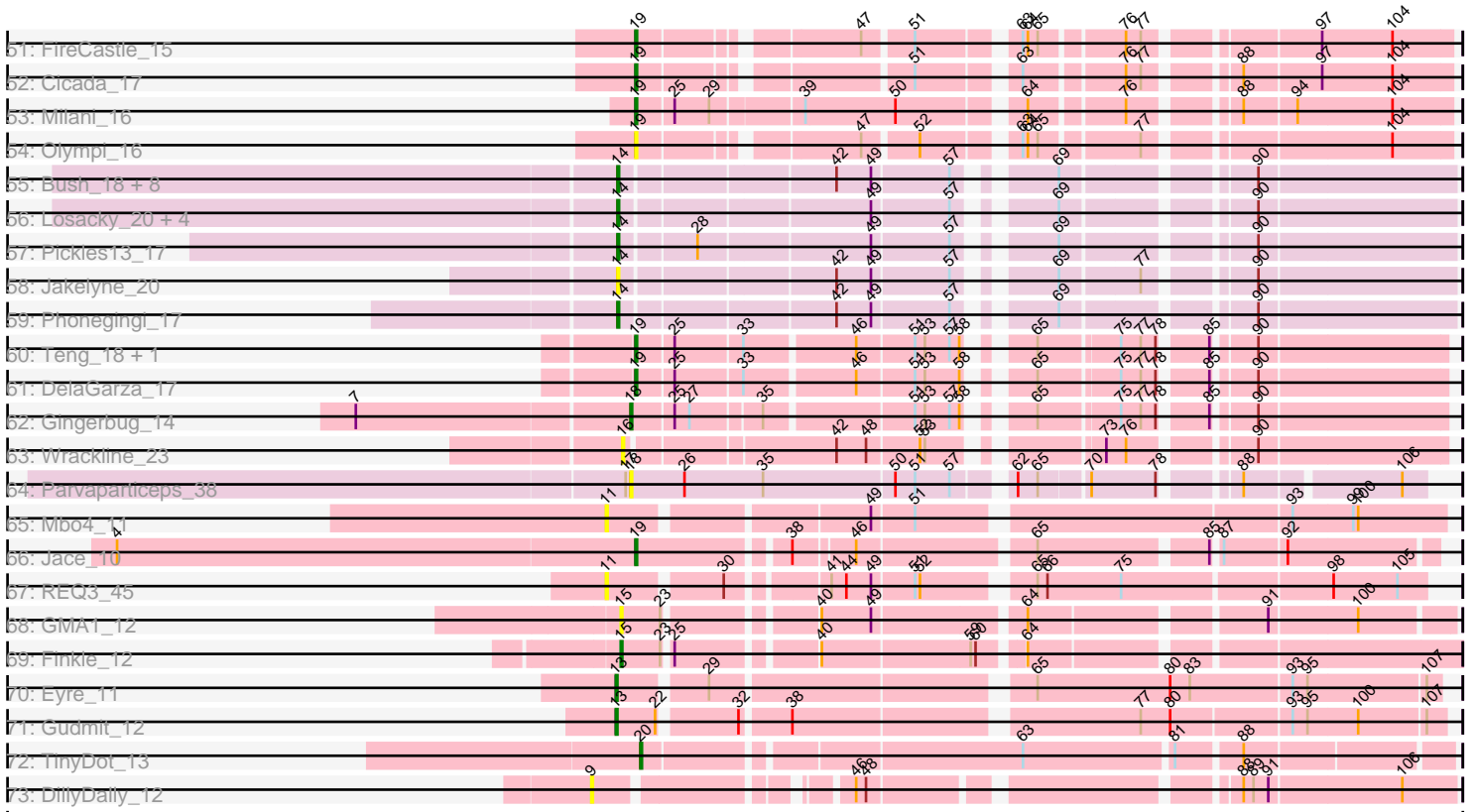


Pham 212354



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 212354 Report

This analysis was run 02/22/25 on database version 588.

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 212354 has 163 members, 26 are drafts.

Phages represented in each track:

- Track 1 : Mojorita_12, Picard_12
- Track 2 : Tubberson_12, SoJo_12
- Track 3 : ToastyFinz_11
- Track 4 : SV1_12
- Track 5 : Darolandstone_12
- Track 6 : Raleigh_12
- Track 7 : PapayaSalad_12
- Track 8 : Ididsumtinwong_12, Austintatious_12, Lishka_12, Bioscum_12
- Track 9 : HFrancette_13, Ignacio_13
- Track 10 : Vondra_13
- Track 11 : Eklok_13, AxeJC_13
- Track 12 : Eastland_13, Cumberbatch_13, Piccadilly_13
- Track 13 : Hiyaa_17
- Track 14 : Keanu_17
- Track 15 : Galactica_15
- Track 16 : Spocter_17
- Track 17 : Bunnybear_11
- Track 18 : Ohgeesy_11
- Track 19 : Pepperoni_11
- Track 20 : Zirinka_11, Mcklovin_12, Clark_12, PhriskyACE_11, Annalisa_12, WinkNick_12, Bialota_11, Oregano_12, Dolores_12, Dorito_11, Samman98_12
- Track 21 : Tayonia_11, BatStarr_11, Maridalia_11, TimTam_11, Hugley_11, Zameen_11, BaxterFox_11, Kita_11, Suscepit_11, Neobush_11, Bosnia_11, Antonio_11, Herod_11, Eviarto_11, Manasvini_11, Polly_11, AlumE_11, Eudoria_11, BoyNamedSue_11, Nymphadora_11, Trumpet_11
- Track 22 : Agueybana_11, Madeline_11
- Track 23 : WelcomeAyanna_11, ThankyouJordi_11
- Track 24 : Hyzer_11
- Track 25 : Mocha12_11, Gizermo_11, GemG_11, Whiteclaw_11, Haley23_11, TuertoX_11, Sproutie_11, Savage_11, Cynthia_11, JCole_11, Ebert_11, Clap_11
- Track 26 : EdnaMode_11, Lamberg_11, Nettuno_11
- Track 27 : Matteo_11, Attis_11, SoilAssassin_11, Bjanes7_11, Pickett_11, Yeet412_11, LordFarquaad_11

- Track 28 : Vasanti_11
- Track 29 : Sahara_11
- Track 30 : FroggyToad_11
- Track 31 : PantheRoc_11, Yeezy_11
- Track 32 : MichaelScott_12, Beenie_12
- Track 33 : Hortense_11, Howe_11, Twinkle_11, Adora_11, Shlim410_11
- Track 34 : Easley_12
- Track 35 : Sekhmet_12, Invectora_12
- Track 36 : Thimann_12
- Track 37 : Powerball_11
- Track 38 : DobbysSock_11
- Track 39 : Suerte_11
- Track 40 : Denise_11, Lton_11
- Track 41 : Faith5x5_11
- Track 42 : Moosehead_11, OneDirection_11
- Track 43 : Sidious_11
- Track 44 : RavenCo17_11
- Track 45 : Johann_16, Goodman_16
- Track 46 : TurboVicky_15, Jera_16, SBlackberry_15, Typher_17, Zanella_15
- Track 47 : Sucha_12, Benry_15
- Track 48 : Htur_15, Linayshia_15, Rasovi_15
- Track 49 : PermaG_16
- Track 50 : IndiRoo_15
- Track 51 : FireCastle_15
- Track 52 : Cicada_17
- Track 53 : Milani_16
- Track 54 : Olympi_16
- Track 55 : Bush_18, MenE_18, Carrillo_19, Antuna_18, Phingu_20, Blett_18, Guzman_19, Dropshot_17, Violeta_19
- Track 56 : Losacky_20, Appa_17, PhillyJawn_18, Warren_18, CookieDog_18
- Track 57 : Pickles13_17
- Track 58 : Jakelyne_20
- Track 59 : Phonegingi_17
- Track 60 : Teng_18, Lesiram_17
- Track 61 : DelaGarza_17
- Track 62 : Gingerbug_14
- Track 63 : Wrackline_23
- Track 64 : Parvaparticeps_38
- Track 65 : Mbo4_11
- Track 66 : Jace_10
- Track 67 : REQ3_45
- Track 68 : GMA1_12
- Track 69 : Finkle_12
- Track 70 : Eyre_11
- Track 71 : Gudmit_12
- Track 72 : TinyDot_13
- Track 73 : DillyDally_12

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

The start number called the most often in the published annotations is 19, it was called in 70 of the 137 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adora_11, Agueybana_11, AlumE_11, Annalisa_12, Antonio_11, BatStarr_11, BaxterFox_11, Beenie_12, Benry_15, Bialota_11, Bosnia_11, BoyNamedSue_11, Bunnybear_11, Cicada_17, Clark_12, DelaGarza_17, DobbysSock_11, Dolores_12, Dorito_11, Easley_12, Eudoria_11, Eviarto_11, FireCastle_15, Goodman_16, Herod_11, Hortense_11, Howe_11, Htur_15, Hugley_11, Hyzer_11, IndiRoo_15, Invectra_12, Jace_10, Jera_16, Johann_16, Kita_11, Lesiram_17, Linayshia_15, Madeline_11, Manasvini_11, Maridalia_11, Mcklovin_12, MichaelScott_12, Milani_16, Neobush_11, Nymphadora_11, Ohgeesy_11, Olympi_16, Oregono_12, PantheRoc_11, PermaG_16, PhriskyACE_11, Polly_11, Powerball_11, Rasovi_15, SBlackberry_15, Samman98_12, Sekhmet_12, Shlim410_11, Sidious_11, Sucha_12, Suerte_11, Suscepit_11, Tayonia_11, Teng_18, ThankyouJordi_11, Thimann_12, TimTam_11, Trumpet_11, TurboVicky_15, Twinkle_11, Typher_17, WelcomeAyanna_11, WinkNick_12, Yeezy_11, Zameen_11, Zanella_15, Zirinka_11,

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

-

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

- Antuna_18, Appa_17, Attis_11, Austintatious_12, AxeJC_13, Bioscum_12, Bjanes7_11, Blett_18, Bush_18, Carrillo_19, Clap_11, CookieDog_18, Cumberbatch_13, Cynthia_11, Darolandstone_12, Denise_11, DillyDally_12, Dropshot_17, Eastland_13, Ebert_11, EdnaMode_11, Eklok_13, Eyre_11, Faith5x5_11, Finkle_12, FroggyToad_11, GMA1_12, Galactica_15, GemG_11, Gingerbug_14, Gizermo_11, Gudmit_12, Guzman_19, HFrancette_13, Haley23_11, Hiyaa_17, Ididsumtinwong_12, Ignacio_13, JCole_11, Jakelyne_20, Keanu_17, Lamberg_11, Lishka_12, LordFarquaad_11, Losacky_20, Lton_11, Matteo_11, Mbo4_11, MenE_18, Mocha12_11, Mojarita_12, Moosehead_11, Nettuno_11, OneDirection_11, PapayaSalad_12, Parvaparticeps_38, Pepperoni_11, PhillyJawn_18, Phingu_20, Phonegingi_17, Picard_12, Piccadilly_13, Pickett_11, Pickles13_17, REQ3_45, Raleigh_12, RavenCo17_11, SV1_12, Sahara_11, Savage_11, SoJo_12, SoilAssassin_11, Spocter_17, Sproutie_11, TinyDot_13, ToastyFinz_11, Tubberson_12, TuertoX_11, Vasanti_11, Violeta_19, Vondra_13, Warren_18, Whiteclaw_11, Wrackline_23, Yeet412_11,

Summary by start number:

Start 9:

- Found in 1 of 163 (0.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DillyDally_12 (singleton),

Start 10:

- Found in 4 of 163 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 137
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Galactica_15 (BQ), Keanu_17 (BQ),

Start 11:

- Found in 2 of 163 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo4_11 (singleton), REQ3_45 (singleton),

Start 12:

- 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: Hiyaa_17 (BQ), Spocter_17 (BQ),

Start 13:

- Found in 34 of 163 (20.9%) of genes in pham
- Manual Annotations of this start: 31 of 137
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Attis_11 (CZ2), Bjanes7_11 (CZ2), Clap_11 (CZ2), Cynthia_11 (CZ2), Denise_11 (CZ5), Ebert_11 (CZ2), EdnaMode_11 (CZ2), Eyre_11 (singleton), Faith5x5_11 (CZ6), GemG_11 (CZ2), Gizermo_11 (CZ2), Gudmit_12 (singleton), Haley23_11 (CZ2), JCole_11 (CZ2), Lamberg_11 (CZ2), LordFarquaad_11 (CZ2), Lton_11 (CZ), Matteo_11 (CZ2), Mocha12_11 (CZ2), Moosehead_11 (CZ6), Nettuno_11 (CZ2), OneDirection_11 (CZ6), Pepperoni_11 (CZ), Pickett_11 (CZ2), RavenCo17_11 (CZ8), Sahara_11 (CZ2), Savage_11 (CZ2), SoilAssassin_11 (CZ2), Sproutie_11 (CZ2), TuertoX_11 (CZ2), Vasanti_11 (CZ2), Whiteclaw_11 (CZ2), Yeet412_11 (CZ2),

Start 14:

- Found in 17 of 163 (10.4%) 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: Antuna_18 (GA), Appa_17 (GA), Blett_18 (GA), Bush_18 (GA), Carrillo_19 (GA), CookieDog_18 (GA), Dropshot_17 (GA), Guzman_19 (GA), Jakelyne_20 (GA), Losacky_20 (GA), MenE_18 (GA), PhillyJawn_18 (GA), Phingu_20 (GA), Phonegingi_17 (GA), Pickles13_17 (GA), Violeta_19 (GA), Warren_18 (GA),

Start 15:

- Found in 2 of 163 (1.2%) 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: Finkle_12 (singleton), GMA1_12 (singleton),

Start 16:

- Found in 1 of 163 (0.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wrackline_23 (GF),

Start 18:

- Found in 2 of 163 (1.2%) 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: Gingerbug_14 (GF), Parvuparticeps_38 (UNK),

Start 19:

- Found in 78 of 163 (47.9%) of genes in pham
- Manual Annotations of this start: 70 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adora_11 (CZ4), Agueybana_11 (CZ1), AlumE_11 (CZ1), Annalisa_12 (CZ4), Antonio_11 (CZ1), BatStarr_11 (CZ1), BaxterFox_11 (CZ3), Beenie_12 (CZ4), Benry_15 (EJ), Bialota_11 (CZ1), Bosnia_11 (CZ1), BoyNamedSue_11 (CZ1), Bunnybear_11 (CZ), Cicada_17 (EJ), Clark_12 (CZ4), DelaGarza_17 (GF), DobbysSock_11 (CZ4), Dolores_12 (CZ4), Dorito_11 (CZ4), Easley_12 (CZ4), Eudoria_11 (CZ1), Eviarto_11 (CZ1), FireCastle_15 (EJ), Goodman_16 (EJ), Herod_11 (CZ1), Hortense_11 (CZ4), Howe_11 (CZ4), Htur_15 (EJ), Hugley_11 (CZ1), Hyzer_11 (CZ1), IndiRoo_15 (EJ), Invectra_12 (CZ4), Jace_10 (singleton), Jera_16 (EJ), Johann_16 (EJ), Kita_11 (CZ1), Lesiram_17 (GF), Linayshia_15 (EJ), Madeline_11 (CZ1), Manasvini_11 (CZ1), Maridalia_11 (CZ1), Mcklovin_12 (CZ4), MichaelScott_12 (CZ4), Milani_16 (EJ), Neobush_11 (CZ1), Nymphadora_11 (CZ1), Ohgeesy_11 (CZ), Olympi_16 (EJ), Oregano_12 (CZ4), PantheRoc_11 (CZ3), PermaG_16 (EJ), PhriskyACE_11 (CZ4), Polly_11 (CZ1), Powerball_11 (CZ4), Rasovi_15 (EJ), SBlackberry_15 (EJ), Samman98_12 (CZ4), Sekhmet_12 (CZ4), Shlim410_11 (CZ4), Sidious_11 (CZ7), Sucha_12 (EJ), Suerte_11 (CZ4), Suscepit_11 (CZ1), Tayonia_11 (CZ1), Teng_18 (GF), ThankyouJordi_11 (CZ1), Thimann_12 (CZ4), TimTam_11 (CZ1), Trumpet_11 (CZ1), TurboVicky_15 (EJ), Twinkle_11 (CZ4), Typher_17 (EJ), WelcomeAyanna_11 (CZ1), WinkNick_12 (CZ4), Yeezy_11 (CZ3), Zameen_11 (CZ1), Zanella_15 (EJ), Zirinka_11 (CZ1),

Start 20:

- Found in 9 of 163 (5.5%) 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: AxeJC_13 (BP), Cumberbatch_13 (BP), Eastland_13 (BP), Eklok_13 (BP), HFrancette_13 (BP), Ignacio_13 (BP), Piccadilly_13 (BP), TinyDot_13 (singleton), Vondra_13 (BP),

Start 21:

- Found in 13 of 163 (8.0%) of genes in pham
- Manual Annotations of this start: 12 of 137
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Austintatious_12 (BC3), Bioscum_12 (BC3), Darolandstone_12 (BC2), Ididsumtinwong_12 (BC3), Lishka_12 (BC3), Moajorita_12 (BC1), PapayaSalad_12 (BC3), Picard_12 (BC1), Raleigh_12 (BC2), SV1_12 (BC1), SoJo_12 (BC1), ToastyFinz_11 (BC1), Tubberson_12 (BC1),

Start 22:

- Found in 22 of 163 (13.5%) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: FroggyToad_11 (CZ2),

Summary by clusters:

There are 19 clusters represented in this pham: CZ8, UNK, EJ, CZ2, CZ3, CZ1, CZ6, singleton, CZ4, CZ7, GF, BP, BQ, GA, CZ, CZ5, BC1, BC2, BC3,

Info for manual annotations of cluster BC1:

- Start number 21 was manually annotated 6 times for cluster BC1.

Info for manual annotations of cluster BC2:

- Start number 21 was manually annotated 2 times for cluster BC2.

Info for manual annotations of cluster BC3:

- Start number 21 was manually annotated 4 times for cluster BC3.

Info for manual annotations of cluster BP:

- Start number 20 was manually annotated 8 times for cluster BP.

Info for manual annotations of cluster BQ:

- Start number 10 was manually annotated 2 times for cluster BQ.
- Start number 12 was manually annotated 2 times for cluster BQ.

Info for manual annotations of cluster CZ:

- Start number 13 was manually annotated 1 time for cluster CZ.
- Start number 19 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 19 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 13 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 19 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 19 was manually annotated 21 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 13 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 13 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 19 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 13 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster EJ:

- Start number 19 was manually annotated 15 times for cluster EJ.

Info for manual annotations of cluster GA:

- Start number 14 was manually annotated 9 times for cluster GA.

Info for manual annotations of cluster GF:

- Start number 18 was manually annotated 1 time for cluster GF.
- Start number 19 was manually annotated 2 times for cluster GF.

Gene Information:

Gene: Adora_11 Start: 7377, Stop: 7817, Start Num: 19

Candidate Starts for Adora_11:

(Start: 19 @7377 has 70 MA's), (25, 7401), (44, 7491), (46, 7497), (65, 7596), (78, 7668), (88, 7707), (91, 7722),

Gene: Agueybana_11 Start: 8036, Stop: 8476, Start Num: 19

Candidate Starts for Agueybana_11:

(Start: 19 @8036 has 70 MA's), (25, 8060), (44, 8150), (59, 8222), (65, 8255), (88, 8366), (91, 8381),

Gene: AlumE_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for AlumE_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Annalisa_12 Start: 7684, Stop: 8124, Start Num: 19

Candidate Starts for Annalisa_12:

(Start: 19 @7684 has 70 MA's), (25, 7708), (44, 7798), (46, 7804), (59, 7870), (65, 7903), (88, 8014), (91, 8029),

Gene: Antonio_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Antonio_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Antuna_18 Start: 9659, Stop: 10102, Start Num: 14

Candidate Starts for Antuna_18:

(Start: 14 @9659 has 9 MA's), (42, 9779), (49, 9800), (57, 9845), (69, 9887), (90, 9986),

Gene: Appa_17 Start: 9521, Stop: 9964, Start Num: 14

Candidate Starts for Appa_17:

(Start: 14 @9521 has 9 MA's), (49, 9662), (57, 9707), (69, 9749), (90, 9848),

Gene: Attis_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for Attis_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (66, 7392), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Austintatious_12 Start: 8176, Stop: 8589, Start Num: 21

Candidate Starts for Austintatious_12:

(Start: 21 @8176 has 12 MA's), (49, 8275), (51, 8299), (96, 8512),

Gene: AxeJC_13 Start: 8325, Stop: 8759, Start Num: 20

Candidate Starts for AxeJC_13:

(2, 8001), (Start: 20 @8325 has 9 MA's), (45, 8436), (49, 8448), (66, 8535), (68, 8541), (77, 8589), (88, 8634), (91, 8649), (99, 8697), (101, 8703),

Gene: BatStarr_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for BatStarr_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: BaxterFox_11 Start: 7383, Stop: 7823, Start Num: 19

Candidate Starts for BaxterFox_11:

(Start: 19 @7383 has 70 MA's), (25, 7407), (59, 7569), (65, 7602), (88, 7713), (91, 7728),

Gene: Beenie_12 Start: 7677, Stop: 8117, Start Num: 19

Candidate Starts for Beenie_12:

(Start: 19 @7677 has 70 MA's), (24, 7698), (25, 7701), (44, 7791), (46, 7797), (59, 7863), (65, 7896), (88, 8007), (91, 8022),

Gene: Benry_15 Start: 9762, Stop: 10202, Start Num: 19

Candidate Starts for Benry_15:

(Start: 19 @9762 has 70 MA's), (22, 9774), (27, 9792), (37, 9837), (39, 9855), (50, 9909), (64, 9975), (76, 10026), (88, 10080), (94, 10110), (104, 10167),

Gene: Bialota_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Bialota_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (44, 8149), (46, 8155), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Bioscum_12 Start: 8212, Stop: 8625, Start Num: 21

Candidate Starts for Bioscum_12:

(Start: 21 @8212 has 12 MA's), (49, 8311), (51, 8335), (96, 8548),

Gene: Bjaner7_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for Bjaner7_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (66, 7392), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Blett_18 Start: 9674, Stop: 10117, Start Num: 14

Candidate Starts for Blett_18:

(Start: 14 @9674 has 9 MA's), (42, 9794), (49, 9815), (57, 9860), (69, 9902), (90, 10001),

Gene: Bosnia_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Bosnia_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: BoyNamedSue_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for BoyNamedSue_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Bunnybear_11 Start: 8026, Stop: 8466, Start Num: 19

Candidate Starts for Bunnybear_11:

(3, 7693), (5, 7750), (Start: 19 @8026 has 70 MA's), (25, 8050), (59, 8212), (65, 8245), (88, 8356), (91, 8371),

Gene: Bush_18 Start: 9655, Stop: 10098, Start Num: 14

Candidate Starts for Bush_18:

(Start: 14 @9655 has 9 MA's), (42, 9775), (49, 9796), (57, 9841), (69, 9883), (90, 9982),

Gene: Carrillo_19 Start: 9628, Stop: 10071, Start Num: 14

Candidate Starts for Carrillo_19:

(Start: 14 @9628 has 9 MA's), (42, 9748), (49, 9769), (57, 9814), (69, 9856), (90, 9955),

Gene: Cicada_17 Start: 11831, Stop: 12253, Start Num: 19

Candidate Starts for Cicada_17:

(Start: 19 @11831 has 70 MA's), (51, 11972), (63, 12023), (76, 12077), (77, 12086), (88, 12131), (97, 12176), (104, 12218),

Gene: Clap_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Clap_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Clark_12 Start: 7684, Stop: 8124, Start Num: 19

Candidate Starts for Clark_12:

(Start: 19 @7684 has 70 MA's), (25, 7708), (44, 7798), (46, 7804), (59, 7870), (65, 7903), (88, 8014), (91, 8029),

Gene: CookieDog_18 Start: 9655, Stop: 10098, Start Num: 14

Candidate Starts for CookieDog_18:

(Start: 14 @9655 has 9 MA's), (49, 9796), (57, 9841), (69, 9883), (90, 9982),

Gene: Cumberbatch_13 Start: 8312, Stop: 8746, Start Num: 20

Candidate Starts for Cumberbatch_13:

(2, 7988), (Start: 20 @8312 has 9 MA's), (45, 8423), (49, 8435), (66, 8522), (68, 8528), (88, 8621), (91, 8636), (99, 8684), (101, 8690),

Gene: Cynthia_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Cynthia_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Darolandstone_12 Start: 8646, Stop: 9074, Start Num: 21

Candidate Starts for Darolandstone_12:

(Start: 21 @8646 has 12 MA's), (49, 8751), (66, 8844), (68, 8850), (81, 8910), (84, 8928), (90, 8955), (96, 8988), (103, 9024), (106, 9042),

Gene: DelaGarza_17 Start: 10313, Stop: 10741, Start Num: 19

Candidate Starts for DelaGarza_17:

(Start: 19 @10313 has 70 MA's), (25, 10334), (33, 10373), (46, 10436), (51, 10469), (53, 10475), (58, 10496), (65, 10520), (75, 10565), (77, 10577), (78, 10586), (85, 10610), (90, 10631),

Gene: Denise_11 Start: 7170, Stop: 7631, Start Num: 13

Candidate Starts for Denise_11:

(Start: 13 @7170 has 31 MA's), (22, 7194), (27, 7206), (29, 7218), (38, 7263), (51, 7335), (65, 7395), (80, 7476), (86, 7506), (93, 7548), (100, 7587),

Gene: DillyDally_12 Start: 8249, Stop: 8698, Start Num: 9

Candidate Starts for DillyDally_12:

(9, 8249), (46, 8375), (48, 8381), (88, 8573), (89, 8579), (91, 8588), (106, 8666),

Gene: DobbysSock_11 Start: 7176, Stop: 7616, Start Num: 19

Candidate Starts for DobbysSock_11:

(Start: 19 @7176 has 70 MA's), (25, 7200), (44, 7290), (46, 7296), (56, 7347), (59, 7362), (65, 7395), (88, 7506), (91, 7521),

Gene: Dolores_12 Start: 7678, Stop: 8118, Start Num: 19

Candidate Starts for Dolores_12:

(Start: 19 @7678 has 70 MA's), (25, 7702), (44, 7792), (46, 7798), (59, 7864), (65, 7897), (88, 8008), (91, 8023),

Gene: Dorito_11 Start: 7181, Stop: 7621, Start Num: 19

Candidate Starts for Dorito_11:

(Start: 19 @7181 has 70 MA's), (25, 7205), (44, 7295), (46, 7301), (59, 7367), (65, 7400), (88, 7511), (91, 7526),

Gene: Dropshot_17 Start: 9521, Stop: 9964, Start Num: 14

Candidate Starts for Dropshot_17:

(Start: 14 @9521 has 9 MA's), (42, 9641), (49, 9662), (57, 9707), (69, 9749), (90, 9848),

Gene: Easley_12 Start: 7677, Stop: 8117, Start Num: 19

Candidate Starts for Easley_12:

(Start: 19 @7677 has 70 MA's), (24, 7698), (25, 7701), (44, 7791), (46, 7797), (56, 7848), (59, 7863), (65, 7896), (88, 8007), (91, 8022),

Gene: Eastland_13 Start: 8313, Stop: 8747, Start Num: 20

Candidate Starts for Eastland_13:

(2, 7989), (Start: 20 @8313 has 9 MA's), (45, 8424), (49, 8436), (66, 8523), (68, 8529), (88, 8622), (91, 8637), (99, 8685), (101, 8691),

Gene: Ebert_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Ebert_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: EdnaMode_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for EdnaMode_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Eklok_13 Start: 8325, Stop: 8759, Start Num: 20

Candidate Starts for Eklok_13:

(2, 8001), (Start: 20 @8325 has 9 MA's), (45, 8436), (49, 8448), (66, 8535), (68, 8541), (77, 8589), (88, 8634), (91, 8649), (99, 8697), (101, 8703),

Gene: Eudoria_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Eudoria_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Eviarto_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Eviarto_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Eyre_11 Start: 7827, Stop: 8291, Start Num: 13

Candidate Starts for Eyre_11:

(Start: 13 @7827 has 31 MA's), (29, 7875), (65, 8052), (80, 8133), (83, 8145), (93, 8205), (95, 8214), (107, 8283),

Gene: Faith5x5_11 Start: 7132, Stop: 7590, Start Num: 13

Candidate Starts for Faith5x5_11:

(Start: 13 @7132 has 31 MA's), (22, 7156), (27, 7168), (29, 7180), (38, 7225), (51, 7294), (65, 7354), (66, 7360), (79, 7429), (80, 7435), (86, 7465), (93, 7507), (100, 7546),

Gene: Finkle_12 Start: 7640, Stop: 8095, Start Num: 15

Candidate Starts for Finkle_12:

(Start: 15 @7640 has 1 MA's), (23, 7664), (25, 7667), (40, 7742), (59, 7829), (60, 7832), (64, 7853),

Gene: FireCastle_15 Start: 11492, Stop: 11914, Start Num: 19

Candidate Starts for FireCastle_15:

(Start: 19 @11492 has 70 MA's), (47, 11606), (51, 11633), (63, 11684), (64, 11687), (65, 11693), (76, 11738), (77, 11747), (97, 11837), (104, 11879),

Gene: FroggyToad_11 Start: 7201, Stop: 7638, Start Num: 22

Candidate Starts for FroggyToad_11:

(Start: 13 @7177 has 31 MA's), (22, 7201), (27, 7213), (29, 7225), (38, 7270), (48, 7315), (65, 7402), (79, 7477), (80, 7483), (86, 7510), (93, 7552), (100, 7591),

Gene: GMA1_12 Start: 7805, Stop: 8254, Start Num: 15

Candidate Starts for GMA1_12:

(Start: 15 @7805 has 1 MA's), (23, 7829), (40, 7907), (49, 7937), (64, 8021), (91, 8150), (100, 8201),

Gene: Galactica_15 Start: 13154, Stop: 13606, Start Num: 10

Candidate Starts for Galactica_15:

(Start: 10 @13154 has 2 MA's), (25, 13196), (34, 13238), (54, 13328), (57, 13340), (62, 13364), (65, 13376), (81, 13448), (88, 13481), (108, 13595),

Gene: GemG_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for GemG_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Gingerbug_14 Start: 9495, Stop: 9923, Start Num: 18

Candidate Starts for Gingerbug_14:

(7, 9333), (Start: 18 @9495 has 1 MA's), (25, 9519), (27, 9528), (35, 9567), (51, 9651), (53, 9657), (57, 9672), (58, 9678), (65, 9702), (75, 9747), (77, 9759), (78, 9768), (85, 9792), (90, 9813),

Gene: Gizermo_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Gizermo_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Goodman_16 Start: 11743, Stop: 12165, Start Num: 19

Candidate Starts for Goodman_16:

(Start: 19 @11743 has 70 MA's), (47, 11857), (52, 11887), (63, 11935), (64, 11938), (65, 11944), (77, 11998), (88, 12043), (104, 12130),

Gene: Gudmit_12 Start: 7950, Stop: 8414, Start Num: 13

Candidate Starts for Gudmit_12:

(Start: 13 @7950 has 31 MA's), (22, 7974), (32, 8016), (38, 8043), (77, 8238), (80, 8256), (93, 8325), (95, 8334), (100, 8364), (107, 8403),

Gene: Guzman_19 Start: 9936, Stop: 10379, Start Num: 14

Candidate Starts for Guzman_19:

(Start: 14 @9936 has 9 MA's), (42, 10056), (49, 10077), (57, 10122), (69, 10164), (90, 10263),

Gene: HFrancette_13 Start: 8321, Stop: 8758, Start Num: 20

Candidate Starts for HFrancette_13:

(2, 7997), (Start: 20 @8321 has 9 MA's), (34, 8384), (43, 8429), (45, 8435), (49, 8447), (66, 8534), (68, 8540), (77, 8588), (88, 8633), (91, 8648), (99, 8696), (101, 8702),

Gene: Haley23_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Haley23_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Herod_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Herod_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Hiyaa_17 Start: 14197, Stop: 14646, Start Num: 12

Candidate Starts for Hiyaa_17:

(8, 14155), (Start: 10 @14188 has 2 MA's), (Start: 12 @14197 has 2 MA's), (24, 14233), (44, 14320), (53, 14365), (54, 14368), (62, 14404), (65, 14416), (82, 14494), (87, 14512), (89, 14527), (96, 14560), (102, 14593), (108, 14635),

Gene: Hortense_11 Start: 7377, Stop: 7817, Start Num: 19

Candidate Starts for Hortense_11:

(Start: 19 @7377 has 70 MA's), (25, 7401), (44, 7491), (46, 7497), (65, 7596), (78, 7668), (88, 7707), (91, 7722),

Gene: Howe_11 Start: 7377, Stop: 7817, Start Num: 19

Candidate Starts for Howe_11:

(Start: 19 @7377 has 70 MA's), (25, 7401), (44, 7491), (46, 7497), (65, 7596), (78, 7668), (88, 7707), (91, 7722),

Gene: Htur_15 Start: 11746, Stop: 12186, Start Num: 19

Candidate Starts for Htur_15:

(Start: 19 @11746 has 70 MA's), (27, 11776), (52, 11908), (64, 11959), (73, 11998), (74, 12001), (76, 12010), (87, 12055), (104, 12151),

Gene: Hugley_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Hugley_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Hyzer_11 Start: 8036, Stop: 8476, Start Num: 19

Candidate Starts for Hyzer_11:

(Start: 19 @8036 has 70 MA's), (25, 8060), (44, 8150), (59, 8222), (65, 8255), (88, 8366), (91, 8381),

Gene: Ididsumtinwong_12 Start: 8212, Stop: 8625, Start Num: 21

Candidate Starts for Ididsumtinwong_12:

(Start: 21 @8212 has 12 MA's), (49, 8311), (51, 8335), (96, 8548),

Gene: Ignacio_13 Start: 8321, Stop: 8758, Start Num: 20

Candidate Starts for Ignacio_13:

(2, 7997), (Start: 20 @8321 has 9 MA's), (34, 8384), (43, 8429), (45, 8435), (49, 8447), (66, 8534), (68, 8540), (77, 8588), (88, 8633), (91, 8648), (99, 8696), (101, 8702),

Gene: IndiRoo_15 Start: 9770, Stop: 10210, Start Num: 19

Candidate Starts for IndiRoo_15:

(Start: 19 @9770 has 70 MA's), (24, 9788), (37, 9845), (39, 9863), (50, 9917), (76, 10034), (88, 10088), (94, 10118), (104, 10175),

Gene: Invectra_12 Start: 7677, Stop: 8117, Start Num: 19

Candidate Starts for Invectra_12:

(Start: 19 @7677 has 70 MA's), (24, 7698), (25, 7701), (44, 7791), (46, 7797), (56, 7848), (59, 7863), (65, 7896), (83, 7980), (88, 8007), (91, 8022),

Gene: JCole_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for JCole_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Jace_10 Start: 7713, Stop: 8150, Start Num: 19

Candidate Starts for Jace_10:

(4, 7398), (Start: 19 @7713 has 70 MA's), (38, 7797), (46, 7830), (65, 7929), (85, 8025), (87, 8028), (92, 8064),

Gene: Jakelyne_20 Start: 9677, Stop: 10120, Start Num: 14

Candidate Starts for Jakelyne_20:

(Start: 14 @9677 has 9 MA's), (42, 9797), (49, 9818), (57, 9863), (69, 9905), (77, 9950), (90, 10004),

Gene: Jera_16 Start: 10824, Stop: 11264, Start Num: 19

Candidate Starts for Jera_16:

(Start: 19 @10824 has 70 MA's), (27, 10854), (36, 10896), (52, 10986), (63, 11034), (64, 11037), (73, 11076), (74, 11079), (76, 11088), (87, 11133), (89, 11148), (104, 11229),

Gene: Johann_16 Start: 11743, Stop: 12165, Start Num: 19

Candidate Starts for Johann_16:

(Start: 19 @11743 has 70 MA's), (47, 11857), (52, 11887), (63, 11935), (64, 11938), (65, 11944), (77, 11998), (88, 12043), (104, 12130),

Gene: Keanu_17 Start: 14234, Stop: 14686, Start Num: 10

Candidate Starts for Keanu_17:

(Start: 10 @14234 has 2 MA's), (24, 14273), (31, 14312), (44, 14360), (54, 14408), (61, 14435), (62, 14444), (77, 14516), (96, 14600), (102, 14633), (104, 14648),

Gene: Kita_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Kita_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Lamberg_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for Lamberg_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Lesiram_17 Start: 10289, Stop: 10717, Start Num: 19

Candidate Starts for Lesiram_17:

(Start: 19 @10289 has 70 MA's), (25, 10310), (33, 10349), (46, 10412), (51, 10445), (53, 10451), (57, 10466), (58, 10472), (65, 10496), (75, 10541), (77, 10553), (78, 10562), (85, 10586), (90, 10607),

Gene: Linayshia_15 Start: 11738, Stop: 12178, Start Num: 19

Candidate Starts for Linayshia_15:

(Start: 19 @11738 has 70 MA's), (27, 11768), (52, 11900), (64, 11951), (73, 11990), (74, 11993), (76, 12002), (87, 12047), (104, 12143),

Gene: Lishka_12 Start: 8176, Stop: 8589, Start Num: 21

Candidate Starts for Lishka_12:

(Start: 21 @8176 has 12 MA's), (49, 8275), (51, 8299), (96, 8512),

Gene: LordFarquaad_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for LordFarquaad_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (66, 7392), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Losacky_20 Start: 9801, Stop: 10244, Start Num: 14

Candidate Starts for Losacky_20:

(Start: 14 @9801 has 9 MA's), (49, 9942), (57, 9987), (69, 10029), (90, 10128),

Gene: Lton_11 Start: 7186, Stop: 7647, Start Num: 13

Candidate Starts for Lton_11:

(Start: 13 @7186 has 31 MA's), (22, 7210), (27, 7222), (29, 7234), (38, 7279), (51, 7351), (65, 7411), (80, 7492), (86, 7522), (93, 7564), (100, 7603),

Gene: Madeline_11 Start: 8036, Stop: 8476, Start Num: 19

Candidate Starts for Madeline_11:

(Start: 19 @8036 has 70 MA's), (25, 8060), (44, 8150), (59, 8222), (65, 8255), (88, 8366), (91, 8381),

Gene: Manasvini_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Manasvini_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Maridalia_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Maridalia_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Matteo_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for Matteo_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (66, 7392), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Mbo4_11 Start: 7841, Stop: 8311, Start Num: 11

Candidate Starts for Mbo4_11:

(11, 7841), (49, 7985), (51, 8009), (93, 8219), (99, 8255), (100, 8258),

Gene: Mcklovin_12 Start: 8494, Stop: 8934, Start Num: 19

Candidate Starts for Mcklovin_12:

(Start: 19 @8494 has 70 MA's), (25, 8518), (44, 8608), (46, 8614), (59, 8680), (65, 8713), (88, 8824), (91, 8839),

Gene: MenE_18 Start: 9789, Stop: 10232, Start Num: 14

Candidate Starts for MenE_18:

(Start: 14 @9789 has 9 MA's), (42, 9909), (49, 9930), (57, 9975), (69, 10017), (90, 10116),

Gene: MichaelScott_12 Start: 7677, Stop: 8117, Start Num: 19

Candidate Starts for MichaelScott_12:

(Start: 19 @7677 has 70 MA's), (24, 7698), (25, 7701), (44, 7791), (46, 7797), (59, 7863), (65, 7896), (88, 8007), (91, 8022),

Gene: Milani_16 Start: 10421, Stop: 10861, Start Num: 19

Candidate Starts for Milani_16:

(Start: 19 @10421 has 70 MA's), (25, 10442), (29, 10463), (39, 10514), (50, 10568), (64, 10634), (76, 10685), (88, 10739), (94, 10769), (104, 10826),

Gene: Mocha12_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Mocha12_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Mojarita_12 Start: 8489, Stop: 8917, Start Num: 21

Candidate Starts for Mojarita_12:

(Start: 21 @8489 has 12 MA's), (49, 8594), (51, 8618), (81, 8753), (106, 8885),

Gene: Moosehead_11 Start: 7129, Stop: 7587, Start Num: 13

Candidate Starts for Moosehead_11:

(Start: 13 @7129 has 31 MA's), (22, 7153), (27, 7165), (29, 7177), (38, 7222), (51, 7291), (65, 7351), (79, 7426), (80, 7432), (86, 7462), (93, 7504), (100, 7543),

Gene: Neobush_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Neobush_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Nettuno_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for Nettuno_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Nymphadora_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Nymphadora_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Ohgeesy_11 Start: 7383, Stop: 7823, Start Num: 19

Candidate Starts for Ohgeesy_11:

(5, 7107), (Start: 19 @7383 has 70 MA's), (25, 7407), (44, 7497), (59, 7569), (65, 7602), (67, 7611), (88, 7713), (91, 7728),

Gene: Olympi_16 Start: 11734, Stop: 12156, Start Num: 19

Candidate Starts for Olympi_16:

(Start: 19 @11734 has 70 MA's), (47, 11848), (52, 11878), (63, 11926), (64, 11929), (65, 11935), (77, 11989), (104, 12121),

Gene: OneDirection_11 Start: 7130, Stop: 7591, Start Num: 13

Candidate Starts for OneDirection_11:

(Start: 13 @7130 has 31 MA's), (22, 7154), (27, 7166), (29, 7178), (38, 7223), (51, 7295), (65, 7355), (79, 7430), (80, 7436), (86, 7466), (93, 7508), (100, 7547),

Gene: Oregano_12 Start: 7348, Stop: 7788, Start Num: 19

Candidate Starts for Oregano_12:

(Start: 19 @7348 has 70 MA's), (25, 7372), (44, 7462), (46, 7468), (59, 7534), (65, 7567), (88, 7678), (91, 7693),

Gene: PantheRoc_11 Start: 7383, Stop: 7823, Start Num: 19

Candidate Starts for PantheRoc_11:

(5, 7107), (Start: 19 @7383 has 70 MA's), (25, 7407), (44, 7497), (59, 7569), (65, 7602), (88, 7713), (91, 7728),

Gene: PapayaSalad_12 Start: 8184, Stop: 8594, Start Num: 21

Candidate Starts for PapayaSalad_12:

(Start: 21 @8184 has 12 MA's), (49, 8283), (51, 8307), (55, 8319), (96, 8520),

Gene: Parvaparticeps_38 Start: 28458, Stop: 28024, Start Num: 18

Candidate Starts for Parvaparticeps_38:

(17, 28461), (Start: 18 @28458 has 1 MA's), (26, 28425), (35, 28377), (50, 28299), (51, 28287), (57, 28266), (62, 28239), (65, 28227), (70, 28200), (78, 28161), (88, 28125), (106, 28038),

Gene: Pepperoni_11 Start: 7480, Stop: 7941, Start Num: 13

Candidate Starts for Pepperoni_11:

(Start: 13 @7480 has 31 MA's), (22, 7504), (27, 7516), (29, 7528), (31, 7543), (38, 7573), (51, 7645), (65, 7705), (79, 7780), (80, 7786), (86, 7816), (93, 7858), (100, 7897),

Gene: PermaG_16 Start: 11806, Stop: 12228, Start Num: 19

Candidate Starts for PermaG_16:

(Start: 19 @11806 has 70 MA's), (47, 11920), (51, 11947), (64, 12001), (65, 12007), (71, 12034), (77, 12061), (88, 12106), (104, 12193),

Gene: PhillyJawn_18 Start: 9521, Stop: 9964, Start Num: 14

Candidate Starts for PhillyJawn_18:

(Start: 14 @9521 has 9 MA's), (49, 9662), (57, 9707), (69, 9749), (90, 9848),

Gene: Phingu_20 Start: 9680, Stop: 10123, Start Num: 14

Candidate Starts for Phingu_20:

(Start: 14 @9680 has 9 MA's), (42, 9800), (49, 9821), (57, 9866), (69, 9908), (90, 10007),

Gene: Phonegingi_17 Start: 9521, Stop: 9964, Start Num: 14

Candidate Starts for Phonegingi_17:

(Start: 14 @9521 has 9 MA's), (42, 9641), (49, 9662), (57, 9707), (69, 9749), (90, 9848),

Gene: PhriskyACE_11 Start: 7181, Stop: 7621, Start Num: 19

Candidate Starts for PhriskyACE_11:

(Start: 19 @7181 has 70 MA's), (25, 7205), (44, 7295), (46, 7301), (59, 7367), (65, 7400), (88, 7511), (91, 7526),

Gene: Picard_12 Start: 8489, Stop: 8917, Start Num: 21

Candidate Starts for Picard_12:

(Start: 21 @8489 has 12 MA's), (49, 8594), (51, 8618), (81, 8753), (106, 8885),

Gene: Piccadilly_13 Start: 8312, Stop: 8746, Start Num: 20

Candidate Starts for Piccadilly_13:

(2, 7988), (Start: 20 @8312 has 9 MA's), (45, 8423), (49, 8435), (66, 8522), (68, 8528), (88, 8621), (91, 8636), (99, 8684), (101, 8690),

Gene: Pickett_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for Pickett_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (66, 7392), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Pickles13_17 Start: 9691, Stop: 10134, Start Num: 14

Candidate Starts for Pickles13_17:

(Start: 14 @9691 has 9 MA's), (28, 9733), (49, 9832), (57, 9877), (69, 9919), (90, 10018),

Gene: Polly_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Polly_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Powerball_11 Start: 7182, Stop: 7622, Start Num: 19

Candidate Starts for Powerball_11:

(Start: 19 @7182 has 70 MA's), (25, 7206), (44, 7296), (46, 7302), (59, 7368), (65, 7401), (88, 7512), (91, 7527),

Gene: REQ3_45 Start: 24570, Stop: 25019, Start Num: 11

Candidate Starts for REQ3_45:

(11, 24570), (30, 24633), (41, 24684), (44, 24693), (49, 24708), (51, 24732), (52, 24735), (65, 24792), (66, 24798), (75, 24843), (98, 24963), (105, 25002),

Gene: Raleigh_12 Start: 8614, Stop: 9027, Start Num: 21

Candidate Starts for Raleigh_12:

(1, 8278), (6, 8386), (Start: 21 @8614 has 12 MA's), (49, 8713), (51, 8737), (66, 8806), (84, 8890), (87, 8896), (96, 8950), (106, 9004),

Gene: Rasovi_15 Start: 11746, Stop: 12186, Start Num: 19

Candidate Starts for Rasovi_15:

(Start: 19 @11746 has 70 MA's), (27, 11776), (52, 11908), (64, 11959), (73, 11998), (74, 12001), (76, 12010), (87, 12055), (104, 12151),

Gene: RavenCo17_11 Start: 8008, Stop: 8472, Start Num: 13

Candidate Starts for RavenCo17_11:

(Start: 13 @8008 has 31 MA's), (29, 8056), (65, 8233), (75, 8284), (80, 8314), (83, 8326), (93, 8386), (107, 8464),

Gene: SBlackberry_15 Start: 11583, Stop: 12023, Start Num: 19

Candidate Starts for SBlackberry_15:

(Start: 19 @11583 has 70 MA's), (27, 11613), (36, 11655), (52, 11745), (63, 11793), (64, 11796), (73, 11835), (74, 11838), (76, 11847), (87, 11892), (89, 11907), (104, 11988),

Gene: SV1_12 Start: 8384, Stop: 8800, Start Num: 21

Candidate Starts for SV1_12:

(Start: 21 @8384 has 12 MA's), (49, 8483), (84, 8660), (96, 8720), (104, 8768),

Gene: Sahara_11 Start: 7177, Stop: 7632, Start Num: 13

Candidate Starts for Sahara_11:

(Start: 13 @7177 has 31 MA's), (22, 7201), (27, 7213), (29, 7225), (38, 7270), (65, 7399), (80, 7480), (86, 7507), (93, 7549), (100, 7588),

Gene: Samman98_12 Start: 7678, Stop: 8118, Start Num: 19

Candidate Starts for Samman98_12:

(Start: 19 @7678 has 70 MA's), (25, 7702), (44, 7792), (46, 7798), (59, 7864), (65, 7897), (88, 8008), (91, 8023),

Gene: Savage_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Savage_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Sekhmet_12 Start: 7677, Stop: 8117, Start Num: 19

Candidate Starts for Sekhmet_12:

(Start: 19 @7677 has 70 MA's), (24, 7698), (25, 7701), (44, 7791), (46, 7797), (56, 7848), (59, 7863), (65, 7896), (83, 7980), (88, 8007), (91, 8022),

Gene: Shlim410_11 Start: 7377, Stop: 7817, Start Num: 19

Candidate Starts for Shlim410_11:

(Start: 19 @7377 has 70 MA's), (25, 7401), (44, 7491), (46, 7497), (65, 7596), (78, 7668), (88, 7707), (91, 7722),

Gene: Sidious_11 Start: 7378, Stop: 7818, Start Num: 19

Candidate Starts for Sidious_11:

(Start: 19 @7378 has 70 MA's), (25, 7402), (44, 7492), (65, 7597), (88, 7708), (91, 7723),

Gene: SoJo_12 Start: 8406, Stop: 8822, Start Num: 21

Candidate Starts for SoJo_12:

(Start: 21 @8406 has 12 MA's), (49, 8505), (66, 8598), (96, 8742), (103, 8778), (106, 8796),

Gene: SoilAssassin_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for SoilAssassin_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (66, 7392), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Spocter_17 Start: 14185, Stop: 14634, Start Num: 12

Candidate Starts for Spocter_17:

(8, 14143), (Start: 10 @14176 has 2 MA's), (Start: 12 @14185 has 2 MA's), (24, 14221), (25, 14224), (44, 14308), (53, 14353), (54, 14356), (62, 14392), (65, 14404), (82, 14482), (87, 14500), (89, 14515), (96, 14548), (102, 14581), (108, 14623),

Gene: Sproutie_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Sproutie_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: Sucha_12 Start: 8759, Stop: 9199, Start Num: 19

Candidate Starts for Sucha_12:

(Start: 19 @8759 has 70 MA's), (22, 8771), (27, 8789), (37, 8834), (39, 8852), (50, 8906), (64, 8972), (76, 9023), (88, 9077), (94, 9107), (104, 9164),

Gene: Suerte_11 Start: 7176, Stop: 7616, Start Num: 19

Candidate Starts for Suerte_11:

(Start: 19 @7176 has 70 MA's), (25, 7200), (44, 7290), (46, 7296), (56, 7347), (59, 7362), (65, 7395), (88, 7506), (91, 7521),

Gene: Suscepit_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Suscepit_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Tayonia_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Tayonia_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Teng_18 Start: 10310, Stop: 10738, Start Num: 19

Candidate Starts for Teng_18:

(Start: 19 @10310 has 70 MA's), (25, 10331), (33, 10370), (46, 10433), (51, 10466), (53, 10472), (57, 10487), (58, 10493), (65, 10517), (75, 10562), (77, 10574), (78, 10583), (85, 10607), (90, 10628),

Gene: ThankyouJordi_11 Start: 8033, Stop: 8473, Start Num: 19

Candidate Starts for ThankyouJordi_11:

(Start: 19 @8033 has 70 MA's), (25, 8057), (44, 8147), (65, 8252), (88, 8363), (91, 8378),

Gene: Thimann_12 Start: 7678, Stop: 8118, Start Num: 19

Candidate Starts for Thimann_12:

(Start: 19 @7678 has 70 MA's), (24, 7699), (25, 7702), (44, 7792), (46, 7798), (59, 7864), (65, 7897), (88, 8008), (91, 8023),

Gene: TimTam_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for TimTam_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: TinyDot_13 Start: 8300, Stop: 8752, Start Num: 20

Candidate Starts for TinyDot_13:

(Start: 20 @8300 has 9 MA's), (63, 8513), (81, 8600), (88, 8636),

Gene: ToastyFinz_11 Start: 8267, Stop: 8689, Start Num: 21

Candidate Starts for ToastyFinz_11:

(Start: 21 @8267 has 12 MA's), (49, 8366), (51, 8390), (66, 8459), (68, 8465), (72, 8489), (81, 8525), (96, 8603), (103, 8639), (106, 8657),

Gene: Trumpet_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Trumpet_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Tubberson_12 Start: 8406, Stop: 8822, Start Num: 21

Candidate Starts for Tubberson_12:

(Start: 21 @8406 has 12 MA's), (49, 8505), (66, 8598), (96, 8742), (103, 8778), (106, 8796),

Gene: TuertoX_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for TuertoX_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: TurboVicky_15 Start: 11577, Stop: 12017, Start Num: 19

Candidate Starts for TurboVicky_15:

(Start: 19 @11577 has 70 MA's), (27, 11607), (36, 11649), (52, 11739), (63, 11787), (64, 11790), (73, 11829), (74, 11832), (76, 11841), (87, 11886), (89, 11901), (104, 11982),

Gene: Twinkle_11 Start: 7377, Stop: 7817, Start Num: 19

Candidate Starts for Twinkle_11:

(Start: 19 @7377 has 70 MA's), (25, 7401), (44, 7491), (46, 7497), (65, 7596), (78, 7668), (88, 7707), (91, 7722),

Gene: Typher_17 Start: 11711, Stop: 12151, Start Num: 19

Candidate Starts for Typher_17:

(Start: 19 @11711 has 70 MA's), (27, 11741), (36, 11783), (52, 11873), (63, 11921), (64, 11924), (73, 11963), (74, 11966), (76, 11975), (87, 12020), (89, 12035), (104, 12116),

Gene: Vasanti_11 Start: 7180, Stop: 7641, Start Num: 13

Candidate Starts for Vasanti_11:

(Start: 13 @7180 has 31 MA's), (22, 7204), (27, 7216), (29, 7228), (38, 7273), (65, 7405), (79, 7480), (80, 7486), (86, 7513), (93, 7555), (100, 7594),

Gene: Violeta_19 Start: 9619, Stop: 10062, Start Num: 14

Candidate Starts for Violeta_19:

(Start: 14 @9619 has 9 MA's), (42, 9739), (49, 9760), (57, 9805), (69, 9847), (90, 9946),

Gene: Vondra_13 Start: 8321, Stop: 8755, Start Num: 20

Candidate Starts for Vondra_13:

(2, 7997), (Start: 20 @8321 has 9 MA's), (34, 8384), (45, 8432), (49, 8444), (66, 8531), (68, 8537), (77, 8585), (88, 8630), (91, 8645), (99, 8693), (101, 8699),

Gene: Warren_18 Start: 9718, Stop: 10161, Start Num: 14

Candidate Starts for Warren_18:

(Start: 14 @9718 has 9 MA's), (49, 9859), (57, 9904), (69, 9946), (90, 10045),

Gene: WelcomeAyanna_11 Start: 8033, Stop: 8473, Start Num: 19

Candidate Starts for WelcomeAyanna_11:

(Start: 19 @8033 has 70 MA's), (25, 8057), (44, 8147), (65, 8252), (88, 8363), (91, 8378),

Gene: Whiteclaw_11 Start: 7161, Stop: 7619, Start Num: 13

Candidate Starts for Whiteclaw_11:

(Start: 13 @7161 has 31 MA's), (29, 7209), (38, 7254), (53, 7329), (65, 7383), (80, 7464), (86, 7491), (93, 7533), (100, 7572),

Gene: WinkNick_12 Start: 7678, Stop: 8118, Start Num: 19

Candidate Starts for WinkNick_12:

(Start: 19 @7678 has 70 MA's), (25, 7702), (44, 7792), (46, 7798), (59, 7864), (65, 7897), (88, 8008), (91, 8023),

Gene: Wrackline_23 Start: 10963, Stop: 11397, Start Num: 16

Candidate Starts for Wrackline_23:

(16, 10963), (42, 11080), (48, 11098), (52, 11128), (53, 11131), (73, 11212), (76, 11224), (90, 11287),

Gene: Yeet412_11 Start: 7161, Stop: 7622, Start Num: 13

Candidate Starts for Yeet412_11:

(Start: 13 @7161 has 31 MA's), (22, 7185), (27, 7197), (29, 7209), (38, 7254), (65, 7386), (66, 7392), (79, 7461), (86, 7494), (93, 7536), (100, 7575),

Gene: Yeezy_11 Start: 7380, Stop: 7820, Start Num: 19

Candidate Starts for Yeezy_11:

(5, 7104), (Start: 19 @7380 has 70 MA's), (25, 7404), (44, 7494), (59, 7566), (65, 7599), (88, 7710), (91, 7725),

Gene: Zameen_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Zameen_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (59, 8221), (65, 8254), (88, 8365), (91, 8380),

Gene: Zanella_15 Start: 11580, Stop: 12020, Start Num: 19

Candidate Starts for Zanella_15:

(Start: 19 @11580 has 70 MA's), (27, 11610), (36, 11652), (52, 11742), (63, 11790), (64, 11793), (73, 11832), (74, 11835), (76, 11844), (87, 11889), (89, 11904), (104, 11985),

Gene: Zirinka_11 Start: 8035, Stop: 8475, Start Num: 19

Candidate Starts for Zirinka_11:

(Start: 19 @8035 has 70 MA's), (25, 8059), (44, 8149), (46, 8155), (59, 8221), (65, 8254), (88, 8365), (91, 8380),