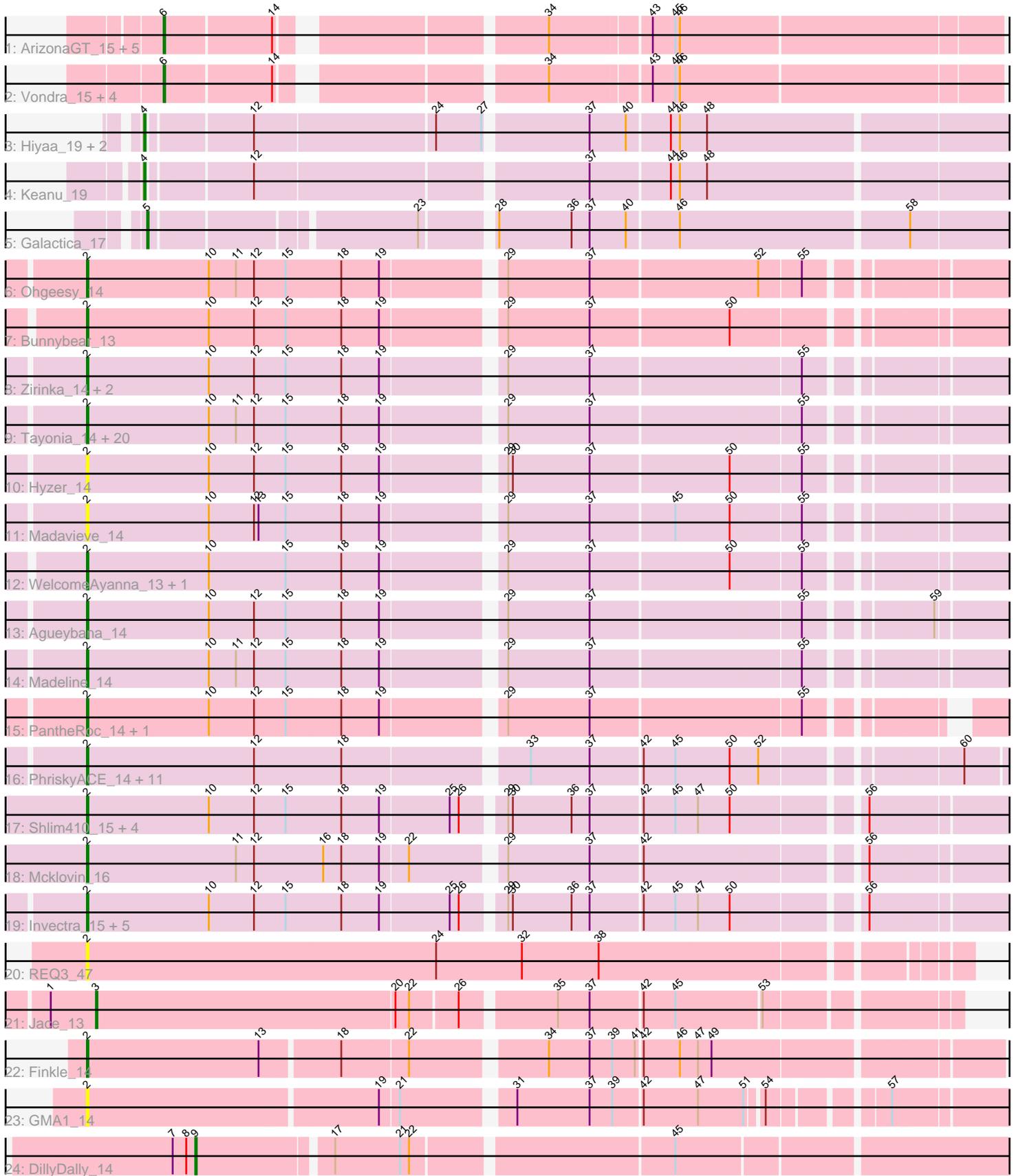


Pham 291096



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 291096 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291096 has 79 members, 8 are drafts.

Phages represented in each track:

- Track 1 : ArizonaGT_15, FrumpyGal_15, Schlegelian_15, Piccadilly_15, Eastland_15, Cumberbatch_15
- Track 2 : Vondra_15, Eklok_15, AxeJC_15, Ignacio_15, HFrancette_15
- Track 3 : Hiya_19, Spocter_19, Kokushibo_20
- Track 4 : Keanu_19
- Track 5 : Galactica_17
- Track 6 : Ohgeesy_14
- Track 7 : Bunnybear_13
- Track 8 : Zirinka_14, Bialota_14, Yeezy_15
- Track 9 : Tayonia_14, Hugley_14, Antonio_14, Eviarto_14, BaxterFox_13, Manasvini_14, TimTam_14, BatStarr_14, Zameen_14, Maridalia_14, Kita_14, Suscepit_14, Neobush_14, Polly_14, Bosnia_14, AlumE_14, BoyNamedSue_14, Eudoria_14, Nymphadora_14, Trumpet_14, Herod_14
- Track 10 : Hyzer_14
- Track 11 : Madavieve_14
- Track 12 : WelcomeAyanna_13, ThankyouJordi_13
- Track 13 : Agueybana_14
- Track 14 : Madeline_14
- Track 15 : PantheRoc_14, Sidious_14
- Track 16 : PhriskyACE_14, Clark_15, Suerte_14, DobbysSock_14, Annalisa_15, Dorito_14, Easley_15, Dolores_15, Samman98_15, Powerball_14, WinkNick_15, Thimann_15
- Track 17 : Shlim410_15, Hortense_15, Adora_15, Twinkle_15, Howe_15
- Track 18 : Mcklovin_16
- Track 19 : Invetra_15, Oregano_15, Sekhmet_15, MichaelScott_15, Tuti_16, Beenie_16
- Track 20 : REQ3_47
- Track 21 : Jace_13
- Track 22 : Finkle_14
- Track 23 : GMA1_14
- Track 24 : DillyDally_14

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

The start number called the most often in the published annotations is 2, it was called in 54 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adora_15, Agueybana_14, AlumE_14, Annalisa_15, Antonio_14, BatStarr_14, BaxterFox_13, Beenie_16, Bialota_14, Bosnia_14, BoyNamedSue_14, Bunnybear_13, Clark_15, DobbysSock_14, Dolores_15, Dorito_14, Easley_15, Eudoria_14, Eviarto_14, Finkle_14, GMA1_14, Herod_14, Hortense_15, Howe_15, Hugley_14, Hyzer_14, Invectra_15, Kita_14, Madavieve_14, Madeline_14, Manasvini_14, Maridalia_14, Mcklovin_16, MichaelScott_15, Neobush_14, Nymphadora_14, Ohgeesy_14, Oregano_15, PantheRoc_14, PhriskyACE_14, Polly_14, Powerball_14, REQ3_47, Samman98_15, Sekhmet_15, Shlim410_15, Sidious_14, Suerte_14, Suscepit_14, Tayonia_14, ThankyouJordi_13, Thimann_15, TimTam_14, Trumpet_14, Tuti_16, Twinkle_15, WelcomeAyanna_13, WinkNick_15, Yeezy_15, Zameen_14, Zirinka_14,

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

-

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

- ArizonaGT_15, AxeJC_15, Cumberbatch_15, DillyDally_14, Eastland_15, Eklok_15, FrumpyGal_15, Galactica_17, HFrancette_15, Hiyaa_19, Ignacio_15, Jace_13, Keanu_19, Kokushibo_20, Piccadilly_15, Schlegelian_15, Spocter_19, Vondra_15,

Summary by start number:

Start 2:

- Found in 61 of 79 (77.2%) of genes in pham
- Manual Annotations of this start: 54 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adora_15 (CZ4), Agueybana_14 (CZ1), AlumE_14 (CZ1), Annalisa_15 (CZ4), Antonio_14 (CZ1), BatStarr_14 (CZ1), BaxterFox_13 (CZ3), Beenie_16 (CZ4), Bialota_14 (CZ1), Bosnia_14 (CZ1), BoyNamedSue_14 (CZ1), Bunnybear_13 (CZ), Clark_15 (CZ4), DobbysSock_14 (CZ4), Dolores_15 (CZ4), Dorito_14 (CZ4), Easley_15 (CZ4), Eudoria_14 (CZ1), Eviarto_14 (CZ1), Finkle_14 (singleton), GMA1_14 (singleton), Herod_14 (CZ1), Hortense_15 (CZ4), Howe_15 (CZ4), Hugley_14 (CZ1), Hyzer_14 (CZ1), Invectra_15 (CZ4), Kita_14 (CZ1), Madavieve_14 (CZ1), Madeline_14 (CZ1), Manasvini_14 (CZ1), Maridalia_14 (CZ1), Mcklovin_16 (CZ4), MichaelScott_15 (CZ4), Neobush_14 (CZ1), Nymphadora_14 (CZ1), Ohgeesy_14 (CZ), Oregano_15 (CZ4), PantheRoc_14 (CZ3), PhriskyACE_14 (CZ4), Polly_14 (CZ1), Powerball_14 (CZ4), REQ3_47 (singleton), Samman98_15 (CZ4), Sekhmet_15 (CZ4), Shlim410_15 (CZ4), Sidious_14 (CZ7), Suerte_14 (CZ4), Suscepit_14 (CZ1), Tayonia_14 (CZ1), ThankyouJordi_13 (CZ1), Thimann_15 (CZ4), TimTam_14 (CZ1), Trumpet_14 (CZ1), Tuti_16 (CZ4), Twinkle_15 (CZ4), WelcomeAyanna_13 (CZ1), WinkNick_15 (CZ4), Yeezy_15 (CZ3), Zameen_14 (CZ1), Zirinka_14 (CZ1),

Start 3:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace_13 (singleton),

Start 4:

- Found in 4 of 79 (5.1%) of genes in pham
- Manual Annotations of this start: 3 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hiyaa_19 (BQ), Keanu_19 (BQ), Kokushibo_20 (BQ), Spocter_19 (BQ),

Start 5:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Galactica_17 (BQ),

Start 6:

- Found in 11 of 79 (13.9%) of genes in pham
- Manual Annotations of this start: 11 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArizonaGT_15 (BP), AxeJC_15 (BP), Cumberbatch_15 (BP), Eastland_15 (BP), Eklok_15 (BP), FrumpyGal_15 (BP), HFrancette_15 (BP), Ignacio_15 (BP), Piccadilly_15 (BP), Schlegelian_15 (BP), Vondra_15 (BP),

Start 9:

- Found in 1 of 79 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DillyDally_14 (singleton),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, CZ3, CZ1, CZ7, CZ4, CZ, BP, BQ,

Info for manual annotations of cluster BP:

- Start number 6 was manually annotated 11 times for cluster BP.

Info for manual annotations of cluster BQ:

- Start number 4 was manually annotated 3 times for cluster BQ.
- Start number 5 was manually annotated 1 time for cluster BQ.

Info for manual annotations of cluster CZ:

- Start number 2 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 2 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ3:

- Start number 2 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 2 was manually annotated 22 times for cluster CZ4.

Info for manual annotations of cluster CZ7:

- Start number 2 was manually annotated 1 time for cluster CZ7.

Gene Information:

Gene: Adora_15 Start: 8998, Stop: 9651, Start Num: 2

Candidate Starts for Adora_15:

(Start: 2 @8998 has 54 MA's), (10, 9079), (12, 9109), (15, 9130), (18, 9166), (19, 9190), (25, 9235), (26, 9241), (29, 9265), (30, 9268), (36, 9307), (37, 9319), (42, 9352), (45, 9373), (47, 9388), (50, 9409), (56, 9487),

Gene: Agueybana_14 Start: 9286, Stop: 9933, Start Num: 2

Candidate Starts for Agueybana_14:

(Start: 2 @9286 has 54 MA's), (10, 9367), (12, 9397), (15, 9418), (18, 9454), (19, 9478), (29, 9550), (37, 9604), (55, 9739), (59, 9811),

Gene: AlumE_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for AlumE_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Annalisa_15 Start: 8856, Stop: 9503, Start Num: 2

Candidate Starts for Annalisa_15:

(Start: 2 @8856 has 54 MA's), (12, 8967), (18, 9024), (33, 9135), (37, 9174), (42, 9207), (45, 9228), (50, 9264), (52, 9282), (60, 9399),

Gene: Antonio_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Antonio_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: ArizonaGT_15 Start: 9256, Stop: 9762, Start Num: 6

Candidate Starts for ArizonaGT_15:

(Start: 6 @9256 has 11 MA's), (14, 9325), (34, 9475), (43, 9538), (45, 9553), (46, 9556),

Gene: AxeJC_15 Start: 9272, Stop: 9778, Start Num: 6

Candidate Starts for AxeJC_15:

(Start: 6 @9272 has 11 MA's), (14, 9341), (34, 9491), (43, 9554), (45, 9569), (46, 9572),

Gene: BatStarr_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for BatStarr_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: BaxterFox_13 Start: 8633, Stop: 9280, Start Num: 2

Candidate Starts for BaxterFox_13:

(Start: 2 @8633 has 54 MA's), (10, 8714), (11, 8732), (12, 8744), (15, 8765), (18, 8801), (19, 8825), (29, 8897), (37, 8951), (55, 9086),

Gene: Beenie_16 Start: 8840, Stop: 9493, Start Num: 2

Candidate Starts for Beenie_16:

(Start: 2 @8840 has 54 MA's), (10, 8921), (12, 8951), (15, 8972), (18, 9008), (19, 9032), (25, 9077), (26, 9083), (29, 9107), (30, 9110), (36, 9149), (37, 9161), (42, 9194), (45, 9215), (47, 9230), (50, 9251), (56, 9329),

Gene: Bialota_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Bialota_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Bosnia_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Bosnia_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: BoyNamedSue_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for BoyNamedSue_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Bunnybear_13 Start: 9302, Stop: 9949, Start Num: 2

Candidate Starts for Bunnybear_13:

(Start: 2 @9302 has 54 MA's), (10, 9383), (12, 9413), (15, 9434), (18, 9470), (19, 9494), (29, 9566), (37, 9620), (50, 9710),

Gene: Clark_15 Start: 8856, Stop: 9503, Start Num: 2

Candidate Starts for Clark_15:

(Start: 2 @8856 has 54 MA's), (12, 8967), (18, 9024), (33, 9135), (37, 9174), (42, 9207), (45, 9228), (50, 9264), (52, 9282), (60, 9399),

Gene: Cumberbatch_15 Start: 9256, Stop: 9762, Start Num: 6

Candidate Starts for Cumberbatch_15:

(Start: 6 @9256 has 11 MA's), (14, 9325), (34, 9475), (43, 9538), (45, 9553), (46, 9556),

Gene: DillyDally_14 Start: 9259, Stop: 9768, Start Num: 9

Candidate Starts for DillyDally_14:

(7, 9244), (8, 9253), (Start: 9 @9259 has 1 MA's), (17, 9343), (21, 9385), (22, 9391), (45, 9553),

Gene: DobbysSock_14 Start: 8339, Stop: 8986, Start Num: 2

Candidate Starts for DobbysSock_14:

(Start: 2 @8339 has 54 MA's), (12, 8450), (18, 8507), (33, 8618), (37, 8657), (42, 8690), (45, 8711), (50, 8747), (52, 8765), (60, 8882),

Gene: Dolores_15 Start: 8841, Stop: 9488, Start Num: 2

Candidate Starts for Dolores_15:

(Start: 2 @8841 has 54 MA's), (12, 8952), (18, 9009), (33, 9120), (37, 9159), (42, 9192), (45, 9213), (50, 9249), (52, 9267), (60, 9384),

Gene: Dorito_14 Start: 8338, Stop: 8985, Start Num: 2

Candidate Starts for Dorito_14:

(Start: 2 @8338 has 54 MA's), (12, 8449), (18, 8506), (33, 8617), (37, 8656), (42, 8689), (45, 8710), (50, 8746), (52, 8764), (60, 8881),

Gene: Easley_15 Start: 8845, Stop: 9492, Start Num: 2

Candidate Starts for Easley_15:

(Start: 2 @8845 has 54 MA's), (12, 8956), (18, 9013), (33, 9124), (37, 9163), (42, 9196), (45, 9217), (50, 9253), (52, 9271), (60, 9388),

Gene: Eastland_15 Start: 9257, Stop: 9763, Start Num: 6

Candidate Starts for Eastland_15:

(Start: 6 @9257 has 11 MA's), (14, 9326), (34, 9476), (43, 9539), (45, 9554), (46, 9557),

Gene: Eklok_15 Start: 9272, Stop: 9778, Start Num: 6

Candidate Starts for Eklok_15:

(Start: 6 @9272 has 11 MA's), (14, 9341), (34, 9491), (43, 9554), (45, 9569), (46, 9572),

Gene: Eudoria_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Eudoria_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Eviarto_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Eviarto_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Finkle_14 Start: 8643, Stop: 9212, Start Num: 2

Candidate Starts for Finkle_14:

(Start: 2 @8643 has 54 MA's), (13, 8757), (18, 8805), (22, 8847), (34, 8928), (37, 8955), (39, 8970), (41, 8985), (42, 8988), (46, 9012), (47, 9024), (49, 9033),

Gene: FrumpyGal_15 Start: 9257, Stop: 9763, Start Num: 6

Candidate Starts for FrumpyGal_15:

(Start: 6 @9257 has 11 MA's), (14, 9326), (34, 9476), (43, 9539), (45, 9554), (46, 9557),

Gene: GMA1_14 Start: 8784, Stop: 9359, Start Num: 2

Candidate Starts for GMA1_14:

(Start: 2 @8784 has 54 MA's), (19, 8970), (21, 8982), (31, 9048), (37, 9096), (39, 9111), (42, 9129), (47, 9165), (51, 9195), (54, 9204), (57, 9270),

Gene: Galactica_17 Start: 14113, Stop: 14673, Start Num: 5

Candidate Starts for Galactica_17:

(Start: 5 @14113 has 1 MA's), (23, 14272), (28, 14314), (36, 14362), (37, 14374), (40, 14398), (46, 14431), (58, 14578),

Gene: HFrancette_15 Start: 9271, Stop: 9777, Start Num: 6

Candidate Starts for HFrancette_15:

(Start: 6 @9271 has 11 MA's), (14, 9340), (34, 9490), (43, 9553), (45, 9568), (46, 9571),

Gene: Herod_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Herod_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Hiyaa_19 Start: 15134, Stop: 15703, Start Num: 4

Candidate Starts for Hiyaa_19:

(Start: 4 @15134 has 3 MA's), (12, 15197), (24, 15311), (27, 15341), (37, 15404), (40, 15428), (44, 15455), (46, 15461), (48, 15479),

Gene: Hortense_15 Start: 9045, Stop: 9698, Start Num: 2

Candidate Starts for Hortense_15:

(Start: 2 @9045 has 54 MA's), (10, 9126), (12, 9156), (15, 9177), (18, 9213), (19, 9237), (25, 9282), (26, 9288), (29, 9312), (30, 9315), (36, 9354), (37, 9366), (42, 9399), (45, 9420), (47, 9435), (50, 9456), (56, 9534),

Gene: Howe_15 Start: 9045, Stop: 9698, Start Num: 2

Candidate Starts for Howe_15:

(Start: 2 @9045 has 54 MA's), (10, 9126), (12, 9156), (15, 9177), (18, 9213), (19, 9237), (25, 9282), (26, 9288), (29, 9312), (30, 9315), (36, 9354), (37, 9366), (42, 9399), (45, 9420), (47, 9435), (50, 9456), (56, 9534),

Gene: Hugley_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Hugley_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Hyzer_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Hyzer_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (30, 9552), (37, 9603), (50, 9693), (55, 9738),

Gene: Ignacio_15 Start: 9271, Stop: 9777, Start Num: 6

Candidate Starts for Ignacio_15:

(Start: 6 @9271 has 11 MA's), (14, 9340), (34, 9490), (43, 9553), (45, 9568), (46, 9571),

Gene: Invectra_15 Start: 8840, Stop: 9493, Start Num: 2

Candidate Starts for Invectra_15:

(Start: 2 @8840 has 54 MA's), (10, 8921), (12, 8951), (15, 8972), (18, 9008), (19, 9032), (25, 9077), (26, 9083), (29, 9107), (30, 9110), (36, 9149), (37, 9161), (42, 9194), (45, 9215), (47, 9230), (50, 9251), (56, 9329),

Gene: Jace_13 Start: 8989, Stop: 9525, Start Num: 3

Candidate Starts for Jace_13:

(1, 8959), (Start: 3 @8989 has 1 MA's), (20, 9184), (22, 9193), (26, 9223), (35, 9280), (37, 9301), (42, 9334), (45, 9355), (53, 9409),

Gene: Keanu_19 Start: 15177, Stop: 15746, Start Num: 4

Candidate Starts for Keanu_19:

(Start: 4 @15177 has 3 MA's), (12, 15240), (37, 15447), (44, 15498), (46, 15504), (48, 15522),

Gene: Kita_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Kita_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Kokushibo_20 Start: 15149, Stop: 15718, Start Num: 4

Candidate Starts for Kokushibo_20:

(Start: 4 @15149 has 3 MA's), (12, 15212), (24, 15326), (27, 15356), (37, 15419), (40, 15443), (44, 15470), (46, 15476), (48, 15494),

Gene: Madavieve_14 Start: 9287, Stop: 9934, Start Num: 2

Candidate Starts for Madavieve_14:

(Start: 2 @9287 has 54 MA's), (10, 9368), (12, 9398), (13, 9401), (15, 9419), (18, 9455), (19, 9479), (29, 9551), (37, 9605), (45, 9659), (50, 9695), (55, 9740),

Gene: Madeline_14 Start: 9287, Stop: 9934, Start Num: 2

Candidate Starts for Madeline_14:

(Start: 2 @9287 has 54 MA's), (10, 9368), (11, 9386), (12, 9398), (15, 9419), (18, 9455), (19, 9479), (29, 9551), (37, 9605), (55, 9740),

Gene: Manasvini_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Manasvini_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Maridalia_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Maridalia_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Mcklovin_16 Start: 10161, Stop: 10811, Start Num: 2

Candidate Starts for Mcklovin_16:

(Start: 2 @10161 has 54 MA's), (11, 10260), (12, 10272), (16, 10317), (18, 10329), (19, 10353), (22, 10371), (29, 10425), (37, 10479), (42, 10512), (56, 10647),

Gene: MichaelScott_15 Start: 8840, Stop: 9493, Start Num: 2

Candidate Starts for MichaelScott_15:

(Start: 2 @8840 has 54 MA's), (10, 8921), (12, 8951), (15, 8972), (18, 9008), (19, 9032), (25, 9077), (26, 9083), (29, 9107), (30, 9110), (36, 9149), (37, 9161), (42, 9194), (45, 9215), (47, 9230), (50, 9251), (56, 9329),

Gene: Neobush_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Neobush_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Nymphadora_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Nymphadora_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Ohgeesy_14 Start: 8633, Stop: 9280, Start Num: 2

Candidate Starts for Ohgeesy_14:

(Start: 2 @8633 has 54 MA's), (10, 8714), (11, 8732), (12, 8744), (15, 8765), (18, 8801), (19, 8825), (29, 8897), (37, 8951), (52, 9059), (55, 9086),

Gene: Oregano_15 Start: 8511, Stop: 9164, Start Num: 2

Candidate Starts for Oregano_15:

(Start: 2 @8511 has 54 MA's), (10, 8592), (12, 8622), (15, 8643), (18, 8679), (19, 8703), (25, 8748), (26, 8754), (29, 8778), (30, 8781), (36, 8820), (37, 8832), (42, 8865), (45, 8886), (47, 8901), (50, 8922), (56, 9000),

Gene: PantheRoc_14 Start: 8634, Stop: 9266, Start Num: 2

Candidate Starts for PantheRoc_14:

(Start: 2 @8634 has 54 MA's), (10, 8715), (12, 8745), (15, 8766), (18, 8802), (19, 8826), (29, 8898), (37, 8952), (55, 9087),

Gene: PhriskyACE_14 Start: 8338, Stop: 8985, Start Num: 2

Candidate Starts for PhriskyACE_14:

(Start: 2 @8338 has 54 MA's), (12, 8449), (18, 8506), (33, 8617), (37, 8656), (42, 8689), (45, 8710), (50, 8746), (52, 8764), (60, 8881),

Gene: Piccadilly_15 Start: 9256, Stop: 9762, Start Num: 6

Candidate Starts for Piccadilly_15:

(Start: 6 @9256 has 11 MA's), (14, 9325), (34, 9475), (43, 9538), (45, 9553), (46, 9556),

Gene: Polly_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Polly_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Powerball_14 Start: 8347, Stop: 8994, Start Num: 2

Candidate Starts for Powerball_14:

(Start: 2 @8347 has 54 MA's), (12, 8458), (18, 8515), (33, 8626), (37, 8665), (42, 8698), (45, 8719), (50, 8755), (52, 8773), (60, 8890),

Gene: REQ3_47 Start: 25838, Stop: 26401, Start Num: 2

Candidate Starts for REQ3_47:

(Start: 2 @25838 has 54 MA's), (24, 26069), (32, 26126), (38, 26177),

Gene: Samman98_15 Start: 8856, Stop: 9503, Start Num: 2

Candidate Starts for Samman98_15:

(Start: 2 @8856 has 54 MA's), (12, 8967), (18, 9024), (33, 9135), (37, 9174), (42, 9207), (45, 9228), (50, 9264), (52, 9282), (60, 9399),

Gene: Schlegelian_15 Start: 9256, Stop: 9762, Start Num: 6

Candidate Starts for Schlegelian_15:

(Start: 6 @9256 has 11 MA's), (14, 9325), (34, 9475), (43, 9538), (45, 9553), (46, 9556),

Gene: Sekhmet_15 Start: 8840, Stop: 9493, Start Num: 2

Candidate Starts for Sekhmet_15:

(Start: 2 @8840 has 54 MA's), (10, 8921), (12, 8951), (15, 8972), (18, 9008), (19, 9032), (25, 9077), (26, 9083), (29, 9107), (30, 9110), (36, 9149), (37, 9161), (42, 9194), (45, 9215), (47, 9230), (50, 9251), (56, 9329),

Gene: Shlim410_15 Start: 9045, Stop: 9698, Start Num: 2

Candidate Starts for Shlim410_15:

(Start: 2 @9045 has 54 MA's), (10, 9126), (12, 9156), (15, 9177), (18, 9213), (19, 9237), (25, 9282), (26, 9288), (29, 9312), (30, 9315), (36, 9354), (37, 9366), (42, 9399), (45, 9420), (47, 9435), (50, 9456), (56, 9534),

Gene: Sidious_14 Start: 8632, Stop: 9279, Start Num: 2

Candidate Starts for Sidious_14:

(Start: 2 @8632 has 54 MA's), (10, 8713), (12, 8743), (15, 8764), (18, 8800), (19, 8824), (29, 8896), (37, 8950), (55, 9085),

Gene: Spocter_19 Start: 15122, Stop: 15691, Start Num: 4

Candidate Starts for Spocter_19:

(Start: 4 @15122 has 3 MA's), (12, 15185), (24, 15299), (27, 15329), (37, 15392), (40, 15416), (44, 15443), (46, 15449), (48, 15467),

Gene: Suerte_14 Start: 8339, Stop: 8986, Start Num: 2

Candidate Starts for Suerte_14:

(Start: 2 @8339 has 54 MA's), (12, 8450), (18, 8507), (33, 8618), (37, 8657), (42, 8690), (45, 8711), (50, 8747), (52, 8765), (60, 8882),

Gene: Suscepit_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Suscepit_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Tayonia_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Tayonia_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: ThankyouJordi_13 Start: 9309, Stop: 9956, Start Num: 2

Candidate Starts for ThankyouJordi_13:

(Start: 2 @9309 has 54 MA's), (10, 9390), (15, 9441), (18, 9477), (19, 9501), (29, 9573), (37, 9627), (50, 9717), (55, 9762),

Gene: Thimann_15 Start: 8826, Stop: 9473, Start Num: 2

Candidate Starts for Thimann_15:

(Start: 2 @8826 has 54 MA's), (12, 8937), (18, 8994), (33, 9105), (37, 9144), (42, 9177), (45, 9198), (50, 9234), (52, 9252), (60, 9369),

Gene: TimTam_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for TimTam_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Trumpet_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Trumpet_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Tuti_16 Start: 8843, Stop: 9496, Start Num: 2

Candidate Starts for Tuti_16:

(Start: 2 @8843 has 54 MA's), (10, 8924), (12, 8954), (15, 8975), (18, 9011), (19, 9035), (25, 9080), (26, 9086), (29, 9110), (30, 9113), (36, 9152), (37, 9164), (42, 9197), (45, 9218), (47, 9233), (50, 9254), (56, 9332),

Gene: Twinkle_15 Start: 9045, Stop: 9698, Start Num: 2

Candidate Starts for Twinkle_15:

(Start: 2 @9045 has 54 MA's), (10, 9126), (12, 9156), (15, 9177), (18, 9213), (19, 9237), (25, 9282), (26, 9288), (29, 9312), (30, 9315), (36, 9354), (37, 9366), (42, 9399), (45, 9420), (47, 9435), (50, 9456), (56, 9534),

Gene: Vondra_15 Start: 9268, Stop: 9774, Start Num: 6

Candidate Starts for Vondra_15:

(Start: 6 @9268 has 11 MA's), (14, 9337), (34, 9487), (43, 9550), (45, 9565), (46, 9568),

Gene: WelcomeAyanna_13 Start: 9309, Stop: 9956, Start Num: 2

Candidate Starts for WelcomeAyanna_13:

(Start: 2 @9309 has 54 MA's), (10, 9390), (15, 9441), (18, 9477), (19, 9501), (29, 9573), (37, 9627), (50, 9717), (55, 9762),

Gene: WinkNick_15 Start: 8841, Stop: 9488, Start Num: 2

Candidate Starts for WinkNick_15:

(Start: 2 @8841 has 54 MA's), (12, 8952), (18, 9009), (33, 9120), (37, 9159), (42, 9192), (45, 9213), (50, 9249), (52, 9267), (60, 9384),

Gene: Yeezy_15 Start: 8643, Stop: 9290, Start Num: 2

Candidate Starts for Yeezy_15:

(Start: 2 @8643 has 54 MA's), (10, 8724), (12, 8754), (15, 8775), (18, 8811), (19, 8835), (29, 8907), (37, 8961), (55, 9096),

Gene: Zameen_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Zameen_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (11, 9384), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),

Gene: Zirinka_14 Start: 9285, Stop: 9932, Start Num: 2

Candidate Starts for Zirinka_14:

(Start: 2 @9285 has 54 MA's), (10, 9366), (12, 9396), (15, 9417), (18, 9453), (19, 9477), (29, 9549), (37, 9603), (55, 9738),