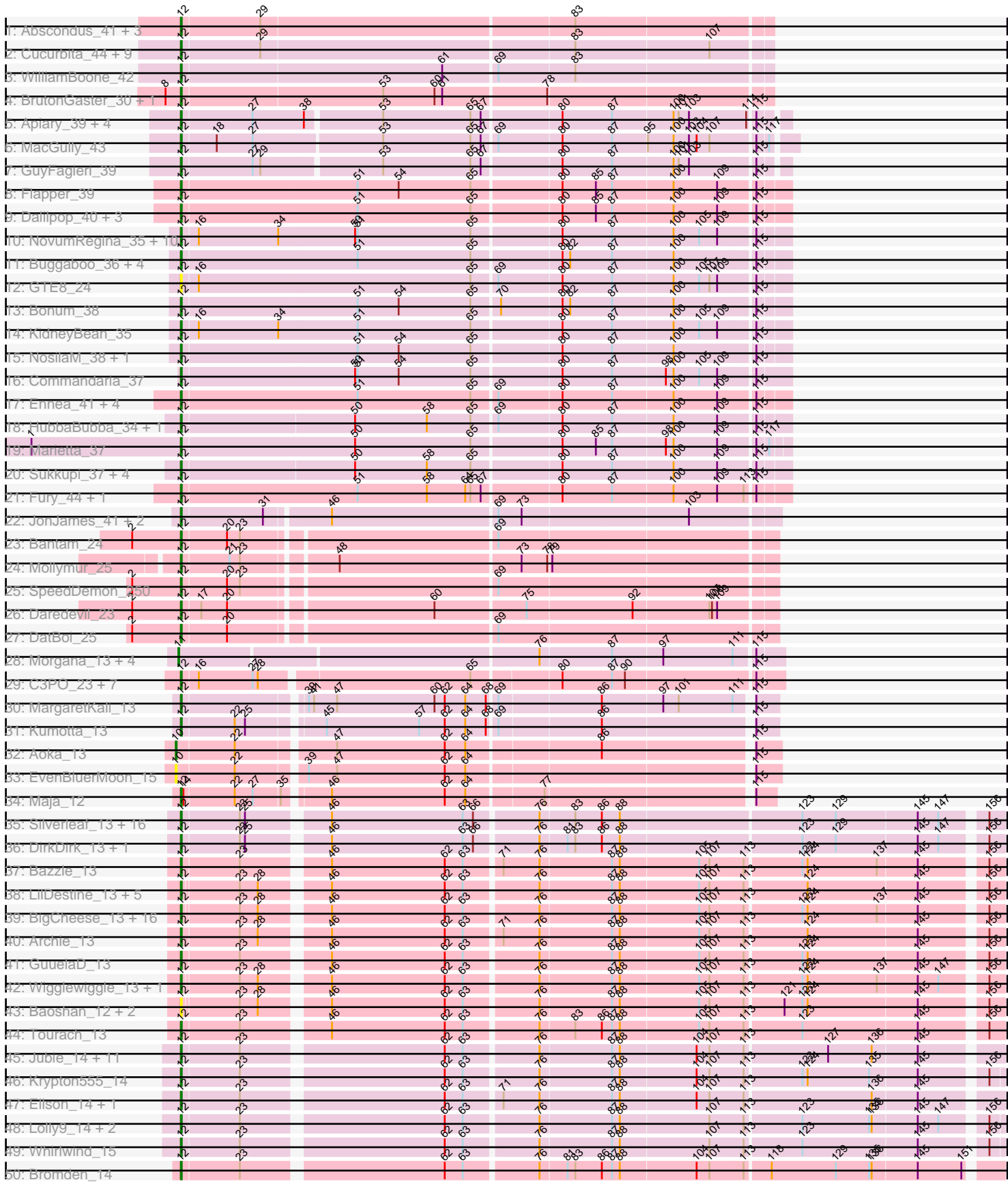
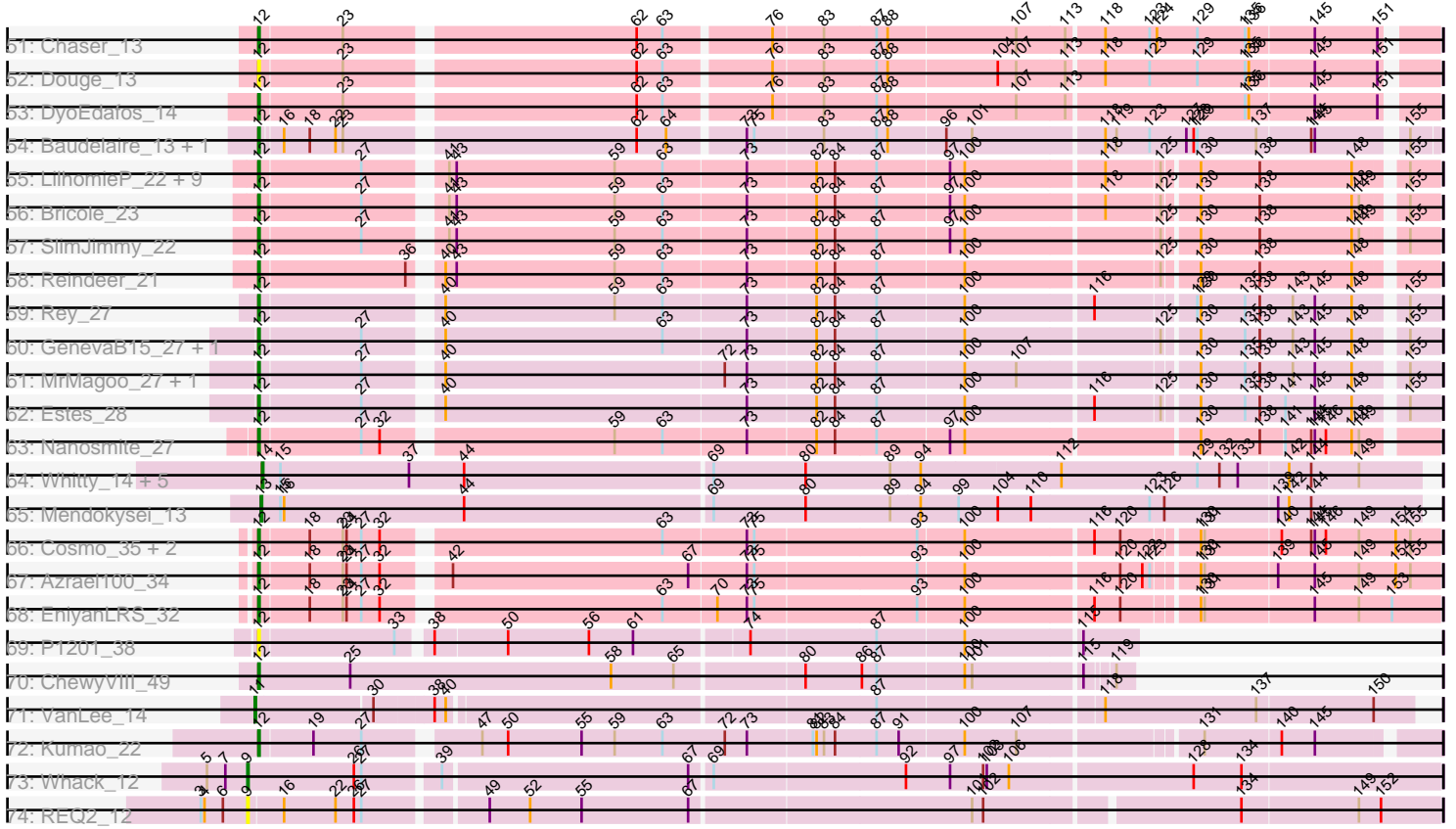


Pham 171202



Pham 171202



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 171202 Report

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

Pham number 171202 has 206 members, 22 are drafts.

Phages represented in each track:

- Track 1 : Abscondus_41, Dusty_40, Miskis_44, Culver_42
- Track 2 : Cucurbita_44, ClubL_42, Lozinak_42, Engineer_43, Toniann_42, Bachita_44, Norvs_43, Smoothie_43, Aphelion_42, PhinkBoden_42
- Track 3 : WilliamBoone_42
- Track 4 : BrutonGaster_30, OneUp_36
- Track 5 : Apiary_39, Polyuyuki_39, Maselop_39, CoffeeBean_39, Braxoaddie_39
- Track 6 : MacGully_43
- Track 7 : GuyFagieri_39
- Track 8 : Flapper_39
- Track 9 : Dalipop_40, Turuncu_39, GRU1_25, GTE5_26
- Track 10 : NovumRegina_35, GrootJr_37, Jifall16_34, Foxboro_36, NatB6_35, Kurt_35, Wheezy_35, Tracker_35, Arti_35, Emianna_35, Phomeo_34
- Track 11 : Buggaboo_36, StarStruck_36, MerCougar_36, Outis_36, SuperSulley_36
- Track 12 : GTE8_24
- Track 13 : Bonum_38
- Track 14 : KidneyBean_35
- Track 15 : NosilaM_38, Kabluna_38
- Track 16 : Commandaria_37
- Track 17 : Ennea_41, Patio_38, Lollipop1437_40, Float294_37, Skysand_37
- Track 18 : HubbaBubba_34, WhoseManz_37
- Track 19 : Marietta_37
- Track 20 : Sukkupi_37, NadineRae_35, BiPauneto_38, Yndexa_37, IDyn_36
- Track 21 : Fury_44, Pleakley_44
- Track 22 : JonJames_41, Cardigan_41, Yvonnetastic_39
- Track 23 : Bantam_24
- Track 24 : Mollymur_25
- Track 25 : SpeedDemon_250
- Track 26 : Daredevil_23
- Track 27 : DatBoi_25
- Track 28 : Morgana_13, ModicumRichard_13, ObLaDi_13, Cafasso_13, Aleemily_13
- Track 29 : C3PO_23, Cruella_23, Darwin_26, PotatoChip_23, Kimchi1738_23, Stickynote_25, Zion_23, PeteyPab_22
- Track 30 : MargaretKali_13
- Track 31 : Kumotta_13
- Track 32 : Aoka_13
- Track 33 : EvenBluerMoon_15

- Track 34 : Maja_12
- Track 35 : Silverleaf_13, Appletree2_13, AvadaKedavra_13, Rose5_13, Acquire49_13, Tyson_13, LeBron_13, UPIE_13, Halena_13, CicholasNage_13, Enceladus_13, MAckerman_13, Wamburggrxpress_13, Zaria_13, Calm_13, Wyatt2_13, JoeDirt_13
- Track 36 : DirkDirk_13, OhShagHennessy_13
- Track 37 : Bazzle_13
- Track 38 : LilDestine_13, Kahlid_13, Nicholasp3_13, Finemlucis_13, Gardann_13, Wilder_13
- Track 39 : BigCheese_13, Faith1_13, Miley16_13, DrSeegs_13, Lewan_13, MkaliMitinis3_13, BobsGarage_13, Zakai_13, Hafay_13, Vetrix_13, Crossroads_13, Gabriela_13, Itos_13, Winky_13, Breezona_13, Rumpelstiltskin_13, Netyap_13
- Track 40 : Archie_13
- Track 41 : GuuelaD_13
- Track 42 : Wigglewiggles_13, Loadrie_13
- Track 43 : Baoshan_12, Claus_13, ZhongYanYuan_12
- Track 44 : Tourach_13
- Track 45 : Jubie_14, Bellis_14, Kingsolomon_14, Snenia_14, Finnry_14, Nicholas_14, Moostard_14, MsGreen_14, Jobypre_14, Clautastrophe_14, Samty_14, Lumos_14
- Track 46 : Krypton555_14
- Track 47 : Ellson_14, DuncansLeg_14
- Track 48 : Lolly9_14, MiniMac_14, MiniLon_14
- Track 49 : Whirlwind_15
- Track 50 : Bromden_14
- Track 51 : Chaser_13
- Track 52 : Douge_13
- Track 53 : DyoEdafos_14
- Track 54 : Baudelaire_13, Aegeus_13
- Track 55 : LilhomieP_22, TyDawg_23, Auspice_23, IPhane7_23, Glaske16_24, Skinny_24, Bongo_23, PegLeg_23, Dulcita_24, Diminimus_24
- Track 56 : Bricole_23
- Track 57 : SlimJimmy_22
- Track 58 : Reindeer_21
- Track 59 : Rey_27
- Track 60 : GenevaB15_27, Aziz_27
- Track 61 : MrMagoo_27, GardenSalsa_27
- Track 62 : Estes_28
- Track 63 : Nanosmite_27
- Track 64 : Whitty_14, Bernal13_14, Ibrahim_14, RonRayGun_14, ZenTime222_14, Nairb_14
- Track 65 : Mendokysei_13
- Track 66 : Cosmo_35, MaryV_35, Wildcat_35
- Track 67 : Azrael100_34
- Track 68 : EniyanLRS_32
- Track 69 : P1201_38
- Track 70 : ChewyVIII_49
- Track 71 : VanLee_14
- Track 72 : Kumao_22
- Track 73 : Whack_12
- Track 74 : REQ2_12

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

The start number called the most often in the published annotations is 12, it was called in 170 of the 184 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abscondus_41, Acquire49_13, Aegeus_13, Aphelion_42, Apiary_39, Appletree2_13, Archie_13, Arti_35, Auspice_23, AvadaKedavra_13, Aziz_27, Azrael100_34, Bachita_44, Bantam_24, Baoshan_12, Baudelaire_13, Bazzle_13, Bellis_14, BiPauneto_38, BigCheese_13, BobsGarage_13, Bongo_23, Bonum_38, Braxoaddie_39, Breezona_13, Bricole_23, Bromden_14, BrutonGaster_30, Buggaboo_36, C3PO_23, Calm_13, Cardigan_41, Chaser_13, ChewyVIII_49, CicholasNage_13, Claus_13, Clautastrophe_14, ClubL_42, CoffeeBean_39, Commandaria_37, Cosmo_35, Crossroads_13, Cruella_23, Cucurbita_44, Culver_42, Dalilpop_40, Daredevil_23, Darwin_26, DatBoi_25, Diminimus_24, DirkDirk_13, Douge_13, DrSeegs_13, Dulcita_24, DuncansLeg_14, Dusty_40, DyoEdafos_14, Ellson_14, Emianna_35, Enceladus_13, Engineer_43, EniyanLRS_32, Ennea_41, Estes_28, Faith1_13, Finemlucis_13, Finnry_14, Flapper_39, Float294_37, Foxboro_36, Fury_44, GRU1_25, GTE5_26, GTE8_24, Gabriela_13, Gardann_13, GardenSalsa_27, GenevaB15_27, Glaske16_24, GrootJr_37, GuuelaD_13, GuyFagieri_39, Hafay_13, Halena_13, HubbaBubba_34, IDyn_36, IPhane7_23, Itos_13, Jifall16_34, Jobypre_14, JoeDirt_13, JonJames_41, Jubie_14, Kabluna_38, Kahlid_13, KidneyBean_35, Kimchi1738_23, Kingsolomon_14, Krypton555_14, Kumao_22, Kumotta_13, Kurt_35, LeBron_13, Lewan_13, LilDestine_13, LilhomieP_22, Loadrie_13, Lollipop1437_40, Lolly9_14, Lozinak_42, Lumos_14, MAckerman_13, MacGully_43, Maja_12, MargaretKali_13, Marietta_37, MaryV_35, Maselop_39, MerCougar_36, Miley16_13, MiniLon_14, MiniMac_14, Miskis_44, MkaliMitinis3_13, Mollymur_25, Moostard_14, MrMagoo_27, MsGreen_14, NadineRae_35, Nanosmite_27, NatB6_35, Netyap_13, Nicholas_14, Nicholasp3_13, Norvs_43, NosilaM_38, NovumRegina_35, OhShagHennessy_13, OneUp_36, Outis_36, P1201_38, Patio_38, PegLeg_23, PeteyPab_22, PhinkBoden_42, Phomeo_34, Pleakley_44, Polyuyuki_39, PotatoChip_23, Reindeer_21, Rey_27, Rose5_13, Rumpelstiltskin_13, Samty_14, Silverleaf_13, Skinny_24, Skysand_37, SlimJimmy_22, Smoothie_43, Snenia_14, SpeedDemon_250, StarStruck_36, Stickynote_25, Sukkupi_37, SuperSulley_36, Toniann_42, Tourach_13, Tracker_35, Turuncu_39, TyDawg_23, Tyson_13, UPIE_13, Vatrix_13, Wamburggrxpress_13, Wheezy_35, Whirlwind_15, WhoseManz_37, Wigglewiggle_13, Wildcat_35, Wilder_13, WilliamBoone_42, Winky_13, Wyatt2_13, Yndexa_37, Yvonnetastic_39, Zakai_13, Zaria_13, ZhongYanYuan_12, Zion_23,

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

-

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

- Aleemily_13, Aoka_13, Bernal13_14, Cafasso_13, EvenBluerMoon_15, Ibrahim_14, Mendokysei_13, ModicumRichard_13, Morgana_13, Nairb_14, ObLaDi_13, REQ2_12, RonRayGun_14, VanLee_14, Whack_12, Whitty_14, ZenTime222_14,

Summary by start number:

Start 9:

- Found in 2 of 206 (1.0%) of genes in pham

- Manual Annotations of this start: 1 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ2_12 (singleton), Whack_12 (singleton),

Start 10:

- Found in 2 of 206 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aoka_13 (FO), EvenBluerMoon_15 (FO),

Start 11:

- Found in 6 of 206 (2.9%) of genes in pham
- Manual Annotations of this start: 5 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aleemily_13 (DZ), Cafasso_13 (DZ), ModicumRichard_13 (DZ), Morgana_13 (DZ), ObLaDi_13 (DZ), VanLee_14 (singleton),

Start 12:

- Found in 189 of 206 (91.7%) of genes in pham
- Manual Annotations of this start: 170 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abscondus_41 (CQ), Acquire49_13 (L1), Aegeus_13 (L5), Aphelion_42 (CQ1), Apiary_39 (CR), Appletree2_13 (L1), Archie_13 (L2), Arti_35 (CR2), Auspice_23 (M1), AvadaKedavra_13 (L1), Aziz_27 (M2), Azrael100_34 (V), Bachita_44 (CQ1), Bantam_24 (DL), Baoshan_12 (L2), Baudelaire_13 (L5), Bazzle_13 (L2), Bellis_14 (L3), BiPauneto_38 (CR4), BigCheese_13 (L2), BobsGarage_13 (L2), Bongo_23 (M1), Bonum_38 (CR2), Braxoaddie_39 (CR), Breezona_13 (L2), Bricole_23 (M1), Bromden_14 (L4), BrutonGaster_30 (CQ2), Buggaboo_36 (CR2), C3PO_23 (EN), Calm_13 (L1), Cardigan_41 (DD), Chaser_13 (L4), ChewyVIII_49 (singleton), CicholasNage_13 (L1), Claus_13 (L2), Clautastrophe_14 (L3), ClubL_42 (CQ1), CoffeeBean_39 (CR), Commandaria_37 (CR2), Cosmo_35 (V), Crossroads_13 (L2), Cruella_23 (EN), Cucurbita_44 (CQ1), Culver_42 (CQ1), Dalilpop_40 (CR1), Daredevil_23 (DL), Darwin_26 (EN), DatBoi_25 (DL), Diminimus_24 (M1), DirkDirk_13 (L1), Douge_13 (L4), DrSeegs_13 (L2), Dulcita_24 (M1), DuncansLeg_14 (L3), Dusty_40 (CQ), DyoEdafos_14 (L4), Ellson_14 (L3), Emianna_35 (CR2), Enceladus_13 (L1), Engineer_43 (CQ1), EniyanLRS_32 (V), Ennea_41 (CR3), Estes_28 (M2), Faith1_13 (L2), Finemlucis_13 (L2), Finnry_14 (L3), Flapper_39 (CR1), Float294_37 (CR3), Foxboro_36 (CR2), Fury_44 (CR5), GRU1_25 (CR1), GTE5_26 (CR1), GTE8_24 (CR2), Gabriela_13 (L2), Gardann_13 (L2), GardenSalsa_27 (M2), GenevaB15_27 (M2), Glaske16_24 (M1), GrootJr_37 (CR2), GuuelaD_13 (L2), GuyFagieri_39 (CR), Hafay_13 (L2), Halena_13 (L1), HubbaBubba_34 (CR4), IDyn_36 (CR4), IPhone7_23 (M1), Itos_13 (L2), Jifall16_34 (CR2), Jobypre_14 (L3), JoeDirt_13 (L1), JonJames_41 (DD), Jubie_14 (L3), Kabluna_38 (CR2), Kahlid_13 (L2), KidneyBean_35 (CR2), Kimchi1738_23 (EN), Kingsolomon_14 (L3), Krypton555_14 (L3), Kumao_22 (singleton), Kumotta_13 (FB), Kurt_35 (CR2), LeBron_13 (L1), Lewan_13 (L2), LilDestine_13 (L2), LilhomieP_22 (M1), Loadrie_13 (L2), Lollipop1437_40 (CR3), Lolly9_14 (L3), Lozinak_42 (CQ1), Lumos_14 (L3), MAckerman_13 (L1), MacGully_43 (CR), Maja_12 (FO), MargaretKali_13 (FB), Marietta_37 (CR4), MaryV_35 (V), Maselop_39 (CR), MerCougar_36 (CR2),

Miley16_13 (L2), MiniLon_14 (L3), MiniMac_14 (L3), Miskis_44 (CQ), MkaliMitinis3_13 (L2), Mollymur_25 (DL), Moostard_14 (L3), MrMagoo_27 (M2), MsGreen_14 (L3), NadineRae_35 (CR4), Nanosmite_27 (M3), NatB6_35 (CR2), Netyap_13 (L2), Nicholas_14 (L3), Nicholasp3_13 (L2), Norvs_43 (CQ), NosilaM_38 (CR2), NovumRegina_35 (CR2), OhShagHennessy_13 (L1), OneUp_36 (CQ2), Outis_36 (CR2), P1201_38 (singleton), Patio_38 (CR3), PegLeg_23 (M1), PeteyPab_22 (EN), PhinkBoden_42 (CQ1), Phomeo_34 (CR2), Pleakley_44 (CR5), Polyyuki_39 (CR), PotatoChip_23 (EN), Reindeer_21 (M1), Rey_27 (M2), Rose5_13 (L1), Rumpelstiltskin_13 (L2), Samty_14 (L3), Silverleaf_13 (L1), Skinny_24 (M1), Skysand_37 (CR3), SlimJimmy_22 (M1), Smoothie_43 (CQ1), Snenia_14 (L3), SpeedDemon_250 (DL), StarStruck_36 (CR2), Stickynote_25 (EN), Sukkupi_37 (CR4), SuperSulley_36 (CR2), Toniann_42 (CQ1), Tourach_13 (L2), Tracker_35 (CR2), Turuncu_39 (CR1), TyDawg_23 (M1), Tyson_13 (L1), UPIE_13 (L1), Vetric_13 (L2), Wamburggrxpress_13 (L1), Wheezy_35 (CR2), Whirlwind_15 (L3), WhoseManz_37 (CR4), Wigglewiggles_13 (L2), Wildcat_35 (V), Wilder_13 (L2), WilliamBoone_42 (CQ1), Winky_13 (L2), Wyatt2_13 (L1), Yndexa_37 (CR4), Yvonnestic_39 (DD), Zakai_13 (L2), Zaria_13 (L1), ZhongYanYuan_12 (L2), Zion_23 (EN),

Start 13:

- Found in 1 of 206 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 184
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mendokysei_13 (T),

Start 14:

- Found in 7 of 206 (3.4%) of genes in pham
- Manual Annotations of this start: 6 of 184
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Bernal13_14 (T), Ibrahim_14 (T), Nairb_14 (T), RonRayGun_14 (T), Whitty_14 (T), ZenTime222_14 (T),

Summary by clusters:

There are 26 clusters represented in this pham: singleton, DD, V, DL, FB, M1, M3, M2, FO, CQ2, CQ1, EN, L4, L5, L2, L3, L1, CR, CQ, CR2, CR3, CR1, CR4, CR5, DZ, T,

Info for manual annotations of cluster CQ:

- Start number 12 was manually annotated 1 time for cluster CQ.

Info for manual annotations of cluster CQ1:

- Start number 12 was manually annotated 11 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 12 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CR:

- Start number 12 was manually annotated 7 times for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 12 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 12 was manually annotated 20 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 12 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 12 was manually annotated 7 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 12 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster DD:

- Start number 12 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:

- Start number 12 was manually annotated 5 times for cluster DL.

Info for manual annotations of cluster DZ:

- Start number 11 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EN:

- Start number 12 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster FB:

- Start number 12 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FO:

- Start number 10 was manually annotated 1 time for cluster FO.
- Start number 12 was manually annotated 1 time for cluster FO.

Info for manual annotations of cluster L1:

- Start number 12 was manually annotated 18 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 12 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 12 was manually annotated 16 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 12 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 12 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M1:

- Start number 12 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 12 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 12 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster T:

- Start number 13 was manually annotated 1 time for cluster T.
- Start number 14 was manually annotated 6 times for cluster T.

Info for manual annotations of cluster V:

- Start number 12 was manually annotated 5 times for cluster V.

Gene Information:

Gene: Abscondus_41 Start: 17642, Stop: 18307, Start Num: 12

Candidate Starts for Abscondus_41:

(Start: 12 @17642 has 170 MA's), (29, 17732), (83, 18089),

Gene: Acquire49_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for Acquire49_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: Aegeus_13 Start: 8615, Stop: 9511, Start Num: 12

Candidate Starts for Aegeus_13:

(Start: 12 @8615 has 170 MA's), (16, 8630), (18, 8651), (22, 8672), (23, 8678), (62, 8900), (64, 8924), (73, 8981), (75, 8987), (83, 9041), (87, 9083), (88, 9092), (96, 9137), (101, 9158), (118, 9260), (119, 9269), (123, 9296), (127, 9326), (128, 9332), (129, 9335), (137, 9383), (144, 9425), (145, 9428), (155, 9491),

Gene: Aleemily_13 Start: 8905, Stop: 9573, Start Num: 11

Candidate Starts for Aleemily_13:

(Start: 11 @8905 has 5 MA's), (76, 9307), (87, 9388), (97, 9445), (111, 9526), (115, 9547),

Gene: Aoka_13 Start: 9111, Stop: 9773, Start Num: 10

Candidate Starts for Aoka_13:

(Start: 10 @9111 has 1 MA's), (22, 9177), (47, 9282), (62, 9408), (64, 9432), (86, 9579), (115, 9744),

Gene: Aphelion_42 Start: 17911, Stop: 18576, Start Num: 12

Candidate Starts for Aphelion_42:

(Start: 12 @17911 has 170 MA's), (29, 18001), (83, 18358), (107, 18511),

Gene: Apiary_39 Start: 23228, Stop: 23896, Start Num: 12

Candidate Starts for Apiary_39:

(Start: 12 @23228 has 170 MA's), (27, 23309), (38, 23366), (53, 23450), (65, 23552), (67, 23564), (80, 23651), (87, 23708), (100, 23777), (101, 23783), (103, 23795), (114, 23861), (115, 23867),

Gene: Appletree2_13 Start: 8963, Stop: 9865, Start Num: 12

Candidate Starts for Appletree2_13:

(Start: 12 @8963 has 170 MA's), (23, 9029), (25, 9035), (46, 9119), (63, 9272), (66, 9284), (76, 9353), (83, 9392), (86, 9422), (88, 9443), (123, 9647), (129, 9686), (145, 9779), (147, 9803), (156, 9848),

Gene: Archie_13 Start: 8948, Stop: 9850, Start Num: 12

Candidate Starts for Archie_13:

(Start: 12 @8948 has 170 MA's), (23, 9014), (28, 9035), (46, 9104), (62, 9236), (63, 9257), (71, 9296), (76, 9338), (87, 9419), (88, 9428), (105, 9518), (107, 9530), (113, 9569), (124, 9638), (145, 9764), (156, 9833),

Gene: Arti_35 Start: 21382, Stop: 22065, Start Num: 12

Candidate Starts for Arti_35:

(Start: 12 @21382 has 170 MA's), (16, 21400), (34, 21493), (50, 21580), (51, 21583), (65, 21715), (80, 21814), (87, 21871), (100, 21940), (105, 21970), (109, 21991), (115, 22030),

Gene: Auspice_23 Start: 12816, Stop: 13715, Start Num: 12

Candidate Starts for Auspice_23:

(Start: 12 @12816 has 170 MA's), (27, 12897), (41, 12951), (43, 12957), (59, 13086), (63, 13125), (73, 13191), (82, 13245), (84, 13260), (87, 13293), (97, 13350), (100, 13362), (118, 13470), (125, 13512), (130, 13536), (138, 13584), (148, 13659), (155, 13692),

Gene: AvadaKedavra_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for AvadaKedavra_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: Aziz_27 Start: 13394, Stop: 14293, Start Num: 12

Candidate Starts for Aziz_27:

(Start: 12 @13394 has 170 MA's), (27, 13475), (40, 13526), (63, 13703), (73, 13769), (82, 13823), (84, 13838), (87, 13871), (100, 13940), (125, 14090), (130, 14114), (135, 14150), (138, 14162), (143, 14189), (145, 14207), (148, 14237), (155, 14270),

Gene: Azrael100_34 Start: 15887, Stop: 16798, Start Num: 12

Candidate Starts for Azrael100_34:

(Start: 12 @15887 has 170 MA's), (18, 15926), (23, 15953), (24, 15956), (27, 15968), (32, 15983), (42, 16025), (67, 16217), (73, 16262), (75, 16268), (93, 16397), (100, 16433), (120, 16553), (122, 16571), (123, 16577), (130, 16607), (131, 16610), (139, 16667), (145, 16697), (149, 16733), (154, 16763), (155, 16775),

Gene: Bachita_44 Start: 18344, Stop: 19009, Start Num: 12

Candidate Starts for Bachita_44:

(Start: 12 @18344 has 170 MA's), (29, 18434), (83, 18791), (107, 18944),

Gene: Bantam_24 Start: 15333, Stop: 15989, Start Num: 12

Candidate Starts for Bantam_24:

(2, 15276), (Start: 12 @15333 has 170 MA's), (20, 15384), (23, 15399), (69, 15678),

Gene: Baoshan_12 Start: 8830, Stop: 9729, Start Num: 12

Candidate Starts for Baoshan_12:

(Start: 12 @8830 has 170 MA's), (23, 8893), (28, 8914), (46, 8983), (62, 9115), (63, 9136), (76, 9217), (87, 9298), (88, 9307), (105, 9397), (107, 9409), (113, 9448), (121, 9490), (123, 9511), (124, 9517), (145, 9643), (156, 9712),

Gene: Baudelaire_13 Start: 8615, Stop: 9511, Start Num: 12

Candidate Starts for Baudelaire_13:

(Start: 12 @8615 has 170 MA's), (16, 8630), (18, 8651), (22, 8672), (23, 8678), (62, 8900), (64, 8924), (73, 8981), (75, 8987), (83, 9041), (87, 9083), (88, 9092), (96, 9137), (101, 9158), (118, 9260), (119, 9269), (123, 9296), (127, 9326), (128, 9332), (129, 9335), (137, 9383), (144, 9425), (145, 9428), (155, 9491),

Gene: Bazzle_13 Start: 8951, Stop: 9853, Start Num: 12

Candidate Starts for Bazzle_13:

(Start: 12 @8951 has 170 MA's), (23, 9017), (46, 9107), (62, 9239), (63, 9260), (71, 9299), (76, 9341), (87, 9422), (88, 9431), (105, 9521), (107, 9533), (113, 9572), (123, 9635), (124, 9641), (137, 9722), (145, 9767), (156, 9836),

Gene: Bellis_14 Start: 9118, Stop: 10020, Start Num: 12

Candidate Starts for Bellis_14:

(Start: 12 @9118 has 170 MA's), (23, 9184), (62, 9406), (63, 9427), (76, 9508), (87, 9589), (88, 9598), (104, 9685), (107, 9700), (113, 9739), (127, 9832), (136, 9883), (145, 9934),

Gene: Bernal13_14 Start: 9882, Stop: 10814, Start Num: 14

Candidate Starts for Bernal13_14:

(Start: 14 @9882 has 6 MA's), (15, 9897), (37, 10002), (44, 10047), (69, 10245), (80, 10320), (89, 10389), (94, 10413), (112, 10524), (129, 10635), (132, 10653), (133, 10668), (142, 10707), (144, 10725), (149, 10764),

Gene: BiPauneto_38 Start: 21225, Stop: 21905, Start Num: 12

Candidate Starts for BiPauneto_38:

(Start: 12 @21225 has 170 MA's), (50, 21420), (58, 21504), (65, 21555), (80, 21654), (87, 21711), (100, 21780), (109, 21831), (115, 21870),

Gene: BigCheese_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for BigCheese_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: BobsGarage_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for BobsGarage_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Bongo_23 Start: 12816, Stop: 13715, Start Num: 12

Candidate Starts for Bongo_23:

(Start: 12 @12816 has 170 MA's), (27, 12897), (41, 12951), (43, 12957), (59, 13086), (63, 13125), (73, 13191), (82, 13245), (84, 13260), (87, 13293), (97, 13350), (100, 13362), (118, 13470), (125, 13512), (130, 13536), (138, 13584), (148, 13659), (155, 13692),

Gene: Bonum_38 Start: 21700, Stop: 22383, Start Num: 12

Candidate Starts for Bonum_38:

(Start: 12 @21700 has 170 MA's), (51, 21901), (54, 21949), (65, 22033), (70, 22063), (80, 22132), (82, 22141), (87, 22189), (100, 22258), (115, 22348),

Gene: Braxoaddie_39 Start: 23217, Stop: 23885, Start Num: 12

Candidate Starts for Braxoaddie_39:

(Start: 12 @23217 has 170 MA's), (27, 23298), (38, 23355), (53, 23439), (65, 23541), (67, 23553), (80, 23640), (87, 23697), (100, 23766), (101, 23772), (103, 23784), (114, 23850), (115, 23856),

Gene: Breezona_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Breezona_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Bricole_23 Start: 12815, Stop: 13714, Start Num: 12

Candidate Starts for Bricole_23:

(Start: 12 @12815 has 170 MA's), (27, 12896), (41, 12950), (43, 12956), (59, 13085), (63, 13124), (73, 13190), (82, 13244), (84, 13259), (87, 13292), (97, 13349), (100, 13361), (118, 13469), (125, 13511), (130, 13535), (138, 13583), (148, 13658), (149, 13664), (155, 13691),

Gene: Bromden_14 Start: 9135, Stop: 10037, Start Num: 12

Candidate Starts for Bromden_14:

(Start: 12 @9135 has 170 MA's), (23, 9201), (62, 9423), (63, 9444), (76, 9525), (81, 9555), (83, 9564), (86, 9594), (87, 9606), (88, 9615), (104, 9702), (107, 9717), (113, 9756), (118, 9783), (129, 9858), (135, 9897), (136, 9900), (145, 9951), (151, 10002),

Gene: BrutonGaster_30 Start: 14524, Stop: 15189, Start Num: 12

Candidate Starts for BrutonGaster_30:

(8, 14506), (Start: 12 @14524 has 170 MA's), (53, 14755), (60, 14815), (61, 14824), (78, 14941),

Gene: Buggaboo_36 Start: 22185, Stop: 22868, Start Num: 12

Candidate Starts for Buggaboo_36:

(Start: 12 @22185 has 170 MA's), (51, 22386), (65, 22518), (80, 22617), (82, 22626), (87, 22674), (100, 22743), (115, 22833),

Gene: C3PO_23 Start: 15961, Stop: 16623, Start Num: 12

Candidate Starts for C3PO_23:

(Start: 12 @15961 has 170 MA's), (16, 15979), (27, 16042), (28, 16048), (65, 16282), (80, 16378), (87, 16435), (90, 16450), (115, 16594),

Gene: Cafasso_13 Start: 8905, Stop: 9573, Start Num: 11

Candidate Starts for Cafasso_13:

(Start: 11 @8905 has 5 MA's), (76, 9307), (87, 9388), (97, 9445), (111, 9526), (115, 9547),

Gene: Calm_13 Start: 8990, Stop: 9892, Start Num: 12

Candidate Starts for Calm_13:

(Start: 12 @8990 has 170 MA's), (23, 9056), (25, 9062), (46, 9146), (63, 9299), (66, 9311), (76, 9380), (83, 9419), (86, 9449), (88, 9470), (123, 9674), (129, 9713), (145, 9806), (147, 9830), (156, 9875),

Gene: Cardigan_41 Start: 19485, Stop: 20150, Start Num: 12

Candidate Starts for Cardigan_41:

(Start: 12 @19485 has 170 MA's), (31, 19578), (46, 19647), (69, 19836), (73, 19863), (103, 20052),

Gene: Chaser_13 Start: 8726, Stop: 9628, Start Num: 12

Candidate Starts for Chaser_13:

(Start: 12 @8726 has 170 MA's), (23, 8792), (62, 9014), (63, 9035), (76, 9116), (83, 9155), (87, 9197), (88, 9206), (107, 9308), (113, 9347), (118, 9374), (123, 9410), (124, 9416), (129, 9449), (135, 9488), (136, 9491), (145, 9542), (151, 9593),

Gene: ChewyVIII_49 Start: 28800, Stop: 29486, Start Num: 12

Candidate Starts for ChewyVIII_49:

(Start: 12 @28800 has 170 MA's), (25, 28875), (58, 29088), (65, 29139), (80, 29238), (86, 29283), (87, 29295), (100, 29364), (101, 29370), (115, 29454), (119, 29472),

Gene: CicholasNage_13 Start: 8990, Stop: 9892, Start Num: 12

Candidate Starts for CicholasNage_13:

(Start: 12 @8990 has 170 MA's), (23, 9056), (25, 9062), (46, 9146), (63, 9299), (66, 9311), (76, 9380), (83, 9419), (86, 9449), (88, 9470), (123, 9674), (129, 9713), (145, 9806), (147, 9830), (156, 9875),

Gene: Claus_13 Start: 9010, Stop: 9909, Start Num: 12

Candidate Starts for Claus_13:

(Start: 12 @9010 has 170 MA's), (23, 9073), (28, 9094), (46, 9163), (62, 9295), (63, 9316), (76, 9397), (87, 9478), (88, 9487), (105, 9577), (107, 9589), (113, 9628), (121, 9670), (123, 9691), (124, 9697), (145, 9823), (156, 9892),

Gene: Clautastrophe_14 Start: 9123, Stop: 10025, Start Num: 12

Candidate Starts for Clautastrophe_14:

(Start: 12 @9123 has 170 MA's), (23, 9189), (62, 9411), (63, 9432), (76, 9513), (87, 9594), (88, 9603), (104, 9690), (107, 9705), (113, 9744), (127, 9837), (136, 9888), (145, 9939),

Gene: ClubL_42 Start: 17833, Stop: 18498, Start Num: 12

Candidate Starts for ClubL_42:

(Start: 12 @17833 has 170 MA's), (29, 17923), (83, 18280), (107, 18433),

Gene: CoffeeBean_39 Start: 23172, Stop: 23840, Start Num: 12

Candidate Starts for CoffeeBean_39:

(Start: 12 @23172 has 170 MA's), (27, 23253), (38, 23310), (53, 23394), (65, 23496), (67, 23508), (80, 23595), (87, 23652), (100, 23721), (101, 23727), (103, 23739), (114, 23805), (115, 23811),

Gene: Commandaria_37 Start: 22702, Stop: 23388, Start Num: 12

Candidate Starts for Commandaria_37:

(Start: 12 @22702 has 170 MA's), (50, 22900), (51, 22903), (54, 22951), (65, 23035), (80, 23134), (87, 23191), (98, 23251), (100, 23260), (105, 23290), (109, 23311), (115, 23350),

Gene: Cosmo_35 Start: 15894, Stop: 16805, Start Num: 12

Candidate Starts for Cosmo_35:

(Start: 12 @15894 has 170 MA's), (18, 15933), (23, 15960), (24, 15963), (27, 15975), (32, 15990), (63, 16203), (73, 16269), (75, 16275), (93, 16404), (100, 16440), (116, 16539), (120, 16560), (130, 16614), (131, 16617), (140, 16677), (144, 16701), (145, 16704), (146, 16713), (149, 16740), (154, 16770), (155, 16782),

Gene: Crossroads_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Crossroads_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Cruella_23 Start: 15961, Stop: 16623, Start Num: 12

Candidate Starts for Cruella_23:

(Start: 12 @15961 has 170 MA's), (16, 15979), (27, 16042), (28, 16048), (65, 16282), (80, 16378), (87, 16435), (90, 16450), (115, 16594),

Gene: Cucurbita_44 Start: 19203, Stop: 19868, Start Num: 12

Candidate Starts for Cucurbita_44:

(Start: 12 @19203 has 170 MA's), (29, 19293), (83, 19650), (107, 19803),

Gene: Culver_42 Start: 17642, Stop: 18307, Start Num: 12

Candidate Starts for Culver_42:

(Start: 12 @17642 has 170 MA's), (29, 17732), (83, 18089),

Gene: Dalilpop_40 Start: 23693, Stop: 24376, Start Num: 12

Candidate Starts for Dalilpop_40:

(Start: 12 @23693 has 170 MA's), (51, 23894), (65, 24026), (80, 24125), (85, 24164), (87, 24182), (100, 24251), (109, 24302), (115, 24341),

Gene: Daredevil_23 Start: 13726, Stop: 14382, Start Num: 12

Candidate Starts for Daredevil_23:

(2, 13669), (Start: 12 @13726 has 170 MA's), (17, 13747), (20, 13777), (60, 14002), (75, 14104), (92, 14224), (107, 14311), (108, 14314), (109, 14320),

Gene: Darwin_26 Start: 16706, Stop: 17368, Start Num: 12

Candidate Starts for Darwin_26:

(Start: 12 @16706 has 170 MA's), (16, 16724), (27, 16787), (28, 16793), (65, 17027), (80, 17123), (87, 17180), (90, 17195), (115, 17339),

Gene: DatBoi_25 Start: 16122, Stop: 16778, Start Num: 12

Candidate Starts for DatBoi_25:

(2, 16065), (Start: 12 @16122 has 170 MA's), (20, 16173), (69, 16467),

Gene: Diminimus_24 Start: 12815, Stop: 13714, Start Num: 12

Candidate Starts for Diminimus_24:

(Start: 12 @12815 has 170 MA's), (27, 12896), (41, 12950), (43, 12956), (59, 13085), (63, 13124), (73, 13190), (82, 13244), (84, 13259), (87, 13292), (97, 13349), (100, 13361), (118, 13469), (125, 13511), (130, 13535), (138, 13583), (148, 13658), (155, 13691),

Gene: DirkDirk_13 Start: 8991, Stop: 9893, Start Num: 12

Candidate Starts for DirkDirk_13:

(Start: 12 @8991 has 170 MA's), (23, 9057), (25, 9063), (46, 9147), (63, 9300), (66, 9312), (76, 9381), (81, 9411), (83, 9420), (86, 9450), (88, 9471), (123, 9675), (129, 9714), (145, 9807), (147, 9831), (156, 9876),

Gene: Douge_13 Start: 8672, Stop: 9574, Start Num: 12

Candidate Starts for Douge_13:

(Start: 12 @8672 has 170 MA's), (23, 8738), (62, 8960), (63, 8981), (76, 9062), (83, 9101), (87, 9143), (88, 9152), (104, 9239), (107, 9254), (113, 9293), (118, 9320), (123, 9356), (129, 9395), (135, 9434), (136, 9437), (145, 9488), (151, 9539),

Gene: DrSeegs_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for DrSeegs_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Dulcita_24 Start: 12815, Stop: 13714, Start Num: 12

Candidate Starts for Dulcita_24:

(Start: 12 @12815 has 170 MA's), (27, 12896), (41, 12950), (43, 12956), (59, 13085), (63, 13124), (73, 13190), (82, 13244), (84, 13259), (87, 13292), (97, 13349), (100, 13361), (118, 13469), (125, 13511), (130, 13535), (138, 13583), (148, 13658), (155, 13691),

Gene: DuncansLeg_14 Start: 9127, Stop: 10029, Start Num: 12

Candidate Starts for DuncansLeg_14:

(Start: 12 @9127 has 170 MA's), (23, 9193), (62, 9415), (63, 9436), (71, 9475), (76, 9517), (87, 9598), (88, 9607), (104, 9694), (107, 9709), (113, 9748), (136, 9892), (145, 9943),

Gene: Dusty_40 Start: 17642, Stop: 18307, Start Num: 12

Candidate Starts for Dusty_40:

(Start: 12 @17642 has 170 MA's), (29, 17732), (83, 18089),

Gene: DyoEdafos_14 Start: 8883, Stop: 9785, Start Num: 12

Candidate Starts for DyoEdafos_14:

(Start: 12 @8883 has 170 MA's), (23, 8949), (62, 9171), (63, 9192), (76, 9273), (83, 9312), (87, 9354), (88, 9363), (107, 9465), (113, 9504), (135, 9645), (136, 9648), (145, 9699), (151, 9750),

Gene: Ellson_14 Start: 9135, Stop: 10037, Start Num: 12

Candidate Starts for Ellson_14:

(Start: 12 @9135 has 170 MA's), (23, 9201), (62, 9423), (63, 9444), (71, 9483), (76, 9525), (87, 9606), (88, 9615), (104, 9702), (107, 9717), (113, 9756), (136, 9900), (145, 9951),

Gene: Emianna_35 Start: 22419, Stop: 23102, Start Num: 12

Candidate Starts for Emianna_35:

(Start: 12 @22419 has 170 MA's), (16, 22437), (34, 22530), (50, 22617), (51, 22620), (65, 22752), (80, 22851), (87, 22908), (100, 22977), (105, 23007), (109, 23028), (115, 23067),

Gene: Enceladus_13 Start: 8991, Stop: 9893, Start Num: 12

Candidate Starts for Enceladus_13:

(Start: 12 @8991 has 170 MA's), (23, 9057), (25, 9063), (46, 9147), (63, 9300), (66, 9312), (76, 9381), (83, 9420), (86, 9450), (88, 9471), (123, 9675), (129, 9714), (145, 9807), (147, 9831), (156, 9876),

Gene: Engineer_43 Start: 17859, Stop: 18524, Start Num: 12

Candidate Starts for Engineer_43:

(Start: 12 @17859 has 170 MA's), (29, 17949), (83, 18306), (107, 18459),

Gene: EniyanLRS_32 Start: 15588, Stop: 16499, Start Num: 12

Candidate Starts for EniyanLRS_32:

(Start: 12 @15588 has 170 MA's), (18, 15627), (23, 15654), (24, 15657), (27, 15669), (32, 15684), (63, 15897), (70, 15939), (73, 15963), (75, 15969), (93, 16098), (100, 16134), (116, 16233), (120, 16254), (130, 16308), (131, 16311), (145, 16398), (149, 16434), (153, 16461),

Gene: Ennea_41 Start: 23023, Stop: 23706, Start Num: 12

Candidate Starts for Ennea_41:

(Start: 12 @23023 has 170 MA's), (51, 23224), (65, 23356), (69, 23383), (80, 23455), (87, 23512), (100, 23581), (109, 23632), (115, 23671),

Gene: Estes_28 Start: 13531, Stop: 14430, Start Num: 12

Candidate Starts for Estes_28:

(Start: 12 @13531 has 170 MA's), (27, 13612), (40, 13663), (73, 13906), (82, 13960), (84, 13975), (87, 14008), (100, 14077), (116, 14176), (125, 14227), (130, 14251), (135, 14287), (138, 14299), (141, 14320), (145, 14344), (148, 14374), (155, 14407),

Gene: EvenBluerMoon_15 Start: 9146, Stop: 9808, Start Num: 10

Candidate Starts for EvenBluerMoon_15:

(Start: 10 @9146 has 1 MA's), (22, 9212), (39, 9284), (47, 9317), (62, 9443), (64, 9467), (115, 9779),

Gene: Faith1_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Faith1_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Finemlucis_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Finemlucis_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (124, 9689), (145, 9815), (156, 9884),

Gene: Finnry_14 Start: 9120, Stop: 10022, Start Num: 12

Candidate Starts for Finnry_14:

(Start: 12 @9120 has 170 MA's), (23, 9186), (62, 9408), (63, 9429), (76, 9510), (87, 9591), (88, 9600), (104, 9687), (107, 9702), (113, 9741), (127, 9834), (136, 9885), (145, 9936),

Gene: Flapper_39 Start: 22775, Stop: 23458, Start Num: 12

Candidate Starts for Flapper_39:

(Start: 12 @22775 has 170 MA's), (51, 22976), (54, 23024), (65, 23108), (80, 23207), (85, 23246), (87, 23264), (100, 23333), (109, 23384), (115, 23423),

Gene: Float294_37 Start: 22462, Stop: 23145, Start Num: 12

Candidate Starts for Float294_37:

(Start: 12 @22462 has 170 MA's), (51, 22663), (65, 22795), (69, 22822), (80, 22894), (87, 22951), (100, 23020), (109, 23071), (115, 23110),

Gene: Foxboro_36 Start: 22925, Stop: 23608, Start Num: 12

Candidate Starts for Foxboro_36:

(Start: 12 @22925 has 170 MA's), (16, 22943), (34, 23036), (50, 23123), (51, 23126), (65, 23258), (80, 23357), (87, 23414), (100, 23483), (105, 23513), (109, 23534), (115, 23573),

Gene: Fury_44 Start: 22072, Stop: 22755, Start Num: 12

Candidate Starts for Fury_44:

(Start: 12 @22072 has 170 MA's), (51, 22273), (58, 22354), (64, 22399), (65, 22405), (67, 22417), (80, 22504), (87, 22561), (100, 22630), (109, 22681), (113, 22711), (115, 22720),

Gene: GRU1_25 Start: 14660, Stop: 15343, Start Num: 12

Candidate Starts for GRU1_25:

(Start: 12 @14660 has 170 MA's), (51, 14861), (65, 14993), (80, 15092), (85, 15131), (87, 15149), (100, 15218), (109, 15269), (115, 15308),

Gene: GTE5_26 Start: 15663, Stop: 16346, Start Num: 12

Candidate Starts for GTE5_26:

(Start: 12 @15663 has 170 MA's), (51, 15864), (65, 15996), (80, 16095), (85, 16134), (87, 16152), (100, 16221), (109, 16272), (115, 16311),

Gene: GTE8_24 Start: 15678, Stop: 16361, Start Num: 12

Candidate Starts for GTE8_24:

(Start: 12 @15678 has 170 MA's), (16, 15696), (65, 16011), (69, 16038), (80, 16110), (87, 16167), (100, 16236), (105, 16266), (107, 16278), (109, 16287), (115, 16326),

Gene: Gabriela_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Gabriela_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Gardann_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Gardann_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (124, 9689), (145, 9815), (156, 9884),

Gene: GardenSalsa_27 Start: 13367, Stop: 14266, Start Num: 12

Candidate Starts for GardenSalsa_27:

(Start: 12 @13367 has 170 MA's), (27, 13448), (40, 13499), (72, 13724), (73, 13742), (82, 13796), (84, 13811), (87, 13844), (100, 13913), (107, 13955), (130, 14087), (135, 14123), (138, 14135), (143, 14162), (145, 14180), (148, 14210), (155, 14243),

Gene: GenevaB15_27 Start: 13394, Stop: 14293, Start Num: 12

Candidate Starts for GenevaB15_27:

(Start: 12 @13394 has 170 MA's), (27, 13475), (40, 13526), (63, 13703), (73, 13769), (82, 13823), (84, 13838), (87, 13871), (100, 13940), (125, 14090), (130, 14114), (135, 14150), (138, 14162), (143, 14189), (145, 14207), (148, 14237), (155, 14270),

Gene: Glaske16_24 Start: 12815, Stop: 13714, Start Num: 12

Candidate Starts for Glaske16_24:

(Start: 12 @12815 has 170 MA's), (27, 12896), (41, 12950), (43, 12956), (59, 13085), (63, 13124), (73, 13190), (82, 13244), (84, 13259), (87, 13292), (97, 13349), (100, 13361), (118, 13469), (125, 13511), (130, 13535), (138, 13583), (148, 13658), (155, 13691),

Gene: GrootJr_37 Start: 21777, Stop: 22460, Start Num: 12

Candidate Starts for GrootJr_37:

(Start: 12 @21777 has 170 MA's), (16, 21795), (34, 21888), (50, 21975), (51, 21978), (65, 22110), (80, 22209), (87, 22266), (100, 22335), (105, 22365), (109, 22386), (115, 22425),

Gene: GuuelaD_13 Start: 9034, Stop: 9936, Start Num: 12

Candidate Starts for GuuelaD_13:

(Start: 12 @9034 has 170 MA's), (23, 9100), (46, 9190), (62, 9322), (63, 9343), (76, 9424), (87, 9505), (88, 9514), (105, 9604), (107, 9616), (113, 9655), (123, 9718), (124, 9724), (145, 9850), (156, 9919),

Gene: GuyFagieri_39 Start: 23053, Stop: 23721, Start Num: 12

Candidate Starts for GuyFagieri_39:

(Start: 12 @23053 has 170 MA's), (27, 23134), (29, 23143), (53, 23275), (65, 23377), (67, 23389), (80, 23476), (87, 23533), (100, 23602), (101, 23608), (103, 23620), (115, 23692),

Gene: Hafay_13 Start: 9035, Stop: 9934, Start Num: 12

Candidate Starts for Hafay_13:

(Start: 12 @9035 has 170 MA's), (23, 9098), (28, 9119), (46, 9188), (62, 9320), (63, 9341), (76, 9422), (87, 9503), (88, 9512), (105, 9602), (107, 9614), (113, 9653), (123, 9716), (124, 9722), (137, 9803), (145, 9848), (156, 9917),

Gene: Halena_13 Start: 8990, Stop: 9892, Start Num: 12

Candidate Starts for Halena_13:

(Start: 12 @8990 has 170 MA's), (23, 9056), (25, 9062), (46, 9146), (63, 9299), (66, 9311), (76, 9380), (83, 9419), (86, 9449), (88, 9470), (123, 9674), (129, 9713), (145, 9806), (147, 9830), (156, 9875),

Gene: HubbaBubba_34 Start: 18243, Stop: 18923, Start Num: 12

Candidate Starts for HubbaBubba_34:

(Start: 12 @18243 has 170 MA's), (50, 18438), (58, 18522), (65, 18573), (69, 18600), (80, 18672), (87, 18729), (100, 18798), (109, 18849), (115, 18888),

Gene: IDyn_36 Start: 19639, Stop: 20319, Start Num: 12

Candidate Starts for IDyn_36:

(Start: 12 @19639 has 170 MA's), (50, 19834), (58, 19918), (65, 19969), (80, 20068), (87, 20125), (100, 20194), (109, 20245), (115, 20284),

Gene: IPhane7_23 Start: 12816, Stop: 13715, Start Num: 12

Candidate Starts for IPhane7_23:

(Start: 12 @12816 has 170 MA's), (27, 12897), (41, 12951), (43, 12957), (59, 13086), (63, 13125), (73, 13191), (82, 13245), (84, 13260), (87, 13293), (97, 13350), (100, 13362), (118, 13470), (125, 13512), (130, 13536), (138, 13584), (148, 13659), (155, 13692),

Gene: Ibrahim_14 Start: 9882, Stop: 10814, Start Num: 14

Candidate Starts for Ibrahim_14:

(Start: 14 @9882 has 6 MA's), (15, 9897), (37, 10002), (44, 10047), (69, 10245), (80, 10320), (89, 10389), (94, 10413), (112, 10524), (129, 10635), (132, 10653), (133, 10668), (142, 10707), (144, 10725), (149, 10764),

Gene: Itos_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Itos_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Jifall16_34 Start: 22046, Stop: 22729, Start Num: 12

Candidate Starts for Jifall16_34:

(Start: 12 @22046 has 170 MA's), (16, 22064), (34, 22157), (50, 22244), (51, 22247), (65, 22379), (80, 22478), (87, 22535), (100, 22604), (105, 22634), (109, 22655), (115, 22694),

Gene: Jobypre_14 Start: 9123, Stop: 10025, Start Num: 12

Candidate Starts for Jobypre_14:

(Start: 12 @9123 has 170 MA's), (23, 9189), (62, 9411), (63, 9432), (76, 9513), (87, 9594), (88, 9603), (104, 9690), (107, 9705), (113, 9744), (127, 9837), (136, 9888), (145, 9939),

Gene: JoeDirt_13 Start: 8990, Stop: 9892, Start Num: 12

Candidate Starts for JoeDirt_13:

(Start: 12 @8990 has 170 MA's), (23, 9056), (25, 9062), (46, 9146), (63, 9299), (66, 9311), (76, 9380), (83, 9419), (86, 9449), (88, 9470), (123, 9674), (129, 9713), (145, 9806), (147, 9830), (156, 9875),

Gene: JonJames_41 Start: 21700, Stop: 22365, Start Num: 12

Candidate Starts for JonJames_41:

(Start: 12 @21700 has 170 MA's), (31, 21793), (46, 21862), (69, 22051), (73, 22078), (103, 22267),

Gene: Jubie_14 Start: 9123, Stop: 10025, Start Num: 12

Candidate Starts for Jubie_14:

(Start: 12 @9123 has 170 MA's), (23, 9189), (62, 9411), (63, 9432), (76, 9513), (87, 9594), (88, 9603), (104, 9690), (107, 9705), (113, 9744), (127, 9837), (136, 9888), (145, 9939),

Gene: Kabluna_38 Start: 21100, Stop: 21783, Start Num: 12

Candidate Starts for Kabluna_38:

(Start: 12 @21100 has 170 MA's), (51, 21301), (54, 21349), (65, 21433), (80, 21532), (87, 21589), (100, 21658), (115, 21748),

Gene: Kahlid_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Kahlid_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (124, 9689), (145, 9815), (156, 9884),

Gene: KidneyBean_35 Start: 22194, Stop: 22877, Start Num: 12

Candidate Starts for KidneyBean_35:

(Start: 12 @22194 has 170 MA's), (16, 22212), (34, 22305), (51, 22395), (65, 22527), (80, 22626), (87, 22683), (100, 22752), (105, 22782), (109, 22803), (115, 22842),

Gene: Kimchi1738_23 Start: 15559, Stop: 16221, Start Num: 12

Candidate Starts for Kimchi1738_23:

(Start: 12 @15559 has 170 MA's), (16, 15577), (27, 15640), (28, 15646), (65, 15880), (80, 15976), (87, 16033), (90, 16048), (115, 16192),

Gene: Kingsolomon_14 Start: 9123, Stop: 10025, Start Num: 12

Candidate Starts for Kingsolomon_14:

(Start: 12 @9123 has 170 MA's), (23, 9189), (62, 9411), (63, 9432), (76, 9513), (87, 9594), (88, 9603), (104, 9690), (107, 9705), (113, 9744), (127, 9837), (136, 9888), (145, 9939),

Gene: Krypton555_14 Start: 9112, Stop: 10011, Start Num: 12

Candidate Starts for Krypton555_14:

(Start: 12 @9112 has 170 MA's), (23, 9178), (62, 9400), (63, 9421), (76, 9502), (87, 9583), (88, 9592), (104, 9679), (107, 9694), (113, 9733), (123, 9796), (124, 9802), (135, 9874), (145, 9928), (156, 9997),

Gene: Kumao_22 Start: 12078, Stop: 12980, Start Num: 12

Candidate Starts for Kumao_22:

(Start: 12 @12078 has 170 MA's), (19, 12120), (27, 12159), (47, 12240), (50, 12261), (55, 12321), (59, 12348), (63, 12387), (72, 12438), (73, 12456), (81, 12507), (82, 12510), (83, 12516), (84, 12525), (87, 12558), (91, 12576), (100, 12627), (107, 12669), (131, 12804), (140, 12864), (145, 12891),

Gene: Kumotta_13 Start: 8849, Stop: 9499, Start Num: 12

Candidate Starts for Kumotta_13:

(Start: 12 @8849 has 170 MA's), (22, 8909), (25, 8921), (45, 8999), (57, 9107), (62, 9137), (64, 9161), (68, 9185), (69, 9194), (86, 9308), (115, 9473),

Gene: Kurt_35 Start: 22434, Stop: 23117, Start Num: 12

Candidate Starts for Kurt_35:

(Start: 12 @22434 has 170 MA's), (16, 22452), (34, 22545), (50, 22632), (51, 22635), (65, 22767), (80, 22866), (87, 22923), (100, 22992), (105, 23022), (109, 23043), (115, 23082),

Gene: LeBron_13 Start: 8990, Stop: 9892, Start Num: 12

Candidate Starts for LeBron_13:

(Start: 12 @8990 has 170 MA's), (23, 9056), (25, 9062), (46, 9146), (63, 9299), (66, 9311), (76, 9380), (83, 9419), (86, 9449), (88, 9470), (123, 9674), (129, 9713), (145, 9806), (147, 9830), (156, 9875),

Gene: Lewan_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Lewan_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: LilDestine_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for LilDestine_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (124, 9689), (145, 9815), (156, 9884),

Gene: LilhomieP_22 Start: 12816, Stop: 13715, Start Num: 12

Candidate Starts for LilhomieP_22:

(Start: 12 @12816 has 170 MA's), (27, 12897), (41, 12951), (43, 12957), (59, 13086), (63, 13125), (73, 13191), (82, 13245), (84, 13260), (87, 13293), (97, 13350), (100, 13362), (118, 13470), (125, 13512), (130, 13536), (138, 13584), (148, 13659), (155, 13692),

Gene: Loadrie_13 Start: 9035, Stop: 9934, Start Num: 12

Candidate Starts for Loadrie_13:

(Start: 12 @9035 has 170 MA's), (23, 9098), (28, 9119), (46, 9188), (62, 9320), (63, 9341), (76, 9422), (87, 9503), (88, 9512), (105, 9602), (107, 9614), (113, 9653), (123, 9716), (124, 9722), (137, 9803), (145, 9848), (147, 9872), (156, 9917),

Gene: Lollipop1437_40 Start: 23011, Stop: 23694, Start Num: 12

Candidate Starts for Lollipop1437_40:

(Start: 12 @23011 has 170 MA's), (51, 23212), (65, 23344), (69, 23371), (80, 23443), (87, 23500), (100, 23569), (109, 23620), (115, 23659),

Gene: Lolly9_14 Start: 9130, Stop: 10029, Start Num: 12

Candidate Starts for Lolly9_14:

(Start: 12 @9130 has 170 MA's), (23, 9196), (62, 9418), (63, 9439), (76, 9520), (87, 9601), (88, 9610), (107, 9712), (113, 9751), (123, 9814), (135, 9892), (136, 9895), (145, 9946), (147, 9970), (156, 10015),

Gene: Lozinak_42 Start: 17914, Stop: 18579, Start Num: 12

Candidate Starts for Lozinak_42:

(Start: 12 @17914 has 170 MA's), (29, 18004), (83, 18361), (107, 18514),

Gene: Lumos_14 Start: 9123, Stop: 10025, Start Num: 12

Candidate Starts for Lumos_14:

(Start: 12 @9123 has 170 MA's), (23, 9189), (62, 9411), (63, 9432), (76, 9513), (87, 9594), (88, 9603), (104, 9690), (107, 9705), (113, 9744), (127, 9837), (136, 9888), (145, 9939),

Gene: MAckerman_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for MAckerman_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: MacGully_43 Start: 23224, Stop: 23904, Start Num: 12

Candidate Starts for MacGully_43:

(Start: 12 @23224 has 170 MA's), (18, 23263), (27, 23305), (53, 23449), (65, 23551), (67, 23563), (69, 23578), (80, 23650), (87, 23707), (95, 23746), (100, 23776), (103, 23794), (104, 23803), (107, 23818), (115, 23866), (117, 23878),

Gene: Maja_12 Start: 8474, Stop: 9121, Start Num: 12

Candidate Starts for Maja_12:

(Start: 12 @8474 has 170 MA's), (Start: 14 @8477 has 6 MA's), (22, 8534), (27, 8555), (35, 8585), (46, 8630), (62, 8762), (64, 8786), (77, 8870), (115, 9098),

Gene: MargaretKali_13 Start: 8484, Stop: 9134, Start Num: 12

Candidate Starts for MargaretKali_13:

(Start: 12 @8484 has 170 MA's), (39, 8613), (41, 8619), (47, 8646), (60, 8760), (62, 8772), (64, 8796), (68, 8820), (69, 8829), (86, 8943), (97, 9012), (101, 9030), (111, 9093), (115, 9108),

Gene: Marietta_37 Start: 19554, Stop: 20234, Start Num: 12

Candidate Starts for Marietta_37:

(1, 19380), (Start: 12 @19554 has 170 MA's), (50, 19752), (65, 19887), (80, 19986), (85, 20025), (87, 20043), (98, 20103), (100, 20112), (109, 20163), (115, 20202), (117, 20214),

Gene: MaryV_35 Start: 15860, Stop: 16771, Start Num: 12

Candidate Starts for MaryV_35:

(Start: 12 @15860 has 170 MA's), (18, 15899), (23, 15926), (24, 15929), (27, 15941), (32, 15956), (63, 16169), (73, 16235), (75, 16241), (93, 16370), (100, 16406), (116, 16505), (120, 16526), (130, 16580), (131, 16583), (140, 16643), (144, 16667), (145, 16670), (146, 16679), (149, 16706), (154, 16736), (155, 16748),

Gene: Maselop_39 Start: 23248, Stop: 23916, Start Num: 12

Candidate Starts for Maselop_39:

(Start: 12 @23248 has 170 MA's), (27, 23329), (38, 23386), (53, 23470), (65, 23572), (67, 23584), (80, 23671), (87, 23728), (100, 23797), (101, 23803), (103, 23815), (114, 23881), (115, 23887),

Gene: Mendokysei_13 Start: 9859, Stop: 10791, Start Num: 13

Candidate Starts for Mendokysei_13:

(Start: 13 @9859 has 1 MA's), (15, 9874), (16, 9877), (44, 10024), (69, 10222), (80, 10297), (89, 10366), (94, 10390), (99, 10420), (104, 10450), (110, 10477), (123, 10573), (126, 10585), (139, 10675), (142, 10684), (144, 10702),

Gene: MerCougar_36 Start: 22307, Stop: 22990, Start Num: 12

Candidate Starts for MerCougar_36:

(Start: 12 @22307 has 170 MA's), (51, 22508), (65, 22640), (80, 22739), (82, 22748), (87, 22796), (100, 22865), (115, 22955),

Gene: Miley16_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Miley16_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: MiniLon_14 Start: 9130, Stop: 10029, Start Num: 12

Candidate Starts for MiniLon_14:

(Start: 12 @9130 has 170 MA's), (23, 9196), (62, 9418), (63, 9439), (76, 9520), (87, 9601), (88, 9610), (107, 9712), (113, 9751), (123, 9814), (135, 9892), (136, 9895), (145, 9946), (147, 9970), (156, 10015),

Gene: MiniMac_14 Start: 9131, Stop: 10030, Start Num: 12

Candidate Starts for MiniMac_14:

(Start: 12 @9131 has 170 MA's), (23, 9197), (62, 9419), (63, 9440), (76, 9521), (87, 9602), (88, 9611), (107, 9713), (113, 9752), (123, 9815), (135, 9893), (136, 9896), (145, 9947), (147, 9971), (156,

10016),

Gene: Miskis_44 Start: 17677, Stop: 18342, Start Num: 12

Candidate Starts for Miskis_44:

(Start: 12 @17677 has 170 MA's), (29, 17767), (83, 18124),

Gene: MkaliMitinis3_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for MkaliMitinis3_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: ModicumRichard_13 Start: 8905, Stop: 9573, Start Num: 11

Candidate Starts for ModicumRichard_13:

(Start: 11 @8905 has 5 MA's), (76, 9307), (87, 9388), (97, 9445), (111, 9526), (115, 9547),

Gene: Mollymur_25 Start: 16148, Stop: 16804, Start Num: 12

Candidate Starts for Mollymur_25:

(Start: 12 @16148 has 170 MA's), (21, 16202), (23, 16214), (48, 16313), (73, 16520), (78, 16550), (79, 16553),

Gene: Moostard_14 Start: 9119, Stop: 10021, Start Num: 12

Candidate Starts for Moostard_14:

(Start: 12 @9119 has 170 MA's), (23, 9185), (62, 9407), (63, 9428), (76, 9509), (87, 9590), (88, 9599), (104, 9686), (107, 9701), (113, 9740), (127, 9833), (136, 9884), (145, 9935),

Gene: Morgana_13 Start: 8909, Stop: 9580, Start Num: 11

Candidate Starts for Morgana_13:

(Start: 11 @8909 has 5 MA's), (76, 9311), (87, 9392), (97, 9449), (111, 9530), (115, 9551),

Gene: MrMagoo_27 Start: 13367, Stop: 14266, Start Num: 12

Candidate Starts for MrMagoo_27:

(Start: 12 @13367 has 170 MA's), (27, 13448), (40, 13499), (72, 13724), (73, 13742), (82, 13796), (84, 13811), (87, 13844), (100, 13913), (107, 13955), (130, 14087), (135, 14123), (138, 14135), (143, 14162), (145, 14180), (148, 14210), (155, 14243),

Gene: MsGreen_14 Start: 9123, Stop: 10025, Start Num: 12

Candidate Starts for MsGreen_14:

(Start: 12 @9123 has 170 MA's), (23, 9189), (62, 9411), (63, 9432), (76, 9513), (87, 9594), (88, 9603), (104, 9690), (107, 9705), (113, 9744), (127, 9837), (136, 9888), (145, 9939),

Gene: NadineRae_35 Start: 18802, Stop: 19482, Start Num: 12

Candidate Starts for NadineRae_35:

(Start: 12 @18802 has 170 MA's), (50, 18997), (58, 19081), (65, 19132), (80, 19231), (87, 19288), (100, 19357), (109, 19408), (115, 19447),

Gene: Nairb_14 Start: 9882, Stop: 10814, Start Num: 14

Candidate Starts for Nairb_14:

(Start: 14 @9882 has 6 MA's), (15, 9897), (37, 10002), (44, 10047), (69, 10245), (80, 10320), (89, 10389), (94, 10413), (112, 10524), (129, 10635), (132, 10653), (133, 10668), (142, 10707), (144, 10725), (149, 10764),

Gene: Nanosmite_27 Start: 13585, Stop: 14487, Start Num: 12

Candidate Starts for Nanosmite_27:

(Start: 12 @13585 has 170 MA's), (27, 13666), (32, 13681), (59, 13855), (63, 13894), (73, 13960), (82, 14014), (84, 14029), (87, 14062), (97, 14119), (100, 14131), (130, 14311), (138, 14359), (141, 14377), (144, 14398), (145, 14401), (146, 14410), (148, 14431), (149, 14437),

Gene: NatB6_35 Start: 21443, Stop: 22126, Start Num: 12

Candidate Starts for NatB6_35:

(Start: 12 @21443 has 170 MA's), (16, 21461), (34, 21554), (50, 21641), (51, 21644), (65, 21776), (80, 21875), (87, 21932), (100, 22001), (105, 22031), (109, 22052), (115, 22091),

Gene: Netyap_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Netyap_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Nicholas_14 Start: 9123, Stop: 10025, Start Num: 12

Candidate Starts for Nicholas_14:

(Start: 12 @9123 has 170 MA's), (23, 9189), (62, 9411), (63, 9432), (76, 9513), (87, 9594), (88, 9603), (104, 9690), (107, 9705), (113, 9744), (127, 9837), (136, 9888), (145, 9939),

Gene: Nicholasp3_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Nicholasp3_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (124, 9689), (145, 9815), (156, 9884),

Gene: Norvs_43 Start: 17916, Stop: 18581, Start Num: 12

Candidate Starts for Norvs_43:

(Start: 12 @17916 has 170 MA's), (29, 18006), (83, 18363), (107, 18516),

Gene: NosilaM_38 Start: 21997, Stop: 22680, Start Num: 12

Candidate Starts for NosilaM_38:

(Start: 12 @21997 has 170 MA's), (51, 22198), (54, 22246), (65, 22330), (80, 22429), (87, 22486), (100, 22555), (115, 22645),

Gene: NovumRegina_35 Start: 21776, Stop: 22459, Start Num: 12

Candidate Starts for NovumRegina_35:

(Start: 12 @21776 has 170 MA's), (16, 21794), (34, 21887), (50, 21974), (51, 21977), (65, 22109), (80, 22208), (87, 22265), (100, 22334), (105, 22364), (109, 22385), (115, 22424),

Gene: ObLaDi_13 Start: 8905, Stop: 9573, Start Num: 11

Candidate Starts for ObLaDi_13:

(Start: 11 @8905 has 5 MA's), (76, 9307), (87, 9388), (97, 9445), (111, 9526), (115, 9547),

Gene: OhShagHennessy_13 Start: 8963, Stop: 9865, Start Num: 12

Candidate Starts for OhShagHennessy_13:

(Start: 12 @8963 has 170 MA's), (23, 9029), (25, 9035), (46, 9119), (63, 9272), (66, 9284), (76, 9353), (81, 9383), (83, 9392), (86, 9422), (88, 9443), (123, 9647), (129, 9686), (145, 9779), (147, 9803), (156, 9848),

Gene: OneUp_36 Start: 15613, Stop: 16278, Start Num: 12

Candidate Starts for OneUp_36:

(8, 15595), (Start: 12 @15613 has 170 MA's), (53, 15844), (60, 15904), (61, 15913), (78, 16030),

Gene: Outis_36 Start: 22001, Stop: 22684, Start Num: 12

Candidate Starts for Outis_36:

(Start: 12 @22001 has 170 MA's), (51, 22202), (65, 22334), (80, 22433), (82, 22442), (87, 22490), (100, 22559), (115, 22649),

Gene: P1201_38 Start: 22813, Stop: 23490, Start Num: 12

Candidate Starts for P1201_38:

(Start: 12 @22813 has 170 MA's), (33, 22921), (38, 22942), (50, 22999), (56, 23065), (61, 23101), (74, 23188), (87, 23287), (100, 23356), (115, 23446),

Gene: Patio_38 Start: 22247, Stop: 22930, Start Num: 12

Candidate Starts for Patio_38:

(Start: 12 @22247 has 170 MA's), (51, 22448), (65, 22580), (69, 22607), (80, 22679), (87, 22736), (100, 22805), (109, 22856), (115, 22895),

Gene: PegLeg_23 Start: 12815, Stop: 13714, Start Num: 12

Candidate Starts for PegLeg_23:

(Start: 12 @12815 has 170 MA's), (27, 12896), (41, 12950), (43, 12956), (59, 13085), (63, 13124), (73, 13190), (82, 13244), (84, 13259), (87, 13292), (97, 13349), (100, 13361), (118, 13469), (125, 13511), (130, 13535), (138, 13583), (148, 13658), (155, 13691),

Gene: PeteyPab_22 Start: 15926, Stop: 16588, Start Num: 12

Candidate Starts for PeteyPab_22:

(Start: 12 @15926 has 170 MA's), (16, 15944), (27, 16007), (28, 16013), (65, 16247), (80, 16343), (87, 16400), (90, 16415), (115, 16559),

Gene: PhinkBoden_42 Start: 18297, Stop: 18962, Start Num: 12

Candidate Starts for PhinkBoden_42:

(Start: 12 @18297 has 170 MA's), (29, 18387), (83, 18744), (107, 18897),

Gene: Phomeo_34 Start: 22069, Stop: 22752, Start Num: 12

Candidate Starts for Phomeo_34:

(Start: 12 @22069 has 170 MA's), (16, 22087), (34, 22180), (50, 22267), (51, 22270), (65, 22402), (80, 22501), (87, 22558), (100, 22627), (105, 22657), (109, 22678), (115, 22717),

Gene: Pleakley_44 Start: 22073, Stop: 22756, Start Num: 12

Candidate Starts for Pleakley_44:

(Start: 12 @22073 has 170 MA's), (51, 22274), (58, 22355), (64, 22400), (65, 22406), (67, 22418), (80, 22505), (87, 22562), (100, 22631), (109, 22682), (113, 22712), (115, 22721),

Gene: Polyzuki_39 Start: 23240, Stop: 23908, Start Num: 12

Candidate Starts for Polyzuki_39:

(Start: 12 @23240 has 170 MA's), (27, 23321), (38, 23378), (53, 23462), (65, 23564), (67, 23576), (80, 23663), (87, 23720), (100, 23789), (101, 23795), (103, 23807), (114, 23873), (115, 23879),

Gene: PotatoChip_23 Start: 15928, Stop: 16590, Start Num: 12

Candidate Starts for PotatoChip_23:

(Start: 12 @15928 has 170 MA's), (16, 15946), (27, 16009), (28, 16015), (65, 16249), (80, 16345), (87, 16402), (90, 16417), (115, 16561),

Gene: REQ2_12 Start: 7795, Stop: 8721, Start Num: 9

Candidate Starts for REQ2_12:

(3, 7759), (4, 7762), (6, 7777), (Start: 9 @7795 has 1 MA's), (16, 7822), (22, 7864), (26, 7879), (27, 7885), (49, 7975), (52, 8008), (55, 8050), (67, 8137), (101, 8359), (102, 8368), (134, 8563), (149, 8656), (152, 8674),

Gene: Reindeer_21 Start: 12668, Stop: 13567, Start Num: 12

Candidate Starts for Reindeer_21:

(Start: 12 @12668 has 170 MA's), (36, 12785), (40, 12800), (43, 12809), (59, 12938), (63, 12977), (73, 13043), (82, 13097), (84, 13112), (87, 13145), (100, 13214), (125, 13364), (130, 13388), (138, 13436), (148, 13511),

Gene: Rey_27 Start: 13596, Stop: 14495, Start Num: 12

Candidate Starts for Rey_27:

(Start: 12 @13596 has 170 MA's), (40, 13728), (59, 13866), (63, 13905), (73, 13971), (82, 14025), (84, 14040), (87, 14073), (100, 14142), (116, 14241), (129, 14313), (130, 14316), (135, 14352), (138, 14364), (143, 14391), (145, 14409), (148, 14439), (155, 14472),

Gene: RonRayGun_14 Start: 9882, Stop: 10814, Start Num: 14

Candidate Starts for RonRayGun_14:

(Start: 14 @9882 has 6 MA's), (15, 9897), (37, 10002), (44, 10047), (69, 10245), (80, 10320), (89, 10389), (94, 10413), (112, 10524), (129, 10635), (132, 10653), (133, 10668), (142, 10707), (144, 10725), (149, 10764),

Gene: Rose5_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for Rose5_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: Rumpelstiltskin_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Rumpelstiltskin_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Samty_14 Start: 9119, Stop: 10021, Start Num: 12

Candidate Starts for Samty_14:

(Start: 12 @9119 has 170 MA's), (23, 9185), (62, 9407), (63, 9428), (76, 9509), (87, 9590), (88, 9599), (104, 9686), (107, 9701), (113, 9740), (127, 9833), (136, 9884), (145, 9935),

Gene: Silverleaf_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for Silverleaf_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: Skinny_24 Start: 12816, Stop: 13715, Start Num: 12

Candidate Starts for Skinny_24:

(Start: 12 @12816 has 170 MA's), (27, 12897), (41, 12951), (43, 12957), (59, 13086), (63, 13125), (73, 13191), (82, 13245), (84, 13260), (87, 13293), (97, 13350), (100, 13362), (118, 13470), (125, 13512), (130, 13536), (138, 13584), (148, 13659), (155, 13692),

Gene: Skysand_37 Start: 22464, Stop: 23147, Start Num: 12

Candidate Starts for Skysand_37:

(Start: 12 @22464 has 170 MA's), (51, 22665), (65, 22797), (69, 22824), (80, 22896), (87, 22953), (100, 23022), (109, 23073), (115, 23112),

Gene: SlimJimmy_22 Start: 12815, Stop: 13714, Start Num: 12

Candidate Starts for SlimJimmy_22:

(Start: 12 @12815 has 170 MA's), (27, 12896), (41, 12950), (43, 12956), (59, 13085), (63, 13124), (73, 13190), (82, 13244), (84, 13259), (87, 13292), (97, 13349), (100, 13361), (125, 13511), (130, 13535), (138, 13583), (148, 13658), (149, 13664), (155, 13691),

Gene: Smoothie_43 Start: 17914, Stop: 18579, Start Num: 12

Candidate Starts for Smoothie_43:

(Start: 12 @17914 has 170 MA's), (29, 18004), (83, 18361), (107, 18514),

Gene: Snenia_14 Start: 9124, Stop: 10026, Start Num: 12

Candidate Starts for Snenia_14:

(Start: 12 @9124 has 170 MA's), (23, 9190), (62, 9412), (63, 9433), (76, 9514), (87, 9595), (88, 9604), (104, 9691), (107, 9706), (113, 9745), (127, 9838), (136, 9889), (145, 9940),

Gene: SpeedDemon_250 Start: 15649, Stop: 16305, Start Num: 12

Candidate Starts for SpeedDemon_250:

(2, 15592), (Start: 12 @15649 has 170 MA's), (20, 15700), (23, 15715), (69, 15994),

Gene: StarStruck_36 Start: 22001, Stop: 22684, Start Num: 12

Candidate Starts for StarStruck_36:

(Start: 12 @22001 has 170 MA's), (51, 22202), (65, 22334), (80, 22433), (82, 22442), (87, 22490), (100, 22559), (115, 22649),

Gene: Stickynote_25 Start: 16738, Stop: 17400, Start Num: 12

Candidate Starts for Stickynote_25:

(Start: 12 @16738 has 170 MA's), (16, 16756), (27, 16819), (28, 16825), (65, 17059), (80, 17155), (87, 17212), (90, 17227), (115, 17371),

Gene: Sukkupi_37 Start: 21116, Stop: 21796, Start Num: 12

Candidate Starts for Sukkupi_37:

(Start: 12 @21116 has 170 MA's), (50, 21311), (58, 21395), (65, 21446), (80, 21545), (87, 21602), (100, 21671), (109, 21722), (115, 21761),

Gene: SuperSulley_36 Start: 22185, Stop: 22868, Start Num: 12

Candidate Starts for SuperSulley_36:

(Start: 12 @22185 has 170 MA's), (51, 22386), (65, 22518), (80, 22617), (82, 22626), (87, 22674), (100, 22743), (115, 22833),

Gene: Toniann_42 Start: 17859, Stop: 18524, Start Num: 12

Candidate Starts for Toniann_42:

(Start: 12 @17859 has 170 MA's), (29, 17949), (83, 18306), (107, 18459),

Gene: Tourach_13 Start: 9015, Stop: 9917, Start Num: 12

Candidate Starts for Tourach_13:

(Start: 12 @9015 has 170 MA's), (23, 9081), (46, 9171), (62, 9303), (63, 9324), (76, 9405), (83, 9444), (86, 9474), (87, 9486), (88, 9495), (105, 9585), (107, 9597), (113, 9636), (123, 9699), (145, 9831), (156, 9900),

Gene: Tracker_35 Start: 21197, Stop: 21880, Start Num: 12

Candidate Starts for Tracker_35:

(Start: 12 @21197 has 170 MA's), (16, 21215), (34, 21308), (50, 21395), (51, 21398), (65, 21530), (80, 21629), (87, 21686), (100, 21755), (105, 21785), (109, 21806), (115, 21845),

Gene: Turuncu_39 Start: 22468, Stop: 23151, Start Num: 12

Candidate Starts for Turuncu_39:

(Start: 12 @22468 has 170 MA's), (51, 22669), (65, 22801), (80, 22900), (85, 22939), (87, 22957), (100, 23026), (109, 23077), (115, 23116),

Gene: TyDawg_23 Start: 12816, Stop: 13715, Start Num: 12

Candidate Starts for TyDawg_23:

(Start: 12 @12816 has 170 MA's), (27, 12897), (41, 12951), (43, 12957), (59, 13086), (63, 13125), (73, 13191), (82, 13245), (84, 13260), (87, 13293), (97, 13350), (100, 13362), (118, 13470), (125, 13512), (130, 13536), (138, 13584), (148, 13659), (155, 13692),

Gene: Tyson_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for Tyson_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: UPIE_13 Start: 8987, Stop: 9889, Start Num: 12

Candidate Starts for UPIE_13:

(Start: 12 @8987 has 170 MA's), (23, 9053), (25, 9059), (46, 9143), (63, 9296), (66, 9308), (76, 9377), (83, 9416), (86, 9446), (88, 9467), (123, 9671), (129, 9710), (145, 9803), (147, 9827), (156, 9872),

Gene: VanLee_14 Start: 8706, Stop: 9605, Start Num: 11

Candidate Starts for VanLee_14:

(Start: 11 @8706 has 5 MA's), (30, 8796), (38, 8841), (40, 8850), (87, 9183), (118, 9357), (137, 9480), (150, 9573),

Gene: Vetrix_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Vetrix_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Wamburgexpress_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for Wamburgexpress_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: Whack_12 Start: 7754, Stop: 8692, Start Num: 9

Candidate Starts for Whack_12:

(5, 7721), (7, 7736), (Start: 9 @7754 has 1 MA's), (26, 7841), (27, 7847), (39, 7904), (67, 8099), (69, 8114), (92, 8267), (97, 8303), (102, 8330), (103, 8333), (106, 8351), (128, 8495), (134, 8534),

Gene: Wheezy_35 Start: 21402, Stop: 22085, Start Num: 12

Candidate Starts for Wheezy_35:

(Start: 12 @21402 has 170 MA's), (16, 21420), (34, 21513), (50, 21600), (51, 21603), (65, 21735), (80, 21834), (87, 21891), (100, 21960), (105, 21990), (109, 22011), (115, 22050),

Gene: Whirlwind_15 Start: 9117, Stop: 10016, Start Num: 12

Candidate Starts for Whirlwind_15:

(Start: 12 @9117 has 170 MA's), (23, 9183), (62, 9405), (63, 9426), (76, 9507), (87, 9588), (88, 9597), (107, 9699), (113, 9738), (123, 9801), (145, 9933), (156, 10002),

Gene: Whitty_14 Start: 9882, Stop: 10814, Start Num: 14

Candidate Starts for Whitty_14:

(Start: 14 @9882 has 6 MA's), (15, 9897), (37, 10002), (44, 10047), (69, 10245), (80, 10320), (89, 10389), (94, 10413), (112, 10524), (129, 10635), (132, 10653), (133, 10668), (142, 10707), (144, 10725), (149, 10764),

Gene: WhoseManz_37 Start: 19168, Stop: 19848, Start Num: 12

Candidate Starts for WhoseManz_37:

(Start: 12 @19168 has 170 MA's), (50, 19363), (58, 19447), (65, 19498), (69, 19525), (80, 19597), (87, 19654), (100, 19723), (109, 19774), (115, 19813),

Gene: Wigglewigggle_13 Start: 9035, Stop: 9934, Start Num: 12

Candidate Starts for Wigglewigggle_13:

(Start: 12 @9035 has 170 MA's), (23, 9098), (28, 9119), (46, 9188), (62, 9320), (63, 9341), (76, 9422), (87, 9503), (88, 9512), (105, 9602), (107, 9614), (113, 9653), (123, 9716), (124, 9722), (137, 9803), (145, 9848), (147, 9872), (156, 9917),

Gene: Wildcat_35 Start: 15870, Stop: 16781, Start Num: 12

Candidate Starts for Wildcat_35:

(Start: 12 @15870 has 170 MA's), (18, 15909), (23, 15936), (24, 15939), (27, 15951), (32, 15966), (63, 16179), (73, 16245), (75, 16251), (93, 16380), (100, 16416), (116, 16515), (120, 16536), (130, 16590), (131, 16593), (140, 16653), (144, 16677), (145, 16680), (146, 16689), (149, 16716), (154, 16746), (155, 16758),

Gene: Wilder_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Wilder_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (124, 9689), (145, 9815), (156, 9884),

Gene: WilliamBoone_42 Start: 17223, Stop: 17888, Start Num: 12

Candidate Starts for WilliamBoone_42:

(Start: 12 @17223 has 170 MA's), (61, 17523), (69, 17583), (83, 17670),

Gene: Winky_13 Start: 9002, Stop: 9901, Start Num: 12

Candidate Starts for Winky_13:

(Start: 12 @9002 has 170 MA's), (23, 9065), (28, 9086), (46, 9155), (62, 9287), (63, 9308), (76, 9389), (87, 9470), (88, 9479), (105, 9569), (107, 9581), (113, 9620), (123, 9683), (124, 9689), (137, 9770), (145, 9815), (156, 9884),

Gene: Wyatt2_13 Start: 8989, Stop: 9891, Start Num: 12

Candidate Starts for Wyatt2_13:

(Start: 12 @8989 has 170 MA's), (23, 9055), (25, 9061), (46, 9145), (63, 9298), (66, 9310), (76, 9379), (83, 9418), (86, 9448), (88, 9469), (123, 9673), (129, 9712), (145, 9805), (147, 9829), (156, 9874),

Gene: Yndexa_37 Start: 21116, Stop: 21796, Start Num: 12

Candidate Starts for Yndexa_37:

(Start: 12 @21116 has 170 MA's), (50, 21311), (58, 21395), (65, 21446), (80, 21545), (87, 21602), (100, 21671), (109, 21722), (115, 21761),

Gene: Yvonnetastic_39 Start: 19249, Stop: 19914, Start Num: 12

Candidate Starts for Yvonnetastic_39:

(Start: 12 @19249 has 170 MA's), (31, 19342), (46, 19411), (69, 19600), (73, 19627), (103, 19816),

Gene: Zakai_13 Start: 8990, Stop: 9889, Start Num: 12

Candidate Starts for Zakai_13:

(Start: 12 @8990 has 170 MA's), (23, 9053), (28, 9074), (46, 9143), (62, 9275), (63, 9296), (76, 9377), (87, 9458), (88, 9467), (105, 9557), (107, 9569), (113, 9608), (123, 9671), (124, 9677), (137, 9758), (145, 9803), (156, 9872),

Gene: Zaria_13 Start: 8990, Stop: 9892, Start Num: 12

Candidate Starts for Zaria_13:

(Start: 12 @8990 has 170 MA's), (23, 9056), (25, 9062), (46, 9146), (63, 9299), (66, 9311), (76, 9380), (83, 9419), (86, 9449), (88, 9470), (123, 9674), (129, 9713), (145, 9806), (147, 9830), (156, 9875),

Gene: ZenTime222_14 Start: 9882, Stop: 10814, Start Num: 14

Candidate Starts for ZenTime222_14:

(Start: 14 @9882 has 6 MA's), (15, 9897), (37, 10002), (44, 10047), (69, 10245), (80, 10320), (89, 10389), (94, 10413), (112, 10524), (129, 10635), (132, 10653), (133, 10668), (142, 10707), (144, 10725), (149, 10764),

Gene: ZhongYanYuan_12 Start: 8830, Stop: 9729, Start Num: 12

Candidate Starts for ZhongYanYuan_12:

(Start: 12 @8830 has 170 MA's), (23, 8893), (28, 8914), (46, 8983), (62, 9115), (63, 9136), (76, 9217), (87, 9298), (88, 9307), (105, 9397), (107, 9409), (113, 9448), (121, 9490), (123, 9511), (124, 9517), (145, 9643), (156, 9712),

Gene: Zion_23 Start: 15926, Stop: 16588, Start Num: 12

Candidate Starts for Zion_23:

(Start: 12 @15926 has 170 MA's), (16, 15944), (27, 16007), (28, 16013), (65, 16247), (80, 16343), (87, 16400), (90, 16415), (115, 16559),