Start: 15947, Stop: 16867, Start Num: 31

Candidate Starts for Donatella_20:

(10, 15296), (14, 15428), (20, 15635), (Start: 31 @15947 has 40 MA's), (72, 16130), (83, 16199), (87, 16214), (88, 16217), (120, 16331), (150, 16457), (197, 16688), (199, 16694), (201, 16700), (210, 16751),

Gene: Donkey_17 Start: 12656, Stop: 13531, Start Num: 34

Candidate Starts for Donkey_17:

(Start: 34 @12656 has 62 MA's), (51, 12734), (75, 12845), (82, 12887), (113, 12986), (149, 13112), (173, 13235), (180, 13268), (220, 13496),

Gene: DreamEater_17 Start: 15472, Stop: 16380, Start Num: 31

Candidate Starts for DreamEater_17:

(Start: 31 @15472 has 40 MA's), (58, 15595), (92, 15757), (93, 15760), (98, 15778), (109, 15814), (111, 15817), (112, 15820), (120, 15850), (124, 15871), (125, 15874), (162, 16033), (164, 16048), (168, 16057), (174, 16093), (188, 16159), (189, 16162), (197, 16201), (201, 16213), (210, 16264),

Gene: Elesar_20 Start: 15874, Stop: 16794, Start Num: 31

Candidate Starts for Elesar_20:

(Start: 31 @15874 has 40 MA's), (83, 16126), (87, 16141), (88, 16144), (103, 16207), (112, 16228), (125, 16282), (197, 16615), (199, 16621), (201, 16627), (210, 16678),

Gene: Elezi_17 Start: 13021, Stop: 13896, Start Num: 34

Candidate Starts for Elezi_17:

(Start: 34 @13021 has 62 MA's), (59, 13132), (73, 13192), (131, 13417), (147, 13471), (151, 13486), (168, 13567), (183, 13645), (186, 13660),

Gene: Emotion_16 Start: 11297, Stop: 12160, Start Num: 34

Candidate Starts for Emotion_16:

(Start: 34 @11297 has 62 MA's), (47, 11333), (52, 11354), (65, 11414), (129, 11672), (172, 11864),

Gene: Eraser_17 Start: 13021, Stop: 13896, Start Num: 34

Candidate Starts for Eraser_17:

(Start: 34 @13021 has 62 MA's), (59, 13132), (73, 13192), (131, 13417), (147, 13471), (151, 13486), (155, 13510), (168, 13567), (183, 13645), (186, 13660),

Gene: Euratis_13 Start: 10457, Stop: 11323, Start Num: 36

Candidate Starts for Euratis_13:

(Start: 36 @10457 has 9 MA's), (46, 10499), (47, 10502), (54, 10538), (73, 10625), (91, 10718), (116, 10790), (130, 10853), (133, 10865), (139, 10889), (147, 10916), (178, 11087), (190, 11123), (192, 11141), (206, 11192), (215, 11252), (220, 11294),

Gene: EvePickles_20 Start: 15163, Stop: 16071, Start Num: 31

Candidate Starts for EvePickles_20:

(24, 15019), (Start: 31 @15163 has 40 MA's), (48, 15238), (52, 15259), (53, 15262), (58, 15286), (61, 15298), (98, 15469), (109, 15505), (119, 15538), (120, 15541), (125, 15565), (135, 15604), (164, 15739), (201, 15904), (210, 15955),

Gene: EvenBluerMoon_18 Start: 14233, Stop: 15093, Start Num: 42

Candidate Starts for EvenBluerMoon_18:

(Start: 42 @14233 has 5 MA's), (148, 14674), (167, 14767), (184, 14857),

Gene: Exile_16 Start: 13694, Stop: 14551, Start Num: 34

Candidate Starts for Exile_16:

(Start: 34 @13694 has 62 MA's), (47, 13730), (107, 13985), (129, 14069), (137, 14105), (146, 14129), (150, 14144), (174, 14267),

Gene: Ezurina_17 Start: 11479, Stop: 12387, Start Num: 31

Candidate Starts for Ezurina_17:

(Start: 29 @11473 has 1 MA's), (Start: 31 @11479 has 40 MA's), (33, 11491), (51, 11569), (72, 11656), (83, 11725), (87, 11740), (97, 11779), (119, 11854), (121, 11860), (124, 11878), (163, 12043), (168, 12064), (172, 12094), (176, 12115), (188, 12166), (201, 12220), (214, 12307), (216, 12331), (221, 12370),

Gene: Faja_20 Start: 15058, Stop: 15966, Start Num: 31

Candidate Starts for Faja_20:

(17, 14695), (18, 14701), (21, 14797), (23, 14833), (Start: 31 @15058 has 40 MA's), (52, 15154), (58, 15181), (83, 15304), (90, 15337), (95, 15352), (112, 15406), (120, 15436), (125, 15460), (164, 15634), (168, 15643), (172, 15673), (197, 15787), (201, 15799),

Gene: FiveHead_17 Start: 11229, Stop: 12089, Start Num: 34

Candidate Starts for FiveHead_17:

(Start: 34 @11229 has 62 MA's), (47, 11265), (50, 11283), (63, 11337), (129, 11604), (151, 11682), (166, 11760), (172, 11796), (181, 11835), (185, 11856),

Gene: Flutur_17 Start: 13038, Stop: 13913, Start Num: 34

Candidate Starts for Flutur_17:

(Start: 34 @13038 has 62 MA's), (59, 13149), (79, 13242), (131, 13434), (183, 13662), (186, 13677),

Gene: GUPitcher_18 Start: 14815, Stop: 15723, Start Num: 31

Candidate Starts for GUPitcher_18:

(Start: 31 @14815 has 40 MA's), (52, 14911), (53, 14914), (58, 14938), (61, 14950), (98, 15121), (109, 15157), (119, 15190), (120, 15193), (135, 15256), (164, 15391), (184, 15484), (201, 15556), (205, 15571), (210, 15607),

Gene: Galactica_20 Start: 17668, Stop: 18558, Start Num: 37

Candidate Starts for Galactica_20:

(32, 17647), (Start: 37 @17668 has 4 MA's), (Start: 40 @17674 has 9 MA's), (49, 17713), (59, 17767), (80, 17869), (88, 17908), (92, 17929), (114, 18004), (126, 18058), (200, 18385),

Gene: Gambol_17 Start: 12656, Stop: 13531, Start Num: 34

Candidate Starts for Gambol_17:

(Start: 34 @12656 has 62 MA's), (51, 12734), (75, 12845), (82, 12887), (113, 12986), (149, 13112), (173, 13235), (180, 13268), (220, 13496),

Gene: Gerri43_18 Start: 11910, Stop: 12815, Start Num: 31

Candidate Starts for Gerri43_18:

(Start: 29 @11904 has 1 MA's), (Start: 31 @11910 has 40 MA's), (33, 11922), (51, 12000), (79, 12123), (87, 12168), (89, 12177), (97, 12207), (101, 12228), (119, 12282), (124, 12306), (183, 12567), (201, 12648), (214, 12735), (216, 12759), (219, 12783), (221, 12798),

Gene: Gibbzilla_19 Start: 12866, Stop: 13765, Start Num: 31

Candidate Starts for Gibbzilla_19:

(Start: 31 @12866 has 40 MA's), (44, 12923), (53, 12959), (54, 12965), (55, 12968), (60, 12992), (72, 13034), (83, 13103), (97, 13157), (150, 13355), (183, 13517), (199, 13592),

Gene: GoodLuckBabe_21 Start: 15778, Stop: 16698, Start Num: 31

Candidate Starts for GoodLuckBabe_21:

(Start: 31 @15778 has 40 MA's), (52, 15874), (74, 15979), (83, 16030), (84, 16036), (87, 16045), (88, 16048), (92, 16069), (112, 16132), (124, 16183), (125, 16186), (138, 16240), (162, 16351), (164, 16366), (168, 16375), (197, 16519), (199, 16525), (201, 16531), (205, 16546), (210, 16582), (218, 16663),

Gene: Guinevere_21 Start: 15809, Stop: 16729, Start Num: 31

Candidate Starts for Guinevere_21:

(Start: 31 @15809 has 40 MA's), (52, 15905), (74, 16010), (83, 16061), (84, 16067), (87, 16076), (88, 16079), (92, 16100), (112, 16163), (124, 16214), (138, 16271), (162, 16382), (164, 16397), (168, 16406), (197, 16550), (201, 16562), (205, 16577), (210, 16613), (218, 16694),

Gene: Gusanita_19 Start: 15698, Stop: 16618, Start Num: 31

Candidate Starts for Gusanita_19:

(Start: 31 @15698 has 40 MA's), (52, 15794), (83, 15950), (84, 15956), (87, 15965), (88, 15968), (92, 15989), (123, 16100), (125, 16106), (184, 16379), (197, 16439), (199, 16445), (201, 16451), (210, 16502), (218, 16583),

Gene: Halloweekend_19 Start: 15447, Stop: 16367, Start Num: 31

Candidate Starts for Halloweekend_19:

(Start: 31 @15447 has 40 MA's), (83, 15699), (87, 15714), (88, 15717), (150, 15957), (197, 16188), (199, 16194), (201, 16200), (210, 16251),

Gene: Halsey_17 Start: 12748, Stop: 13623, Start Num: 34

Candidate Starts for Halsey_17:

(Start: 34 @12748 has 62 MA's), (51, 12826), (75, 12937), (82, 12979), (113, 13078), (149, 13204), (173, 13327), (180, 13360), (220, 13588),

Gene: Heather_13 Start: 10445, Stop: 11311, Start Num: 36

Candidate Starts for Heather_13:

(Start: 36 @10445 has 9 MA's), (39, 10454), (47, 10490), (57, 10538), (64, 10577), (73, 10613), (86, 10685), (88, 10691), (91, 10706), (104, 10751), (116, 10778), (127, 10829), (128, 10832), (130, 10841), (144, 10898), (147, 10904), (158, 10958), (170, 11030), (176, 11063), (182, 11090), (202, 11156), (208, 11198),

Gene: Hereford_19 Start: 14357, Stop: 15217, Start Num: 42

Candidate Starts for Hereford_19:

(25, 14204), (Start: 42 @14357 has 5 MA's), (148, 14798), (167, 14891), (184, 14981),

Gene: Hiya_22 Start: 18704, Stop: 19594, Start Num: 37

Candidate Starts for Hiyaa_22:

(32, 18683), (Start: 37 @18704 has 4 MA's), (Start: 40 @18710 has 9 MA's), (49, 18749), (80, 18905), (81, 18920), (88, 18944), (105, 19010), (122, 19076), (156, 19214), (190, 19376), (200, 19421),

Gene: IUFootball_16 Start: 11562, Stop: 12437, Start Num: 34

Candidate Starts for IUFootball_16:

(Start: 34 @11562 has 62 MA's), (68, 11712), (147, 12012), (149, 12018), (168, 12108), (186, 12201),

Gene: Ichiang_19 Start: 15464, Stop: 16384, Start Num: 31

Candidate Starts for Ichiang_19:

(10, 14813), (14, 14945), (20, 15152), (Start: 31 @15464 has 40 MA's), (83, 15716), (87, 15731), (88, 15734), (120, 15848), (150, 15974), (197, 16205), (199, 16211), (201, 16217), (210, 16268),

Gene: Ididsumtinwong_17 Start: 12230, Stop: 13132, Start Num: 37

Candidate Starts for Ididsumtinwong_17:

(1, 11135), (2, 11180), (3, 11237), (4, 11255), (6, 11309), (7, 11363), (8, 11471), (9, 11534), (11, 11564), (12, 11597), (13, 11615), (16, 11741), (17, 11834), (19, 11861), (22, 11969), (32, 12209), (Start: 37 @12230 has 4 MA's), (Start: 40 @12236 has 9 MA's), (81, 12452), (82, 12455), (97, 12512), (106, 12542), (166, 12806), (173, 12845), (210, 13019),

Gene: IsHungry_21 Start: 15775, Stop: 16695, Start Num: 31

Candidate Starts for IsHungry_21:

(Start: 31 @15775 has 40 MA's), (52, 15871), (83, 16027), (84, 16033), (88, 16045), (92, 16066), (93, 16069), (120, 16159), (124, 16180), (125, 16183), (197, 16516), (199, 16522), (201, 16528), (210, 16579), (218, 16660),

Gene: Iter_17 Start: 13047, Stop: 13922, Start Num: 34

Candidate Starts for Iter_17:

(Start: 34 @13047 has 62 MA's), (131, 13443), (155, 13536), (170, 13611), (186, 13686), (206, 13776),

Gene: Janeemi_18 Start: 14291, Stop: 15166, Start Num: 34

Candidate Starts for Janeemi_18:

(Start: 34 @14291 has 62 MA's), (73, 14462), (131, 14687), (155, 14780), (170, 14855), (186, 14930),

Gene: JanetJ_18 Start: 14015, Stop: 14875, Start Num: 42

Candidate Starts for JanetJ_18:

(Start: 42 @14015 has 5 MA's), (45, 14036), (100, 14282), (130, 14396), (134, 14414),

Gene: JasmineDragon_16 Start: 11227, Stop: 12087, Start Num: 34

Candidate Starts for JasmineDragon_16:

(Start: 34 @11227 has 62 MA's), (47, 11263), (50, 11281), (128, 11599), (151, 11680), (166, 11758), (172, 11794), (202, 11920), (206, 11944),

Gene: Joemato_17 Start: 13038, Stop: 13913, Start Num: 34

Candidate Starts for Joemato_17:

(Start: 34 @13038 has 62 MA's), (59, 13149), (79, 13242), (131, 13434), (183, 13662), (186, 13677),

Gene: JohnDoe_17 Start: 13033, Stop: 13908, Start Num: 34

Candidate Starts for JohnDoe_17:

(Start: 34 @13033 has 62 MA's), (59, 13144), (131, 13429), (183, 13657), (186, 13672),

Gene: JohnThicc_16 Start: 11229, Stop: 12089, Start Num: 34

Candidate Starts for JohnThicc_16:

(Start: 34 @11229 has 62 MA's), (47, 11265), (50, 11283), (129, 11604), (151, 11682), (166, 11760), (172, 11796), (181, 11835), (185, 11856),

Gene: Jstan_18 Start: 13021, Stop: 13896, Start Num: 34

Candidate Starts for Jstan_18:

(Start: 34 @13021 has 62 MA's), (59, 13132), (73, 13192), (131, 13417), (147, 13471), (151, 13486), (155, 13510), (168, 13567), (183, 13645), (186, 13660),

Gene: Julie_21 Start: 16037, Stop: 16957, Start Num: 31

Candidate Starts for Julie_21:

(20, 15725), (Start: 31 @16037 has 40 MA's), (72, 16220), (83, 16289), (87, 16304), (88, 16307), (103, 16370), (120, 16421), (145, 16529), (150, 16547), (197, 16778), (199, 16784), (201, 16790), (210, 16841),

Gene: JuneStar_17 Start: 13141, Stop: 14016, Start Num: 34

Candidate Starts for JuneStar_17:

(Start: 34 @13141 has 62 MA's), (131, 13537), (155, 13630), (186, 13780), (194, 13822),

Gene: Kalimba_17 Start: 12657, Stop: 13532, Start Num: 34

Candidate Starts for Kalimba_17:

(Start: 34 @12657 has 62 MA's), (51, 12735), (75, 12846), (82, 12888), (113, 12987), (149, 13113), (173, 13236), (180, 13269), (220, 13497),

Gene: Kaylissa_17 Start: 13039, Stop: 13914, Start Num: 34

Candidate Starts for Kaylissa_17:

(Start: 34 @13039 has 62 MA's), (59, 13150), (79, 13243), (131, 13435), (183, 13663), (186, 13678),

Gene: Keanu_22 Start: 18751, Stop: 19635, Start Num: 40

Candidate Starts for Keanu_22:

(Start: 40 @18751 has 9 MA's), (49, 18790), (80, 18946), (88, 18985), (103, 19048), (106, 19054), (114, 19081), (115, 19084), (122, 19117), (126, 19135), (127, 19141), (140, 19192), (156, 19255), (185, 19396),

Gene: Kihatsu_22 Start: 16131, Stop: 17051, Start Num: 31

Candidate Starts for Kihatsu_22:

(Start: 31 @16131 has 40 MA's), (52, 16227), (74, 16332), (83, 16383), (87, 16398), (88, 16401), (92, 16422), (99, 16446), (124, 16536), (125, 16539), (138, 16593), (162, 16704), (164, 16719), (168, 16728), (197, 16872), (199, 16878), (201, 16884), (205, 16899), (210, 16935), (218, 17016),

Gene: Kokushibo_22 Start: 18725, Stop: 19609, Start Num: 40

Candidate Starts for Kokushibo_22:

(32, 18698), (Start: 37 @18719 has 4 MA's), (Start: 40 @18725 has 9 MA's), (49, 18764), (80, 18920), (81, 18935), (88, 18959), (105, 19025), (106, 19028), (122, 19091), (156, 19229), (200, 19436),

Gene: Kukla_18 Start: 14545, Stop: 15453, Start Num: 31

Candidate Starts for Kukla_18:

(15, 14086), (17, 14185), (18, 14191), (21, 14287), (26, 14437), (Start: 31 @14545 has 40 MA's), (52, 14641), (58, 14668), (83, 14791), (95, 14839), (101, 14866), (109, 14887), (111, 14890), (112, 14893), (118, 14911), (125, 14947), (155, 15070), (164, 15121), (168, 15130), (183, 15205), (201, 15286), (218, 15418),

Gene: LadyAstra_16 Start: 11229, Stop: 12089, Start Num: 34

Candidate Starts for LadyAstra_16:

(Start: 34 @11229 has 62 MA's), (47, 11265), (50, 11283), (129, 11604), (151, 11682), (166, 11760), (172, 11796), (181, 11835), (185, 11856),

Gene: LastNadiia_21 Start: 14183, Stop: 15088, Start Num: 31

Candidate Starts for LastNadiia_21:

(Start: 29 @14177 has 1 MA's), (Start: 31 @14183 has 40 MA's), (82, 14423), (93, 14468), (97, 14480), (119, 14555), (156, 14714), (169, 14768), (201, 14921), (214, 15008), (216, 15032), (219, 15056), (221, 15071),

Gene: Lego_17 Start: 13038, Stop: 13913, Start Num: 34

Candidate Starts for Lego_17:

(Start: 34 @13038 has 62 MA's), (59, 13149), (79, 13242), (131, 13434), (183, 13662), (186, 13677),

Gene: Lenoxika_21 Start: 15805, Stop: 16725, Start Num: 31

Candidate Starts for Lenoxika_21:

(Start: 31 @15805 has 40 MA's), (52, 15901), (74, 16006), (83, 16057), (84, 16063), (87, 16072), (88, 16075), (92, 16096), (112, 16159), (124, 16210), (138, 16267), (162, 16378), (164, 16393), (168, 16402), (197, 16546), (201, 16558), (205, 16573), (210, 16609), (218, 16690),

Gene: Liebe_16 Start: 11562, Stop: 12437, Start Num: 34

Candidate Starts for Liebe_16:

(Start: 34 @11562 has 62 MA's), (68, 11712), (147, 12012), (149, 12018), (168, 12108), (186, 12201),

Gene: Lilbooboo_13 Start: 10470, Stop: 11336, Start Num: 36

Candidate Starts for Lilbooboo_13:

(Start: 36 @10470 has 9 MA's), (39, 10479), (47, 10515), (57, 10563), (64, 10602), (79, 10671), (116, 10803), (130, 10866), (147, 10929), (212, 11232), (215, 11265),

Gene: Lishka_17 Start: 12194, Stop: 13096, Start Num: 37

Candidate Starts for Lishka_17:

(1, 11099), (2, 11144), (3, 11201), (4, 11219), (5, 11246), (6, 11273), (7, 11327), (8, 11435), (9, 11498), (11, 11528), (12, 11561), (13, 11579), (16, 11705), (17, 11798), (19, 11825), (22, 11933), (32, 12173), (Start: 37 @12194 has 4 MA's), (Start: 40 @12200 has 9 MA's), (81, 12416), (82, 12419), (97, 12476), (106, 12506), (166, 12770), (173, 12809), (210, 12983),

Gene: LisoBros_16 Start: 13016, Stop: 13882, Start Num: 35

Candidate Starts for LisoBros_16:

(Start: 35 @13016 has 1 MA's), (79, 13208), (83, 13235), (129, 13400), (149, 13469), (151, 13478), (159, 13526), (185, 13652), (192, 13688), (211, 13769),

Gene: Lizalica_17 Start: 13023, Stop: 13898, Start Num: 34

Candidate Starts for Lizalica_17:

(Start: 34 @13023 has 62 MA's), (59, 13134), (73, 13194), (131, 13419), (183, 13647), (186, 13662),

Gene: London_17 Start: 13021, Stop: 13896, Start Num: 34

Candidate Starts for London_17:

(Start: 34 @13021 has 62 MA's), (59, 13132), (73, 13192), (131, 13417), (147, 13471), (151, 13486), (155, 13510), (168, 13567), (183, 13645), (186, 13660),

Gene: LuckyBarnes_24 Start: 20004, Stop: 20891, Start Num: 38

Candidate Starts for LuckyBarnes_24:

(Start: 38 @20004 has 1 MA's), (53, 20070), (70, 20145), (79, 20193), (102, 20289), (132, 20400), (136, 20418), (147, 20460), (154, 20496), (157, 20511), (193, 20688), (195, 20697), (196, 20700),

(213, 20781), (217, 20823),

Gene: MaGuCo_16 Start: 11496, Stop: 12371, Start Num: 34

Candidate Starts for MaGuCo_16:

(Start: 34 @11496 has 62 MA's), (68, 11646), (147, 11946), (149, 11952), (168, 12042), (173, 12075), (186, 12135),

Gene: Makima_19 Start: 13260, Stop: 14171, Start Num: 29

Candidate Starts for Makima_19:

(Start: 29 @13260 has 1 MA's), (Start: 31 @13266 has 40 MA's), (89, 13533), (97, 13563), (119, 13638), (145, 13743), (154, 13785), (156, 13797), (169, 13851), (201, 14004), (214, 14091), (216, 14115), (219, 14139), (221, 14154),

Gene: Maruru_17 Start: 17270, Stop: 18190, Start Num: 28

Candidate Starts for Maruru_17:

(Start: 28 @17270 has 3 MA's), (61, 17426), (67, 17450), (71, 17471), (122, 17687), (165, 17864), (195, 18014), (202, 18029), (207, 18062),

Gene: Maureen_16 Start: 11562, Stop: 12437, Start Num: 34

Candidate Starts for Maureen_16:

(Start: 34 @11562 has 62 MA's), (68, 11712), (147, 12012), (149, 12018), (168, 12108), (186, 12201),

Gene: Michkear_20 Start: 14910, Stop: 15779, Start Num: 34

Candidate Starts for Michkear_20:

(Start: 34 @14910 has 62 MA's), (131, 15300), (141, 15342), (149, 15360), (186, 15543),

Gene: MillySue_21 Start: 15823, Stop: 16743, Start Num: 31

Candidate Starts for MillySue_21:

(Start: 31 @15823 has 40 MA's), (83, 16075), (87, 16090), (88, 16093), (150, 16333), (197, 16564), (199, 16570), (201, 16576), (210, 16627),

Gene: MiniMommy_16 Start: 11228, Stop: 12088, Start Num: 34

Candidate Starts for MiniMommy_16:

(Start: 34 @11228 has 62 MA's), (47, 11264), (50, 11282), (128, 11600), (151, 11681), (166, 11759), (172, 11795), (202, 11921), (206, 11945),

Gene: Mireles_18 Start: 11674, Stop: 12579, Start Num: 31

Candidate Starts for Mireles_18:

(Start: 29 @11668 has 1 MA's), (Start: 31 @11674 has 40 MA's), (82, 11914), (97, 11971), (100, 11986), (119, 12046), (175, 12298), (188, 12358), (201, 12412), (216, 12523), (219, 12547), (221, 12562),

Gene: Mojarita_17 Start: 12339, Stop: 13232, Start Num: 40

Candidate Starts for Mojarita_17:

(Start: 40 @12339 has 9 MA's), (43, 12348), (82, 12555), (105, 12639), (166, 12906), (177, 12972), (185, 13002), (210, 13119),

Gene: Morrey_27 Start: 14235, Stop: 15095, Start Num: 42

Candidate Starts for Morrey_27:

(Start: 42 @14235 has 5 MA's), (148, 14676), (167, 14769), (184, 14859),

Gene: Moss_17 Start: 12748, Stop: 13623, Start Num: 34

Candidate Starts for Moss_17:

(Start: 34 @12748 has 62 MA's), (51, 12826), (75, 12937), (82, 12979), (113, 13078), (149, 13204), (173, 13327), (180, 13360), (220, 13588),

Gene: Mudpuppy_17 Start: 13037, Stop: 13912, Start Num: 34

Candidate Starts for Mudpuppy_17:

(Start: 34 @13037 has 62 MA's), (59, 13148), (131, 13433), (183, 13661), (186, 13676),

Gene: Nandita_21 Start: 15809, Stop: 16729, Start Num: 31

Candidate Starts for Nandita_21:

(Start: 31 @15809 has 40 MA's), (52, 15905), (74, 16010), (83, 16061), (84, 16067), (87, 16076), (88, 16079), (92, 16100), (112, 16163), (124, 16214), (138, 16271), (162, 16382), (164, 16397), (168, 16406), (197, 16550), (201, 16562), (205, 16577), (210, 16613), (218, 16694),

Gene: Neuville_18 Start: 11910, Stop: 12815, Start Num: 31

Candidate Starts for Neuville_18:

(Start: 29 @11904 has 1 MA's), (Start: 31 @11910 has 40 MA's), (33, 11922), (51, 12000), (79, 12123), (87, 12168), (89, 12177), (97, 12207), (101, 12228), (119, 12282), (124, 12306), (183, 12567), (201, 12648), (214, 12735), (216, 12759), (219, 12783), (221, 12798),

Gene: Niobe_17 Start: 13021, Stop: 13896, Start Num: 34

Candidate Starts for Niobe_17:

(Start: 34 @13021 has 62 MA's), (59, 13132), (73, 13192), (131, 13417), (147, 13471), (151, 13486), (155, 13510), (168, 13567), (183, 13645), (186, 13660),

Gene: Nitro_17 Start: 13045, Stop: 13920, Start Num: 34

Candidate Starts for Nitro_17:

(24, 12886), (Start: 34 @13045 has 62 MA's), (73, 13216), (131, 13441), (155, 13534), (168, 13591), (181, 13660), (183, 13669), (186, 13684), (193, 13723),

Gene: NoSwimming_19 Start: 15157, Stop: 16017, Start Num: 41

Candidate Starts for NoSwimming_19:

(39, 15148), (Start: 41 @15157 has 2 MA's), (96, 15406), (107, 15445), (134, 15556), (147, 15595), (149, 15601), (167, 15691), (186, 15787),

Gene: Origami_16 Start: 11229, Stop: 12089, Start Num: 34

Candidate Starts for Origami_16:

(Start: 34 @11229 has 62 MA's), (47, 11265), (50, 11283), (129, 11604), (151, 11682), (166, 11760), (172, 11796), (181, 11835), (185, 11856),

Gene: PapayaSalad_17 Start: 12206, Stop: 13102, Start Num: 40

Candidate Starts for PapayaSalad_17:

(17, 11804), (19, 11831), (22, 11939), (32, 12179), (Start: 37 @12200 has 4 MA's), (Start: 40 @12206 has 9 MA's), (59, 12305), (81, 12422), (82, 12425), (97, 12482), (106, 12512), (173, 12815), (210, 12989),

Gene: PetriParty_18 Start: 15448, Stop: 16356, Start Num: 31

Candidate Starts for PetriParty_18:

(Start: 31 @15448 has 40 MA's), (48, 15523), (52, 15544), (53, 15547), (58, 15571), (61, 15583), (98, 15754), (109, 15790), (119, 15823), (120, 15826), (125, 15850), (135, 15889), (164, 16024), (184, 16117), (201, 16189), (205, 16204),

Gene: Phives_18 Start: 14123, Stop: 14998, Start Num: 34

Candidate Starts for Phives_18:

(Start: 34 @14123 has 62 MA's), (131, 14519), (147, 14573), (183, 14747), (186, 14762),

Gene: Picard_17 Start: 12333, Stop: 13226, Start Num: 40

Candidate Starts for Picard_17:

(Start: 40 @12333 has 9 MA's), (43, 12342), (82, 12549), (105, 12633), (166, 12900), (177, 12966), (185, 12996), (210, 13113),

Gene: Pixelle_17 Start: 13066, Stop: 13941, Start Num: 34

Candidate Starts for Pixelle_17:

(Start: 34 @13066 has 62 MA's), (147, 13516), (183, 13690), (186, 13705),

Gene: Popper_19 Start: 15336, Stop: 16256, Start Num: 31

Candidate Starts for Popper_19:

(Start: 31 @15336 has 40 MA's), (83, 15588), (84, 15594), (88, 15606), (125, 15744), (155, 15873), (191, 16053), (199, 16083), (201, 16089),

Gene: Powerpuff_17 Start: 13089, Stop: 13964, Start Num: 34

Candidate Starts for Powerpuff_17:

(Start: 34 @13089 has 62 MA's), (59, 13200), (79, 13293), (131, 13485), (183, 13713), (186, 13728),

Gene: PrairieDogTown_18 Start: 14235, Stop: 15095, Start Num: 42

Candidate Starts for PrairieDogTown_18:

(Start: 42 @14235 has 5 MA's), (148, 14676), (167, 14769), (184, 14859),

Gene: Pumpkins_17 Start: 13153, Stop: 14028, Start Num: 34

Candidate Starts for Pumpkins_17:

(Start: 34 @13153 has 62 MA's), (73, 13324), (79, 13357), (131, 13549), (147, 13603), (186, 13792), (206, 13882),

Gene: QuinnAvery_21 Start: 15821, Stop: 16741, Start Num: 31

Candidate Starts for QuinnAvery_21:

(Start: 31 @15821 has 40 MA's), (83, 16073), (87, 16088), (88, 16091), (150, 16331), (197, 16562), (199, 16568), (201, 16574), (210, 16625),

Gene: RemusLoopin_13 Start: 10423, Stop: 11289, Start Num: 36

Candidate Starts for RemusLoopin_13:

(Start: 36 @10423 has 9 MA's), (47, 10468), (56, 10513), (62, 10546), (64, 10555), (68, 10570), (73, 10591), (75, 10606), (77, 10612), (86, 10663), (91, 10684), (104, 10729), (116, 10756), (127, 10807), (128, 10810), (138, 10852), (146, 10879), (153, 10909), (158, 10936), (160, 10948), (179, 11056), (198, 11128), (202, 11134), (207, 11170), (208, 11176), (212, 11185),

Gene: Roberts_18 Start: 11910, Stop: 12815, Start Num: 31

Candidate Starts for Roberts_18:

(Start: 29 @11904 has 1 MA's), (Start: 31 @11910 has 40 MA's), (33, 11922), (51, 12000), (79, 12123), (87, 12168), (89, 12177), (97, 12207), (101, 12228), (119, 12282), (124, 12306), (183, 12567), (201, 12648), (214, 12735), (216, 12759), (219, 12783), (221, 12798),

Gene: RockScotty_17 Start: 12748, Stop: 13623, Start Num: 34

Candidate Starts for RockScotty_17:

(Start: 34 @12748 has 62 MA's), (51, 12826), (75, 12937), (82, 12979), (113, 13078), (149, 13204), (173, 13327), (180, 13360), (220, 13588),

Gene: Ryan_21 Start: 15955, Stop: 16875, Start Num: 31

Candidate Starts for Ryan_21:

(Start: 31 @15955 has 40 MA's), (52, 16051), (74, 16156), (83, 16207), (84, 16213), (87, 16222), (88, 16225), (92, 16246), (112, 16309), (124, 16360), (125, 16363), (138, 16417), (164, 16543), (168, 16552), (197, 16696), (199, 16702), (201, 16708), (205, 16723), (210, 16759), (218, 16840),

Gene: SV1_17 Start: 12442, Stop: 13338, Start Num: 40

Candidate Starts for SV1_17:

(32, 12415), (Start: 37 @12436 has 4 MA's), (Start: 40 @12442 has 9 MA's), (76, 12619), (77, 12622), (81, 12658), (82, 12661), (97, 12718), (106, 12748), (168, 13018), (200, 13174), (210, 13225),

Gene: Sabourin_17 Start: 12655, Stop: 13530, Start Num: 34

Candidate Starts for Sabourin_17:

(Start: 34 @12655 has 62 MA's), (51, 12733), (75, 12844), (82, 12886), (113, 12985), (149, 13111), (173, 13234), (180, 13267), (220, 13495),

Gene: Saintcarr_20 Start: 15831, Stop: 16751, Start Num: 31

Candidate Starts for Saintcarr_20:

(Start: 31 @15831 has 40 MA's), (72, 16014), (83, 16083), (87, 16098), (88, 16101), (120, 16215), (150, 16341), (197, 16572), (199, 16578), (201, 16584), (210, 16635),

Gene: Samora_13 Start: 10501, Stop: 11367, Start Num: 36

Candidate Starts for Samora_13:

(30, 10480), (Start: 36 @10501 has 9 MA's), (39, 10510), (47, 10546), (56, 10591), (91, 10762), (116, 10834), (130, 10897), (139, 10933), (144, 10954), (165, 11059), (180, 11137), (192, 11185), (198, 11206), (215, 11296),

Gene: Sashimi_21 Start: 15164, Stop: 16072, Start Num: 31

Candidate Starts for Sashimi_21:

(24, 15020), (Start: 31 @15164 has 40 MA's), (52, 15260), (58, 15287), (83, 15410), (90, 15443), (95, 15458), (112, 15512), (120, 15542), (121, 15545), (125, 15566), (164, 15740), (168, 15749), (172, 15779), (183, 15824), (188, 15851), (197, 15893), (199, 15899), (201, 15905),

Gene: Schaffner_17 Start: 13140, Stop: 14015, Start Num: 34

Candidate Starts for Schaffner_17:

(Start: 34 @13140 has 62 MA's), (73, 13311), (79, 13344), (131, 13536), (147, 13590), (155, 13629), (186, 13779), (194, 13821),

Gene: Schism_21 Start: 15809, Stop: 16729, Start Num: 31

Candidate Starts for Schism_21:

(Start: 31 @15809 has 40 MA's), (52, 15905), (74, 16010), (83, 16061), (84, 16067), (87, 16076), (88, 16079), (92, 16100), (112, 16163), (124, 16214), (138, 16271), (162, 16382), (164, 16397), (168, 16406), (197, 16550), (201, 16562), (205, 16577), (210, 16613), (218, 16694),

Gene: Scotia_19 Start: 15157, Stop: 16017, Start Num: 41

Candidate Starts for Scotia_19:

(39, 15148), (Start: 41 @15157 has 2 MA's), (96, 15406), (107, 15445), (134, 15556), (147, 15595), (149, 15601), (167, 15691), (186, 15787),

Gene: Sebastisaurus_13 Start: 10449, Stop: 11315, Start Num: 36

Candidate Starts for Sebastisaurus_13:

(Start: 36 @10449 has 9 MA's), (39, 10458), (47, 10494), (64, 10581), (73, 10617), (75, 10632), (77, 10638), (86, 10689), (91, 10710), (104, 10755), (116, 10782), (127, 10833), (128, 10836), (138, 10878), (153, 10935), (160, 10974), (198, 11154), (202, 11160), (204, 11169), (208, 11202),

Gene: ShakeltOph_16 Start: 11227, Stop: 12087, Start Num: 34

Candidate Starts for ShakeltOph_16:

(Start: 34 @11227 has 62 MA's), (47, 11263), (50, 11281), (128, 11599), (151, 11680), (166, 11758), (172, 11794), (202, 11920), (206, 11944),

Gene: Shawty_13 Start: 10451, Stop: 11317, Start Num: 36

Candidate Starts for Shawty_13:

(Start: 36 @10451 has 9 MA's), (39, 10460), (47, 10496), (48, 10502), (59, 10559), (68, 10598), (73, 10619), (94, 10721), (115, 10781), (116, 10784), (130, 10847), (133, 10859), (139, 10883), (155, 10949), (182, 11096), (192, 11135), (194, 11141), (203, 11165), (206, 11186), (212, 11213), (215, 11246),

Gene: Simpson_19 Start: 13038, Stop: 13913, Start Num: 34

Candidate Starts for Simpson_19:

(Start: 34 @13038 has 62 MA's), (59, 13149), (79, 13242), (131, 13434), (183, 13662), (186, 13677),

Gene: Skelbel_18 Start: 13021, Stop: 13896, Start Num: 34

Candidate Starts for Skelbel_18:

(Start: 34 @13021 has 62 MA's), (59, 13132), (73, 13192), (131, 13417), (147, 13471), (151, 13486), (155, 13510), (168, 13567), (183, 13645), (186, 13660),

Gene: Sonali_17 Start: 17836, Stop: 18756, Start Num: 28

Candidate Starts for Sonali_17:

(Start: 28 @17836 has 3 MA's), (61, 17992), (67, 18016), (71, 18037), (122, 18253), (165, 18430), (194, 18574), (195, 18580), (202, 18595),

Gene: Soondubu_16 Start: 13702, Stop: 14559, Start Num: 34

Candidate Starts for Soondubu_16:

(Start: 34 @13702 has 62 MA's), (47, 13738), (107, 13993), (129, 14077), (137, 14113), (146, 14137), (150, 14152), (174, 14275),

Gene: Sooty_17 Start: 12658, Stop: 13533, Start Num: 34

Candidate Starts for Sooty_17:

(Start: 34 @12658 has 62 MA's), (51, 12736), (75, 12847), (82, 12889), (113, 12988), (149, 13114), (173, 13237), (180, 13270), (220, 13498),

Gene: Spocter_22 Start: 18698, Stop: 19582, Start Num: 40

Candidate Starts for Spocter_22:

(32, 18671), (Start: 37 @18692 has 4 MA's), (Start: 40 @18698 has 9 MA's), (49, 18737), (80, 18893), (81, 18908), (88, 18932), (105, 18998), (106, 19001), (122, 19064), (156, 19202), (200, 19409),

Gene: Studio_19 Start: 11670, Stop: 12578, Start Num: 31

Candidate Starts for Studio_19:

(Start: 29 @11664 has 1 MA's), (Start: 31 @11670 has 40 MA's), (33, 11682), (83, 11916), (87, 11931), (117, 12033), (119, 12045), (121, 12051), (124, 12069), (151, 12171), (163, 12234), (164, 12246), (171, 12276), (176, 12306), (201, 12411), (216, 12522), (221, 12561),

Gene: Subaru_17 Start: 13021, Stop: 13896, Start Num: 34

Candidate Starts for Subaru_17:

(Start: 34 @13021 has 62 MA's), (59, 13132), (73, 13192), (131, 13417), (147, 13471), (151, 13486), (168, 13567), (183, 13645), (186, 13660),

Gene: Sunshine23_18 Start: 17848, Stop: 18768, Start Num: 28

Candidate Starts for Sunshine23_18:

(Start: 28 @17848 has 3 MA's), (61, 18004), (67, 18028), (71, 18049), (122, 18265), (142, 18346), (165, 18442), (194, 18586), (195, 18592), (202, 18607),

Gene: TG1_13 Start: 10453, Stop: 11319, Start Num: 36

Candidate Starts for TG1_13:

(27, 10393), (Start: 36 @10453 has 9 MA's), (45, 10492), (56, 10543), (59, 10561), (68, 10600), (73, 10621), (115, 10783), (116, 10786), (130, 10849), (143, 10903), (147, 10912), (155, 10951), (157, 10963), (158, 10966), (190, 11119), (192, 11137), (198, 11158),

Gene: TMaxx_18 Start: 11767, Stop: 12675, Start Num: 31

Candidate Starts for TMaxx_18:

(Start: 29 @11761 has 1 MA's), (Start: 31 @11767 has 40 MA's), (33, 11779), (61, 11902), (119, 12142), (124, 12166), (151, 12268), (201, 12508), (214, 12595), (221, 12658),

Gene: Tallboi_17 Start: 13048, Stop: 13923, Start Num: 34

Candidate Starts for Tallboi_17:

(Start: 34 @13048 has 62 MA's), (73, 13219), (131, 13444), (147, 13498), (168, 13594), (183, 13672), (186, 13687), (206, 13777),

Gene: Tbone_17 Start: 13042, Stop: 13917, Start Num: 34

Candidate Starts for Tbone_17:

(Start: 34 @13042 has 62 MA's), (59, 13153), (131, 13438), (183, 13666), (186, 13681),

Gene: TforTroy_17 Start: 13171, Stop: 14046, Start Num: 34

Candidate Starts for TforTroy_17:

(Start: 34 @13171 has 62 MA's), (73, 13342), (131, 13567), (155, 13660), (186, 13810), (194, 13852),

Gene: ThursdayNight_16 Start: 11797, Stop: 12663, Start Num: 34

Candidate Starts for ThursdayNight_16:

(Start: 34 @11797 has 62 MA's), (51, 11866), (69, 11944), (87, 12037), (173, 12367), (186, 12427), (206, 12517), (215, 12586),

Gene: Tian_17 Start: 13063, Stop: 13938, Start Num: 34

Candidate Starts for Tian_17:

(Start: 34 @13063 has 62 MA's), (131, 13459), (147, 13513), (183, 13687), (186, 13702),

Gene: ToastyOats_23 Start: 16286, Stop: 17206, Start Num: 31

Candidate Starts for ToastyOats_23:

(Start: 31 @16286 has 40 MA's), (72, 16469), (83, 16538), (87, 16553), (88, 16556), (120, 16670), (150, 16796), (197, 17027), (199, 17033), (201, 17039), (210, 17090),

Gene: Toodles_21 Start: 16032, Stop: 16952, Start Num: 31

Candidate Starts for Toodles_21:

(Start: 31 @16032 has 40 MA's), (83, 16284), (87, 16299), (88, 16302), (150, 16542), (197, 16773), (199, 16779), (201, 16785), (210, 16836),

Gene: TripleC_21 Start: 15266, Stop: 16171, Start Num: 31

Candidate Starts for TripleC_21:

(Start: 29 @15260 has 1 MA's), (Start: 31 @15266 has 40 MA's), (33, 15278), (44, 15323), (112, 15611), (119, 15638), (188, 15950), (201, 16004), (205, 16019), (209, 16052), (214, 16091), (219, 16139), (221, 16154),

Gene: TripleJ_19 Start: 15465, Stop: 16373, Start Num: 31

Candidate Starts for TripleJ_19:

(Start: 31 @15465 has 40 MA's), (48, 15540), (52, 15561), (53, 15564), (58, 15588), (61, 15600), (98, 15771), (109, 15807), (119, 15840), (120, 15843), (125, 15867), (135, 15906), (164, 16041), (184, 16134), (201, 16206), (205, 16221),

Gene: Tuck_18 Start: 14243, Stop: 15118, Start Num: 34

Candidate Starts for Tuck_18:

(Start: 34 @14243 has 62 MA's), (56, 14339), (73, 14414), (131, 14639), (155, 14732), (170, 14807), (186, 14882),

Gene: Turab_17 Start: 13050, Stop: 13925, Start Num: 34

Candidate Starts for Turab_17:

(Start: 34 @13050 has 62 MA's), (73, 13221), (87, 13296), (131, 13446), (147, 13500), (155, 13539), (168, 13596), (183, 13674), (186, 13689),

Gene: Tutumahutu_17 Start: 13089, Stop: 13964, Start Num: 34

Candidate Starts for Tutumahutu_17:

(Start: 34 @13089 has 62 MA's), (59, 13200), (131, 13485), (183, 13713), (186, 13728),

Gene: Vash_13 Start: 10476, Stop: 11342, Start Num: 36

Candidate Starts for Vash_13:

(30, 10455), (Start: 36 @10476 has 9 MA's), (39, 10485), (47, 10521), (57, 10569), (77, 10665), (79, 10677), (91, 10737), (116, 10809), (118, 10818), (130, 10872), (139, 10908), (147, 10935), (212, 11238), (215, 11271),

Gene: VroomVroom_16 Start: 11238, Stop: 12098, Start Num: 34

Candidate Starts for VroomVroom_16:

(Start: 34 @11238 has 62 MA's), (47, 11274), (50, 11292), (129, 11613), (166, 11769), (172, 11805), (185, 11865), (202, 11931), (206, 11955),

Gene: Warda_17 Start: 13034, Stop: 13909, Start Num: 34

Candidate Starts for Warda_17:

(Start: 34 @13034 has 62 MA's), (59, 13145), (131, 13430), (183, 13658), (186, 13673),

Gene: Yang_17 Start: 13141, Stop: 14016, Start Num: 34

Candidate Starts for Yang_17:

(Start: 34 @13141 has 62 MA's), (131, 13537), (186, 13780), (222, 14005),

Gene: YesChef_17 Start: 13089, Stop: 13964, Start Num: 34

Candidate Starts for YesChef_17:

(Start: 34 @13089 has 62 MA's), (59, 13200), (79, 13293), (131, 13485), (183, 13713), (186, 13728),

Gene: Yonex_21 Start: 15955, Stop: 16875, Start Num: 31

Candidate Starts for Yonex_21:

(Start: 31 @15955 has 40 MA's), (52, 16051), (74, 16156), (83, 16207), (84, 16213), (87, 16222), (88, 16225), (92, 16246), (112, 16309), (124, 16360), (125, 16363), (138, 16417), (164, 16543), (168, 16552), (197, 16696), (199, 16702), (201, 16708), (205, 16723), (210, 16759), (218, 16840),

Gene: Zaheer_21 Start: 16044, Stop: 16964, Start Num: 31

Candidate Starts for Zaheer_21:

(Start: 31 @16044 has 40 MA's), (52, 16140), (74, 16245), (83, 16296), (84, 16302), (87, 16311), (88, 16314), (92, 16335), (112, 16398), (124, 16449), (125, 16452), (138, 16506), (164, 16632), (168, 16641), (197, 16785), (199, 16791), (201, 16797), (205, 16812), (210, 16848), (218, 16929),

Gene: pZL12_50c Start: 39384, Stop: 38482, Start Num: 34

Candidate Starts for pZL12_50c:

(Start: 34 @39384 has 62 MA's), (47, 39333), (66, 39246), (68, 39237), (75, 39201), (85, 39147), (86, 39144), (100, 39090), (101, 39084), (111, 39051), (160, 38856), (178, 38754), (187, 38715), (192, 38682),

Gene: phiBT1_44 Start: 10499, Stop: 11365, Start Num: 36

Candidate Starts for phiBT1_44:

(Start: 36 @10499 has 9 MA's), (39, 10508), (45, 10538), (47, 10544), (57, 10592), (59, 10607), (73, 10667), (75, 10682), (79, 10700), (91, 10760), (115, 10829), (116, 10832), (130, 10895), (131, 10898), (139, 10931), (152, 10982), (158, 11012), (192, 11183), (215, 11294),