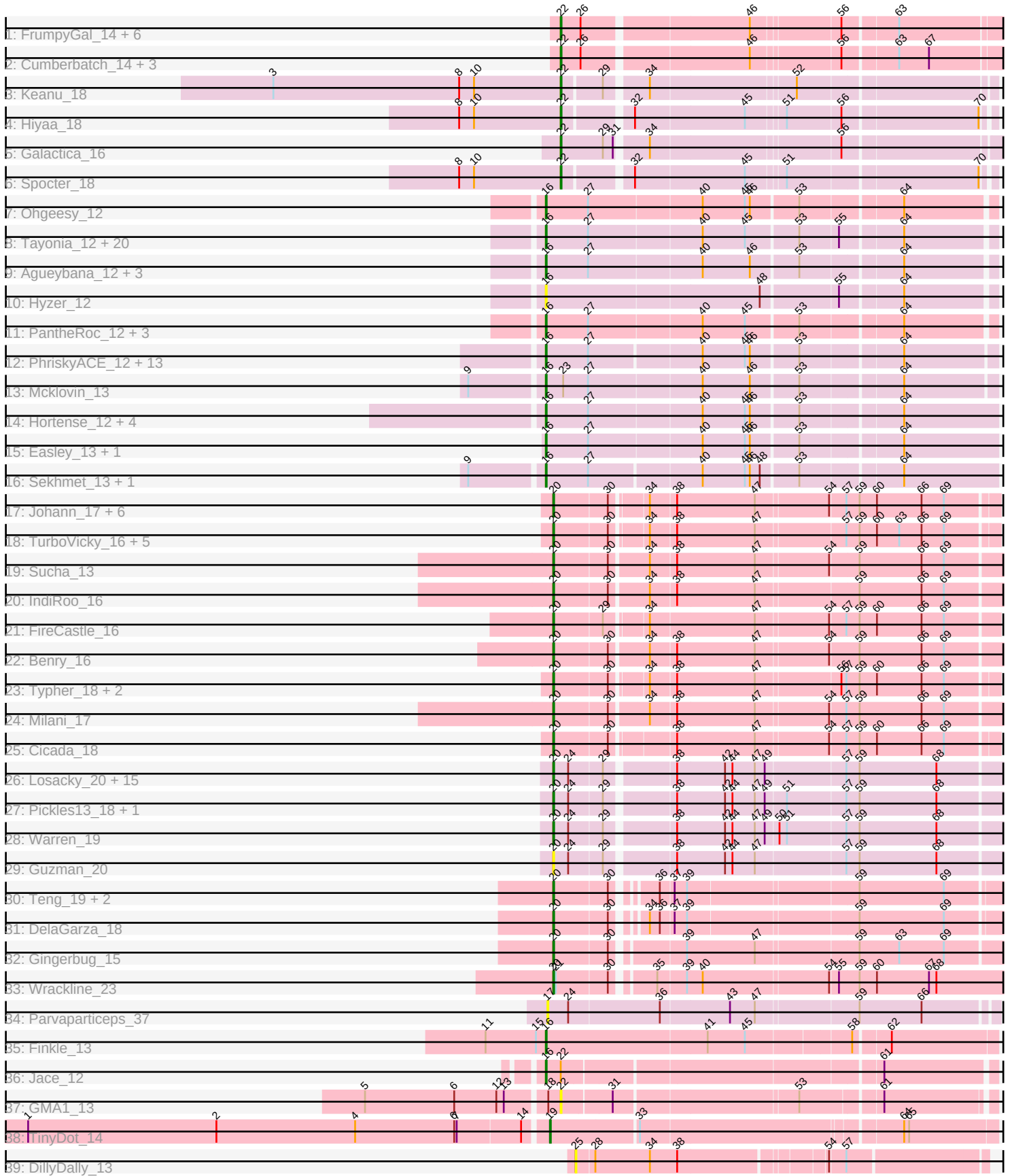


Pham 274111



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 274111 Report

This analysis was run 02/07/26 on database version 634.

Pham number 274111 has 124 members, 23 are drafts.

Phages represented in each track:

- Track 1 : FrumpyGal_14, HFrancette_14, Vondra_14, Eklok_14, Eastland_14, AxeJC_14, Ignacio_14
- Track 2 : Cumberbatch_14, Piccadilly_14, Schlegelian_14, ArizonaGT_14
- Track 3 : Keanu_18
- Track 4 : Hiya_18
- Track 5 : Galactica_16
- Track 6 : Spocter_18
- Track 7 : Ohgeesy_12
- Track 8 : Tayonia_12, BatStarr_12, Maridalia_12, TimTam_12, Hugley_12, Zameen_12, BaxterFox_12, Kita_12, Suscepit_12, Bosnia_12, Neobush_12, Antonio_12, AlumE_12, Herod_12, Eviarto_12, Manasvini_12, Polly_12, Eudoria_12, BoyNamedSue_12, Nymphadora_12, Trumpet_12
- Track 9 : Agueybana_12, Madeline_12, Madavieve_12, Sidious_12
- Track 10 : Hyzer_12
- Track 11 : PantheRoc_12, Zirinka_12, Bialota_12, Yeezy_12
- Track 12 : PhriskyACE_12, Dolores_13, Clark_13, MichaelScott_13, Annalisa_13, DobbysSock_12, Tuti_14, WinkNick_13, Oregano_13, Dorito_12, Beenie_13, Samman98_13, Thimann_13, Suerte_12
- Track 13 : Mcklovin_13
- Track 14 : Hortense_12, Twinkle_12, Howe_12, Adora_12, Shlim410_12
- Track 15 : Easley_13, Powerball_12
- Track 16 : Sekhmet_13, Invectra_13
- Track 17 : Johann_17, Htur_16, Linayshia_16, PermaG_17, Rasovi_16, Goodman_17, Olympi_18
- Track 18 : TurboVicky_16, Jera_17, SBlackberry_16, Zanella_16, Rootkit7_16, Alove_16
- Track 19 : Sucha_13
- Track 20 : IndiRoo_16
- Track 21 : FireCastle_16
- Track 22 : Benry_16
- Track 23 : Typher_18, Labella_18, AyoTeo_18
- Track 24 : Milani_17
- Track 25 : Cicada_18
- Track 26 : Losacky_20, Appa_18, PhillyJawn_19, Carrillo_20, MenE_19, Antuna_19, Blett_19, CookieDog_19, Bush_19, Phingu_21, Violeta_20, Jakelyne_21, Winchester007_34, Mariel_22, Dropshot_18, Phonengingi_18
- Track 27 : Pickles13_18, NCRodriguez_20

- Track 28 : Warren_19
- Track 29 : Guzman_20
- Track 30 : Teng_19, Sweetums_18, Lesiram_18
- Track 31 : DelaGarza_18
- Track 32 : Gingerbug_15
- Track 33 : Wrackline_23
- Track 34 : Parvarticeps_37
- Track 35 : Finkle_13
- Track 36 : Jace_12
- Track 37 : GMA1_13
- Track 38 : TinyDot_14
- Track 39 : DillyDally_13

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

The start number called the most often in the published annotations is 16, it was called in 52 of the 101 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adora_12, Agueybana_12, AlumE_12, Annalisa_13, Antonio_12, BatStarr_12, BaxterFox_12, Beenie_13, Bialota_12, Bosnia_12, BoyNamedSue_12, Clark_13, DobbysSock_12, Dolores_13, Dorito_12, Easley_13, Eudoria_12, Eviarto_12, Finkle_13, Herod_12, Hortense_12, Howe_12, Hugley_12, Hyzer_12, Invectra_13, Jace_12, Kita_12, Madavieve_12, Madeline_12, Manasvini_12, Maridalia_12, Mcklovin_13, MichaelScott_13, Neobush_12, Nymphadora_12, Ohgeesy_12, Oregano_13, PantheRoc_12, PhriskyACE_12, Polly_12, Powerball_12, Samman98_13, Sekhmet_13, Shlim410_12, Sidious_12, Suerte_12, Suscepit_12, Tayonia_12, Thimann_13, TimTam_12, Trumpet_12, Tuti_14, Twinkle_12, WinkNick_13, Yeezy_12, Zameen_12, Zirinka_12,

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

-

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

- Alove_16, Antuna_19, Appa_18, ArizonaGT_14, AxeJC_14, AyoTeo_18, Benry_16, Blett_19, Bush_19, Carrillo_20, Cicada_18, CookieDog_19, Cumberbatch_14, DelaGarza_18, DillyDally_13, Dropshot_18, Eastland_14, Eklok_14, FireCastle_16, FrumpyGal_14, GMA1_13, Galactica_16, Gingerbug_15, Goodman_17, Guzman_20, HFrancette_14, Hiyaa_18, Htur_16, Ignacio_14, IndiRoo_16, Jakelyne_21, Jera_17, Johann_17, Keanu_18, Labella_18, Lesiram_18, Linayshia_16, Losacky_20, Mariel_22, MenE_19, Milani_17, NCRodriguez_20, Olympi_18, Parvarticeps_37, PermaG_17, PhillyJawn_19, Phingu_21, Phonegingi_18, Piccadilly_14, Pickles13_18, Rasovi_16, Rootkit7_16, SBlackberry_16, Schlegelian_14, Spocter_18, Sucha_13, Sweetums_18, Teng_19, TinyDot_14, TurboVicky_16, Typher_18, Violeta_20, Vondra_14, Warren_19, Winchester007_34, Wrackline_23, Zanella_16,

Summary by start number:

Start 16:

- Found in 57 of 124 (46.0%) of genes in pham
- Manual Annotations of this start: 52 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adora_12 (CZ4), Agueybana_12 (CZ1), AlumE_12 (CZ1), Annalisa_13 (CZ4), Antonio_12 (CZ1), BatStarr_12 (CZ1), BaxterFox_12 (CZ3), Beenie_13 (CZ4), Bialota_12 (CZ1), Bosnia_12 (CZ1), BoyNamedSue_12 (CZ1), Clark_13 (CZ4), DobbysSock_12 (CZ4), Dolores_13 (CZ4), Dorito_12 (CZ4), Easley_13 (CZ4), Eudoria_12 (CZ1), Eviarto_12 (CZ1), Finkle_13 (singleton), Herod_12 (CZ1), Hortense_12 (CZ4), Howe_12 (CZ4), Hugley_12 (CZ1), Hyzer_12 (CZ1), Invecra_13 (CZ4), Jace_12 (singleton), Kita_12 (CZ1), Madavieve_12 (CZ1), Madeline_12 (CZ1), Manasvini_12 (CZ1), Maridalia_12 (CZ1), Mcklovin_13 (CZ4), MichaelScott_13 (CZ4), Neobush_12 (CZ1), Nymphadora_12 (CZ1), Ohgeesy_12 (CZ), Oregano_13 (CZ4), PantheRoc_12 (CZ3), PhriskyACE_12 (CZ4), Polly_12 (CZ1), Powerball_12 (CZ4), Samman98_13 (CZ4), Sekhmet_13 (CZ4), Shlim410_12 (CZ4), Sidious_12 (CZ7), Suerte_12 (CZ4), Suscepit_12 (CZ1), Tayonia_12 (CZ1), Thimann_13 (CZ4), TimTam_12 (CZ1), Trumpet_12 (CZ1), Tuti_14 (CZ4), Twinkle_12 (CZ4), WinkNick_13 (CZ4), Yeezy_12 (CZ3), Zameen_12 (CZ1), Zirinka_12 (CZ1),

Start 17:

- Found in 1 of 124 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Parvaparticeps_37 (UNK),

Start 19:

- Found in 1 of 124 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TinyDot_14 (singleton),

Start 20:

- Found in 48 of 124 (38.7%) of genes in pham
- Manual Annotations of this start: 33 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alove_16 (EJ), Antuna_19 (GA), Appa_18 (GA), AyoTeo_18 (EJ), Benry_16 (EJ), Blett_19 (GA), Bush_19 (GA), Carrillo_20 (GA), Cicada_18 (EJ), CookieDog_19 (GA), DelaGarza_18 (GF), Dropshot_18 (GA), FireCastle_16 (EJ), Gingerbug_15 (GF), Goodman_17 (EJ), Guzman_20 (GA), Htur_16 (EJ), IndiRoo_16 (EJ), Jakelyne_21 (GA), Jera_17 (EJ), Johann_17 (EJ), Labella_18 (EJ), Lesiram_18 (GF), Linayshia_16 (EJ), Losacky_20 (GA), Mariel_22 (GA), MenE_19 (GA), Milani_17 (EJ), NCRodriguez_20 (GA), Olympi_18 (EJ), PermaG_17 (EJ), PhillyJawn_19 (GA), Phingu_21 (GA), Phonegingi_18 (GA), Pickles13_18 (GA), Rasovi_16 (EJ), Rootkit7_16 (EJ), SBlackberry_16 (EJ), Sucha_13 (EJ), Sweetums_18 (GF), Teng_19 (GF), TurboVicky_16 (EJ), Typher_18 (EJ), Violeta_20 (GA), Warren_19 (GA), Winchester007_34 (GA), Wrackline_23 (GF), Zanella_16 (EJ),

Start 22:

- Found in 17 of 124 (13.7%) of genes in pham
- Manual Annotations of this start: 15 of 101
- Called 94.1% of time when present

- Phage (with cluster) where this start called: ArizonaGT_14 (BP), AxeJC_14 (BP), Cumberbatch_14 (BP), Eastland_14 (BP), Eklok_14 (BP), FrumpyGal_14 (BP), GMA1_13 (singleton), Galactica_16 (BQ), HFrancette_14 (BP), Hiyaa_18 (BQ), Ignacio_14 (BP), Keanu_18 (BQ), Piccadilly_14 (BP), Schlegelian_14 (BP), Spocter_18 (BQ), Vondra_14 (BP),

Start 25:

- Found in 1 of 124 (0.8%) 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_13 (singleton),

Summary by clusters:

There are 12 clusters represented in this pham: singleton, EJ, CZ3, CZ1, CZ7, CZ4, GF, BP, BQ, GA, CZ, UNK,

Info for manual annotations of cluster BP:

- Start number 22 was manually annotated 11 times for cluster BP.

Info for manual annotations of cluster BQ:

- Start number 22 was manually annotated 4 times for cluster BQ.

Info for manual annotations of cluster CZ:

- Start number 16 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 16 was manually annotated 23 times for cluster CZ1.

Info for manual annotations of cluster CZ3:

- Start number 16 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 16 was manually annotated 22 times for cluster CZ4.

Info for manual annotations of cluster CZ7:

- Start number 16 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster EJ:

- Start number 20 was manually annotated 18 times for cluster EJ.

Info for manual annotations of cluster GA:

- Start number 20 was manually annotated 11 times for cluster GA.

Info for manual annotations of cluster GF:

- Start number 20 was manually annotated 4 times for cluster GF.

Gene Information:

Gene: Adora_12 Start: 7820, Stop: 8341, Start Num: 16

Candidate Starts for Adora_12:

(Start: 16 @7820 has 52 MA's), (27, 7871), (40, 8003), (45, 8054), (46, 8060), (53, 8114), (64, 8228),

Gene: Agueybana_12 Start: 8479, Stop: 8991, Start Num: 16

Candidate Starts for Agueybana_12:

(Start: 16 @8479 has 52 MA's), (27, 8530), (40, 8662), (46, 8719), (53, 8773), (64, 8887),

Gene: Alove_16 Start: 12044, Stop: 12544, Start Num: 20

Candidate Starts for Alove_16:

(Start: 20 @12044 has 33 MA's), (30, 12107), (34, 12143), (38, 12173), (47, 12266), (57, 12368), (59, 12383), (60, 12404), (63, 12431), (66, 12458), (69, 12485),

Gene: AlumE_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for AlumE_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Annalisa_13 Start: 8126, Stop: 8638, Start Num: 16

Candidate Starts for Annalisa_13:

(Start: 16 @8126 has 52 MA's), (27, 8177), (40, 8306), (45, 8357), (46, 8363), (53, 8417), (64, 8531),

Gene: Antonio_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Antonio_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Antuna_19 Start: 10118, Stop: 10630, Start Num: 20

Candidate Starts for Antuna_19:

(Start: 20 @10118 has 33 MA's), (24, 10136), (29, 10175), (38, 10250), (42, 10307), (44, 10316), (47, 10343), (49, 10355), (57, 10448), (59, 10463), (68, 10556),

Gene: Appa_18 Start: 9980, Stop: 10492, Start Num: 20

Candidate Starts for Appa_18:

(Start: 20 @9980 has 33 MA's), (24, 9998), (29, 10037), (38, 10112), (42, 10169), (44, 10178), (47, 10205), (49, 10217), (57, 10310), (59, 10325), (68, 10418),

Gene: ArizonaGT_14 Start: 8759, Stop: 9256, Start Num: 22

Candidate Starts for ArizonaGT_14:

(Start: 22 @8759 has 15 MA's), (26, 8783), (46, 8972), (56, 9071), (63, 9131), (67, 9167),

Gene: AxeJC_14 Start: 8772, Stop: 9272, Start Num: 22

Candidate Starts for AxeJC_14:

(Start: 22 @8772 has 15 MA's), (26, 8796), (46, 8985), (56, 9084), (63, 9144),

Gene: AyoTeo_18 Start: 12175, Stop: 12675, Start Num: 20

Candidate Starts for AyoTeo_18:

(Start: 20 @12175 has 33 MA's), (30, 12238), (34, 12274), (38, 12304), (47, 12397), (56, 12493), (57, 12499), (59, 12514), (60, 12535), (66, 12589), (69, 12616),

Gene: BatStarr_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for BatStarr_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: BaxterFox_12 Start: 7826, Stop: 8338, Start Num: 16

Candidate Starts for BaxterFox_12:

(Start: 16 @7826 has 52 MA's), (27, 7877), (40, 8009), (45, 8060), (53, 8120), (55, 8165), (64, 8234),

Gene: Beenie_13 Start: 8119, Stop: 8637, Start Num: 16

Candidate Starts for Beenie_13:

(Start: 16 @8119 has 52 MA's), (27, 8170), (40, 8299), (45, 8350), (46, 8356), (53, 8410), (64, 8524),

Gene: Benry_16 Start: 10229, Stop: 10741, Start Num: 20

Candidate Starts for Benry_16:

(Start: 20 @10229 has 33 MA's), (30, 10292), (34, 10334), (38, 10364), (47, 10457), (54, 10541), (59, 10574), (66, 10649), (69, 10676),

Gene: Bialota_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Bialota_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (64, 8886),

Gene: Blett_19 Start: 10133, Stop: 10645, Start Num: 20

Candidate Starts for Blett_19:

(Start: 20 @10133 has 33 MA's), (24, 10151), (29, 10190), (38, 10265), (42, 10322), (44, 10331), (47, 10358), (49, 10370), (57, 10463), (59, 10478), (68, 10571),

Gene: Bosnia_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Bosnia_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: BoyNamedSue_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for BoyNamedSue_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Bush_19 Start: 10114, Stop: 10626, Start Num: 20

Candidate Starts for Bush_19:

(Start: 20 @10114 has 33 MA's), (24, 10132), (29, 10171), (38, 10246), (42, 10303), (44, 10312), (47, 10339), (49, 10351), (57, 10444), (59, 10459), (68, 10552),

Gene: Carrillo_20 Start: 10087, Stop: 10599, Start Num: 20

Candidate Starts for Carrillo_20:

(Start: 20 @10087 has 33 MA's), (24, 10105), (29, 10144), (38, 10219), (42, 10276), (44, 10285), (47, 10312), (49, 10324), (57, 10417), (59, 10432), (68, 10525),

Gene: Cicada_18 Start: 12280, Stop: 12780, Start Num: 20

Candidate Starts for Cicada_18:

(Start: 20 @12280 has 33 MA's), (30, 12343), (38, 12409), (47, 12502), (54, 12586), (57, 12604), (59, 12619), (60, 12640), (66, 12694), (69, 12721),

Gene: Clark_13 Start: 8126, Stop: 8638, Start Num: 16

Candidate Starts for Clark_13:

(Start: 16 @8126 has 52 MA's), (27, 8177), (40, 8306), (45, 8357), (46, 8363), (53, 8417), (64, 8531),

Gene: CookieDog_19 Start: 10114, Stop: 10626, Start Num: 20

Candidate Starts for CookieDog_19:

(Start: 20 @10114 has 33 MA's), (24, 10132), (29, 10171), (38, 10246), (42, 10303), (44, 10312), (47, 10339), (49, 10351), (57, 10444), (59, 10459), (68, 10552),

Gene: Cumberbatch_14 Start: 8759, Stop: 9256, Start Num: 22

Candidate Starts for Cumberbatch_14:

(Start: 22 @8759 has 15 MA's), (26, 8783), (46, 8972), (56, 9071), (63, 9131), (67, 9167),

Gene: DelaGarza_18 Start: 10753, Stop: 11244, Start Num: 20

Candidate Starts for DelaGarza_18:

(Start: 20 @10753 has 33 MA's), (30, 10816), (34, 10843), (36, 10855), (37, 10870), (39, 10885), (59, 11080), (69, 11182),

Gene: DillyDally_13 Start: 8708, Stop: 9166, Start Num: 25

Candidate Starts for DillyDally_13:

(25, 8708), (28, 8729), (34, 8795), (38, 8828), (54, 8990), (57, 9008),

Gene: DobbysSock_12 Start: 7618, Stop: 8136, Start Num: 16

Candidate Starts for DobbysSock_12:

(Start: 16 @7618 has 52 MA's), (27, 7669), (40, 7798), (45, 7849), (46, 7855), (53, 7909), (64, 8023),

Gene: Dolores_13 Start: 8120, Stop: 8638, Start Num: 16

Candidate Starts for Dolores_13:

(Start: 16 @8120 has 52 MA's), (27, 8171), (40, 8300), (45, 8351), (46, 8357), (53, 8411), (64, 8525),

Gene: Dorito_12 Start: 7623, Stop: 8135, Start Num: 16

Candidate Starts for Dorito_12:

(Start: 16 @7623 has 52 MA's), (27, 7674), (40, 7803), (45, 7854), (46, 7860), (53, 7914), (64, 8028),

Gene: Dropshot_18 Start: 9980, Stop: 10492, Start Num: 20

Candidate Starts for Dropshot_18:

(Start: 20 @9980 has 33 MA's), (24, 9998), (29, 10037), (38, 10112), (42, 10169), (44, 10178), (47, 10205), (49, 10217), (57, 10310), (59, 10325), (68, 10418),

Gene: Easley_13 Start: 8121, Stop: 8642, Start Num: 16

Candidate Starts for Easley_13:

(Start: 16 @8121 has 52 MA's), (27, 8172), (40, 8304), (45, 8355), (46, 8361), (53, 8415), (64, 8529),

Gene: Eastland_14 Start: 8760, Stop: 9257, Start Num: 22

Candidate Starts for Eastland_14:

(Start: 22 @8760 has 15 MA's), (26, 8784), (46, 8973), (56, 9072), (63, 9132),

Gene: Eklok_14 Start: 8772, Stop: 9272, Start Num: 22

Candidate Starts for Eklok_14:

(Start: 22 @8772 has 15 MA's), (26, 8796), (46, 8985), (56, 9084), (63, 9144),

Gene: Eudoria_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Eudoria_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Eviarto_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Eviarto_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Finkle_13 Start: 8088, Stop: 8609, Start Num: 16

Candidate Starts for Finkle_13:

(11, 8016), (15, 8076), (Start: 16 @8088 has 52 MA's), (41, 8280), (45, 8325), (58, 8445), (62, 8484),

Gene: FireCastle_16 Start: 11944, Stop: 12447, Start Num: 20

Candidate Starts for FireCastle_16:

(Start: 20 @11944 has 33 MA's), (29, 12001), (34, 12043), (47, 12166), (54, 12250), (57, 12268), (59, 12283), (60, 12304), (66, 12358), (69, 12385),

Gene: FrumpyGal_14 Start: 8760, Stop: 9257, Start Num: 22

Candidate Starts for FrumpyGal_14:

(Start: 22 @8760 has 15 MA's), (26, 8784), (46, 8973), (56, 9072), (63, 9132),

Gene: GMA1_13 Start: 8266, Stop: 8748, Start Num: 22

Candidate Starts for GMA1_13:

(5, 8038), (6, 8146), (12, 8197), (13, 8206), (18, 8251), (Start: 22 @8266 has 15 MA's), (31, 8323), (53, 8533), (61, 8623),

Gene: Galactica_16 Start: 13620, Stop: 14111, Start Num: 22

Candidate Starts for Galactica_16:

(Start: 22 @13620 has 15 MA's), (29, 13671), (31, 13683), (34, 13716), (56, 13932),

Gene: Gingerbug_15 Start: 9935, Stop: 10438, Start Num: 20

Candidate Starts for Gingerbug_15:

(Start: 20 @9935 has 33 MA's), (30, 9998), (39, 10073), (47, 10154), (59, 10271), (63, 10319), (69, 10373),

Gene: Goodman_17 Start: 12192, Stop: 12692, Start Num: 20

Candidate Starts for Goodman_17:

(Start: 20 @12192 has 33 MA's), (30, 12255), (34, 12291), (38, 12321), (47, 12414), (54, 12498), (57, 12516), (59, 12531), (60, 12552), (66, 12606), (69, 12633),

Gene: Guzman_20 Start: 10395, Stop: 10907, Start Num: 20

Candidate Starts for Guzman_20:

(Start: 20 @10395 has 33 MA's), (24, 10413), (29, 10452), (38, 10527), (42, 10584), (44, 10593), (47, 10620), (57, 10725), (59, 10740), (68, 10833),

Gene: HFrancette_14 Start: 8771, Stop: 9271, Start Num: 22

Candidate Starts for HFrancette_14:

(Start: 22 @8771 has 15 MA's), (26, 8795), (46, 8984), (56, 9083), (63, 9143),

Gene: Herod_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Herod_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Hiya_18 Start: 14661, Stop: 15134, Start Num: 22

Candidate Starts for Hiya_18:

(8, 14538), (10, 14556), (Start: 22 @14661 has 15 MA's), (32, 14733), (45, 14862), (51, 14904), (56, 14967), (70, 15123),

Gene: Hortense_12 Start: 7820, Stop: 8341, Start Num: 16

Candidate Starts for Hortense_12:

(Start: 16 @7820 has 52 MA's), (27, 7871), (40, 8003), (45, 8054), (46, 8060), (53, 8114), (64, 8228),

Gene: Howe_12 Start: 7820, Stop: 8341, Start Num: 16

Candidate Starts for Howe_12:

(Start: 16 @7820 has 52 MA's), (27, 7871), (40, 8003), (45, 8054), (46, 8060), (53, 8114), (64, 8228),

Gene: Htur_16 Start: 12213, Stop: 12713, Start Num: 20

Candidate Starts for Htur_16:

(Start: 20 @12213 has 33 MA's), (30, 12276), (34, 12312), (38, 12342), (47, 12435), (54, 12519), (57, 12537), (59, 12552), (60, 12573), (66, 12627), (69, 12654),

Gene: Hugley_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Hugley_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Hyzer_12 Start: 8479, Stop: 8991, Start Num: 16

Candidate Starts for Hyzer_12:

(Start: 16 @8479 has 52 MA's), (48, 8731), (55, 8818), (64, 8887),

Gene: Ignacio_14 Start: 8771, Stop: 9271, Start Num: 22

Candidate Starts for Ignacio_14:

(Start: 22 @8771 has 15 MA's), (26, 8795), (46, 8984), (56, 9083), (63, 9143),

Gene: IndiRoo_16 Start: 10237, Stop: 10749, Start Num: 20

Candidate Starts for IndiRoo_16:

(Start: 20 @10237 has 33 MA's), (30, 10300), (34, 10342), (38, 10372), (47, 10465), (59, 10582), (66, 10657), (69, 10684),

Gene: Invetra_13 Start: 8119, Stop: 8637, Start Num: 16

Candidate Starts for Invetra_13:

(9, 8035), (Start: 16 @8119 has 52 MA's), (27, 8170), (40, 8299), (45, 8350), (46, 8356), (48, 8368), (53, 8410), (64, 8524),

Gene: Jace_12 Start: 8389, Stop: 8895, Start Num: 16

Candidate Starts for Jace_12:

(Start: 16 @8389 has 52 MA's), (Start: 22 @8407 has 15 MA's), (61, 8767),

Gene: Jakelyne_21 Start: 10136, Stop: 10648, Start Num: 20

Candidate Starts for Jakelyne_21:

(Start: 20 @10136 has 33 MA's), (24, 10154), (29, 10193), (38, 10268), (42, 10325), (44, 10334), (47, 10361), (49, 10373), (57, 10466), (59, 10481), (68, 10574),

Gene: Jera_17 Start: 11291, Stop: 11791, Start Num: 20

Candidate Starts for Jera_17:

(Start: 20 @11291 has 33 MA's), (30, 11354), (34, 11390), (38, 11420), (47, 11513), (57, 11615), (59, 11630), (60, 11651), (63, 11678), (66, 11705), (69, 11732),

Gene: Johann_17 Start: 12192, Stop: 12692, Start Num: 20

Candidate Starts for Johann_17:

(Start: 20 @12192 has 33 MA's), (30, 12255), (34, 12291), (38, 12321), (47, 12414), (54, 12498), (57, 12516), (59, 12531), (60, 12552), (66, 12606), (69, 12633),

Gene: Keanu_18 Start: 14701, Stop: 15177, Start Num: 22

Candidate Starts for Keanu_18:

(3, 14353), (8, 14578), (10, 14596), (Start: 22 @14701 has 15 MA's), (29, 14746), (34, 14791), (52, 14956),

Gene: Kita_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Kita_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Labella_18 Start: 12179, Stop: 12679, Start Num: 20

Candidate Starts for Labella_18:

(Start: 20 @12179 has 33 MA's), (30, 12242), (34, 12278), (38, 12308), (47, 12401), (56, 12497), (57, 12503), (59, 12518), (60, 12539), (66, 12593), (69, 12620),

Gene: Lesiram_18 Start: 10729, Stop: 11214, Start Num: 20

Candidate Starts for Lesiram_18:

(Start: 20 @10729 has 33 MA's), (30, 10792), (36, 10831), (37, 10846), (39, 10861), (59, 11056), (69, 11158),

Gene: Linayshia_16 Start: 12205, Stop: 12705, Start Num: 20

Candidate Starts for Linayshia_16:

(Start: 20 @12205 has 33 MA's), (30, 12268), (34, 12304), (38, 12334), (47, 12427), (54, 12511), (57, 12529), (59, 12544), (60, 12565), (66, 12619), (69, 12646),

Gene: Losacky_20 Start: 10260, Stop: 10772, Start Num: 20

Candidate Starts for Losacky_20:

(Start: 20 @10260 has 33 MA's), (24, 10278), (29, 10317), (38, 10392), (42, 10449), (44, 10458), (47, 10485), (49, 10497), (57, 10590), (59, 10605), (68, 10698),

Gene: Madavieve_12 Start: 8479, Stop: 8991, Start Num: 16

Candidate Starts for Madavieve_12:

(Start: 16 @8479 has 52 MA's), (27, 8530), (40, 8662), (46, 8719), (53, 8773), (64, 8887),

Gene: Madeline_12 Start: 8479, Stop: 8991, Start Num: 16

Candidate Starts for Madeline_12:

(Start: 16 @8479 has 52 MA's), (27, 8530), (40, 8662), (46, 8719), (53, 8773), (64, 8887),

Gene: Manasvini_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Manasvini_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Maridalia_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Maridalia_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Mariel_22 Start: 10291, Stop: 10803, Start Num: 20

Candidate Starts for Mariel_22:

(Start: 20 @10291 has 33 MA's), (24, 10309), (29, 10348), (38, 10423), (42, 10480), (44, 10489), (47, 10516), (49, 10528), (57, 10621), (59, 10636), (68, 10729),

Gene: Mcklovin_13 Start: 8936, Stop: 9451, Start Num: 16

Candidate Starts for Mcklovin_13:

(9, 8852), (Start: 16 @8936 has 52 MA's), (23, 8957), (27, 8987), (40, 9119), (46, 9176), (53, 9230), (64, 9344),

Gene: MenE_19 Start: 10248, Stop: 10760, Start Num: 20

Candidate Starts for MenE_19:

(Start: 20 @10248 has 33 MA's), (24, 10266), (29, 10305), (38, 10380), (42, 10437), (44, 10446), (47, 10473), (49, 10485), (57, 10578), (59, 10593), (68, 10686),

Gene: MichaelScott_13 Start: 8119, Stop: 8637, Start Num: 16

Candidate Starts for MichaelScott_13:

(Start: 16 @8119 has 52 MA's), (27, 8170), (40, 8299), (45, 8350), (46, 8356), (53, 8410), (64, 8524),

Gene: Milani_17 Start: 10888, Stop: 11400, Start Num: 20

Candidate Starts for Milani_17:

(Start: 20 @10888 has 33 MA's), (30, 10951), (34, 10993), (38, 11023), (47, 11116), (54, 11200), (57, 11218), (59, 11233), (66, 11308), (69, 11335),

Gene: NCRodriguez_20 Start: 10249, Stop: 10761, Start Num: 20

Candidate Starts for NCRodriguez_20:

(Start: 20 @10249 has 33 MA's), (24, 10267), (29, 10306), (38, 10381), (42, 10438), (44, 10447), (47, 10474), (49, 10486), (51, 10510), (57, 10579), (59, 10594), (68, 10687),

Gene: Neobush_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Neobush_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Nymphadora_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Nymphadora_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Ohgeesy_12 Start: 7826, Stop: 8338, Start Num: 16

Candidate Starts for Ohgeesy_12:

(Start: 16 @7826 has 52 MA's), (27, 7877), (40, 8009), (45, 8060), (46, 8066), (53, 8120), (64, 8234),

Gene: Olympi_18 Start: 12183, Stop: 12683, Start Num: 20

Candidate Starts for Olympi_18:

(Start: 20 @12183 has 33 MA's), (30, 12246), (34, 12282), (38, 12312), (47, 12405), (54, 12489), (57, 12507), (59, 12522), (60, 12543), (66, 12597), (69, 12624),

Gene: Oregano_13 Start: 7790, Stop: 8308, Start Num: 16

Candidate Starts for Oregano_13:

(Start: 16 @7790 has 52 MA's), (27, 7841), (40, 7970), (45, 8021), (46, 8027), (53, 8081), (64, 8195),

Gene: PantheRoc_12 Start: 7826, Stop: 8338, Start Num: 16

Candidate Starts for PantheRoc_12:

(Start: 16 @7826 has 52 MA's), (27, 7877), (40, 8009), (45, 8060), (53, 8120), (64, 8234),

Gene: Parvaparticeps_37 Start: 28010, Stop: 27492, Start Num: 17

Candidate Starts for Parvaparticeps_37:

(17, 28010), (24, 27986), (36, 27878), (43, 27797), (47, 27767), (59, 27650), (66, 27575),

Gene: PermaG_17 Start: 12255, Stop: 12755, Start Num: 20

Candidate Starts for PermaG_17:

(Start: 20 @12255 has 33 MA's), (30, 12318), (34, 12354), (38, 12384), (47, 12477), (54, 12561), (57, 12579), (59, 12594), (60, 12615), (66, 12669), (69, 12696),

Gene: PhillyJawn_19 Start: 9980, Stop: 10492, Start Num: 20

Candidate Starts for PhillyJawn_19:

(Start: 20 @9980 has 33 MA's), (24, 9998), (29, 10037), (38, 10112), (42, 10169), (44, 10178), (47, 10205), (49, 10217), (57, 10310), (59, 10325), (68, 10418),

Gene: Phingu_21 Start: 10139, Stop: 10651, Start Num: 20

Candidate Starts for Phingu_21:

(Start: 20 @10139 has 33 MA's), (24, 10157), (29, 10196), (38, 10271), (42, 10328), (44, 10337), (47, 10364), (49, 10376), (57, 10469), (59, 10484), (68, 10577),

Gene: Phonegingi_18 Start: 9980, Stop: 10492, Start Num: 20

Candidate Starts for Phonegingi_18:

(Start: 20 @9980 has 33 MA's), (24, 9998), (29, 10037), (38, 10112), (42, 10169), (44, 10178), (47, 10205), (49, 10217), (57, 10310), (59, 10325), (68, 10418),

Gene: PhriskyACE_12 Start: 7623, Stop: 8135, Start Num: 16

Candidate Starts for PhriskyACE_12:

(Start: 16 @7623 has 52 MA's), (27, 7674), (40, 7803), (45, 7854), (46, 7860), (53, 7914), (64, 8028),

Gene: Piccadilly_14 Start: 8759, Stop: 9256, Start Num: 22

Candidate Starts for Piccadilly_14:

(Start: 22 @8759 has 15 MA's), (26, 8783), (46, 8972), (56, 9071), (63, 9131), (67, 9167),

Gene: Pickles13_18 Start: 10150, Stop: 10662, Start Num: 20

Candidate Starts for Pickles13_18:

(Start: 20 @10150 has 33 MA's), (24, 10168), (29, 10207), (38, 10282), (42, 10339), (44, 10348), (47, 10375), (49, 10387), (51, 10411), (57, 10480), (59, 10495), (68, 10588),

Gene: Polly_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Polly_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Powerball_12 Start: 7626, Stop: 8144, Start Num: 16

Candidate Starts for Powerball_12:

(Start: 16 @7626 has 52 MA's), (27, 7677), (40, 7812), (45, 7863), (46, 7869), (53, 7923), (64, 8037),

Gene: Rasovi_16 Start: 12213, Stop: 12713, Start Num: 20

Candidate Starts for Rasovi_16:

(Start: 20 @12213 has 33 MA's), (30, 12276), (34, 12312), (38, 12342), (47, 12435), (54, 12519), (57, 12537), (59, 12552), (60, 12573), (66, 12627), (69, 12654),

Gene: Rootkit7_16 Start: 12044, Stop: 12544, Start Num: 20

Candidate Starts for Rootkit7_16:

(Start: 20 @12044 has 33 MA's), (30, 12107), (34, 12143), (38, 12173), (47, 12266), (57, 12368), (59, 12383), (60, 12404), (63, 12431), (66, 12458), (69, 12485),

Gene: SBlackberry_16 Start: 12050, Stop: 12550, Start Num: 20

Candidate Starts for SBlackberry_16:

(Start: 20 @12050 has 33 MA's), (30, 12113), (34, 12149), (38, 12179), (47, 12272), (57, 12374), (59, 12389), (60, 12410), (63, 12437), (66, 12464), (69, 12491),

Gene: Samman98_13 Start: 8120, Stop: 8638, Start Num: 16

Candidate Starts for Samman98_13:

(Start: 16 @8120 has 52 MA's), (27, 8171), (40, 8300), (45, 8351), (46, 8357), (53, 8411), (64, 8525),

Gene: Schlegelian_14 Start: 8759, Stop: 9256, Start Num: 22

Candidate Starts for Schlegelian_14:

(Start: 22 @8759 has 15 MA's), (26, 8783), (46, 8972), (56, 9071), (63, 9131), (67, 9167),

Gene: Sekhmet_13 Start: 8119, Stop: 8637, Start Num: 16

Candidate Starts for Sekhmet_13:

(9, 8035), (Start: 16 @8119 has 52 MA's), (27, 8170), (40, 8299), (45, 8350), (46, 8356), (48, 8368), (53, 8410), (64, 8524),

Gene: Shlim410_12 Start: 7820, Stop: 8341, Start Num: 16

Candidate Starts for Shlim410_12:

(Start: 16 @7820 has 52 MA's), (27, 7871), (40, 8003), (45, 8054), (46, 8060), (53, 8114), (64, 8228),

Gene: Sidious_12 Start: 7821, Stop: 8336, Start Num: 16

Candidate Starts for Sidious_12:

(Start: 16 @7821 has 52 MA's), (27, 7872), (40, 8004), (46, 8061), (53, 8115), (64, 8229),

Gene: Spocter_18 Start: 14649, Stop: 15122, Start Num: 22

Candidate Starts for Spocter_18:

(8, 14526), (10, 14544), (Start: 22 @14649 has 15 MA's), (32, 14721), (45, 14850), (51, 14892), (70, 15111),

Gene: Sucha_13 Start: 9226, Stop: 9738, Start Num: 20

Candidate Starts for Sucha_13:

(Start: 20 @9226 has 33 MA's), (30, 9289), (34, 9331), (38, 9361), (47, 9454), (54, 9538), (59, 9571), (66, 9646), (69, 9673),

Gene: Suerte_12 Start: 7618, Stop: 8136, Start Num: 16

Candidate Starts for Suerte_12:

(Start: 16 @7618 has 52 MA's), (27, 7669), (40, 7798), (45, 7849), (46, 7855), (53, 7909), (64, 8023),

Gene: Suscepit_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Suscepit_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Sweetums_18 Start: 10827, Stop: 11318, Start Num: 20

Candidate Starts for Sweetums_18:

(Start: 20 @10827 has 33 MA's), (30, 10890), (36, 10929), (37, 10944), (39, 10959), (59, 11154), (69, 11256),

Gene: Tayonia_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Tayonia_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Teng_19 Start: 10750, Stop: 11241, Start Num: 20

Candidate Starts for Teng_19:

(Start: 20 @10750 has 33 MA's), (30, 10813), (36, 10852), (37, 10867), (39, 10882), (59, 11077), (69, 11179),

Gene: Thimann_13 Start: 8120, Stop: 8638, Start Num: 16

Candidate Starts for Thimann_13:

(Start: 16 @8120 has 52 MA's), (27, 8171), (40, 8300), (45, 8351), (46, 8357), (53, 8411), (64, 8525),

Gene: TimTam_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for TimTam_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: TinyDot_14 Start: 8749, Stop: 9258, Start Num: 19

Candidate Starts for TinyDot_14:

(1, 8131), (2, 8359), (4, 8527), (6, 8647), (7, 8650), (14, 8725), (Start: 19 @8749 has 1 MA's), (33, 8851), (64, 9148), (65, 9154),

Gene: Trumpet_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Trumpet_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: TurboVicky_16 Start: 12044, Stop: 12544, Start Num: 20

Candidate Starts for TurboVicky_16:

(Start: 20 @12044 has 33 MA's), (30, 12107), (34, 12143), (38, 12173), (47, 12266), (57, 12368), (59, 12383), (60, 12404), (63, 12431), (66, 12458), (69, 12485),

Gene: Tuti_14 Start: 8119, Stop: 8640, Start Num: 16

Candidate Starts for Tuti_14:

(Start: 16 @8119 has 52 MA's), (27, 8167), (40, 8302), (45, 8353), (46, 8359), (53, 8413), (64, 8527),

Gene: Twinkle_12 Start: 7820, Stop: 8341, Start Num: 16

Candidate Starts for Twinkle_12:

(Start: 16 @7820 has 52 MA's), (27, 7871), (40, 8003), (45, 8054), (46, 8060), (53, 8114), (64, 8228),

Gene: Typher_18 Start: 12178, Stop: 12678, Start Num: 20

Candidate Starts for Typher_18:

(Start: 20 @12178 has 33 MA's), (30, 12241), (34, 12277), (38, 12307), (47, 12400), (56, 12496), (57, 12502), (59, 12517), (60, 12538), (66, 12592), (69, 12619),

Gene: Violeta_20 Start: 10078, Stop: 10590, Start Num: 20

Candidate Starts for Violeta_20:

(Start: 20 @10078 has 33 MA's), (24, 10096), (29, 10135), (38, 10210), (42, 10267), (44, 10276), (47, 10303), (49, 10315), (57, 10408), (59, 10423), (68, 10516),

Gene: Vondra_14 Start: 8768, Stop: 9268, Start Num: 22

Candidate Starts for Vondra_14:

(Start: 22 @8768 has 15 MA's), (26, 8792), (46, 8981), (56, 9080), (63, 9140),

Gene: Warren_19 Start: 10177, Stop: 10689, Start Num: 20

Candidate Starts for Warren_19:

(Start: 20 @10177 has 33 MA's), (24, 10195), (29, 10234), (38, 10309), (42, 10366), (44, 10375), (47, 10402), (49, 10414), (50, 10429), (51, 10438), (57, 10507), (59, 10522), (68, 10615),

Gene: Winchester007_34 Start: 16097, Stop: 16609, Start Num: 20

Candidate Starts for Winchester007_34:

(Start: 20 @16097 has 33 MA's), (24, 16115), (29, 16154), (38, 16229), (42, 16286), (44, 16295), (47, 16322), (49, 16334), (57, 16427), (59, 16442), (68, 16535),

Gene: WinkNick_13 Start: 8120, Stop: 8638, Start Num: 16

Candidate Starts for WinkNick_13:

(Start: 16 @8120 has 52 MA's), (27, 8171), (40, 8300), (45, 8351), (46, 8357), (53, 8411), (64, 8525),

Gene: Wrackline_23 Start: 11409, Stop: 11918, Start Num: 20

Candidate Starts for Wrackline_23:

(Start: 20 @11409 has 33 MA's), (21, 11412), (30, 11472), (35, 11514), (39, 11547), (40, 11565), (54, 11712), (55, 11721), (59, 11745), (60, 11766), (67, 11829), (68, 11838),

Gene: Yeezy_12 Start: 7823, Stop: 8335, Start Num: 16

Candidate Starts for Yeezy_12:

(Start: 16 @7823 has 52 MA's), (27, 7874), (40, 8006), (45, 8057), (53, 8117), (64, 8231),

Gene: Zameen_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Zameen_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (55, 8817), (64, 8886),

Gene: Zanella_16 Start: 12047, Stop: 12547, Start Num: 20

Candidate Starts for Zanella_16:

(Start: 20 @12047 has 33 MA's), (30, 12110), (34, 12146), (38, 12176), (47, 12269), (57, 12371), (59, 12386), (60, 12407), (63, 12434), (66, 12461), (69, 12488),

Gene: Zirinka_12 Start: 8478, Stop: 8990, Start Num: 16

Candidate Starts for Zirinka_12:

(Start: 16 @8478 has 52 MA's), (27, 8529), (40, 8661), (45, 8712), (53, 8772), (64, 8886),