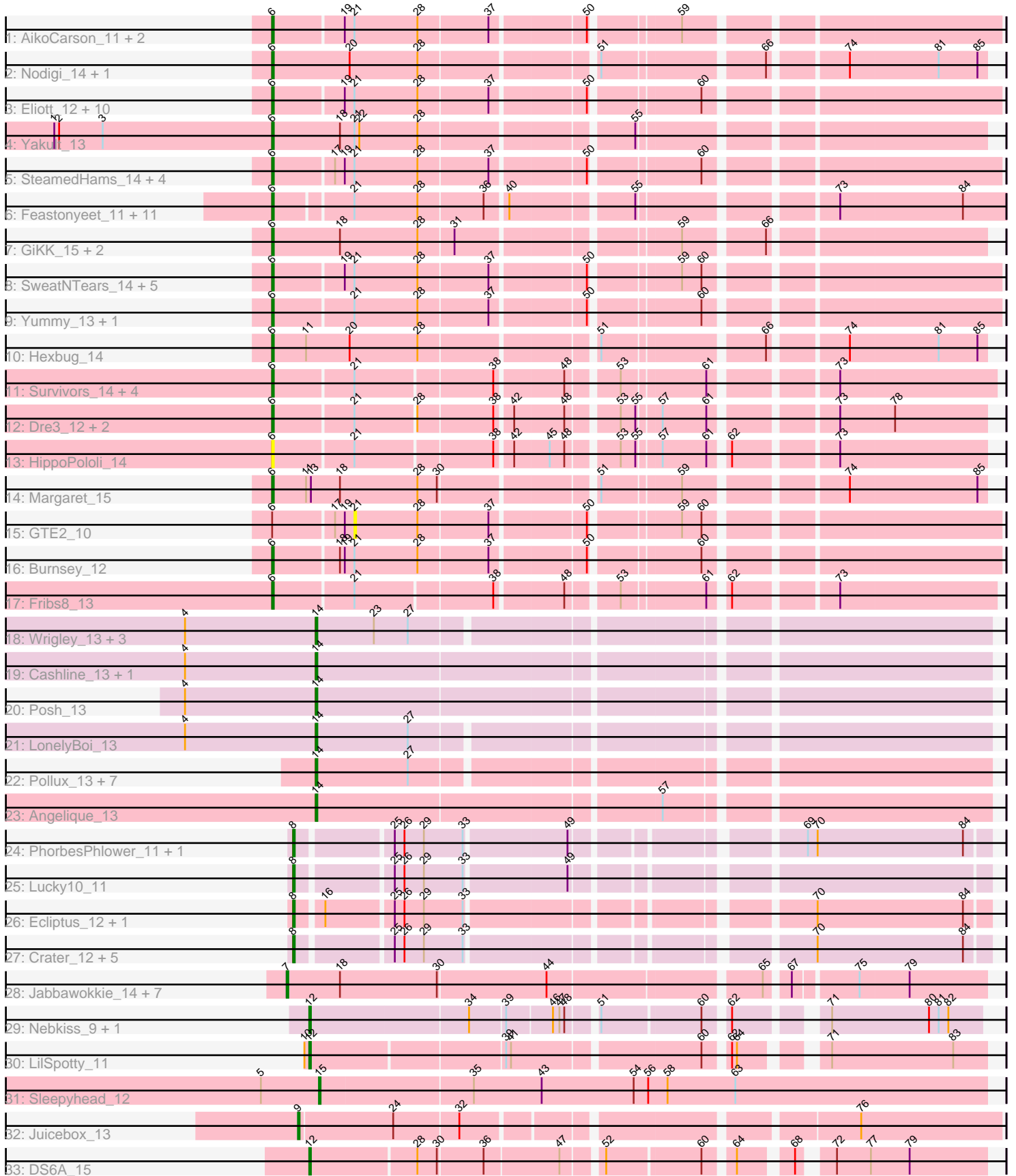


Pham 157756



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 157756 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157756 has 101 members, 14 are drafts.

Phages represented in each track:

- Track 1 : AikoCarson_11, Amok_11, Emalyn_11
- Track 2 : Nodigi_14, Orla_14
- Track 3 : Elliott_12, Agatha_12, Quasar_12, Cozz_12, RedBaron_13, Nina_13, PsychoKiller_12, MunkgeeRoachy_13, Typhonmarchy_13, Sopespian_12, Axym_12
- Track 4 : Yakult_13
- Track 5 : SteamedHams_14, Tolls_14, BillDoor_14, Yarn_11, AndPeggy_11
- Track 6 : Feastonyeet_11, Mayweather_13, Vine_13, CherryonLim_13, BigChungus_11, PotPie_13, SheckWes_11, KayGee_11, SummitAcademy_11, Elinal_13, Pons_12, Lauer_11
- Track 7 : GiKK_15, Jamzy_15, Button_13
- Track 8 : SweatNTears_14, Buttrmlkdreams_12, Biskit_13, Troje_12, SketchMex_11, MScarn_14
- Track 9 : Yummy_13, Horseradish_13
- Track 10 : Hexbug_14
- Track 11 : Survivors_14, Nibbles_14, Zareef_16, MaVan_16, Azira_14
- Track 12 : Dre3_12, Cleo_12, Gibbous_12
- Track 13 : HippoPololi_14
- Track 14 : Margaret_15
- Track 15 : GTE2_10
- Track 16 : Burnsey_12
- Track 17 : Fribs8_13
- Track 18 : Wrigley_13, Pytheas_13, Jablanski_13, Confidence_13
- Track 19 : Cashline_13, BeeGee_13
- Track 20 : Posh_13
- Track 21 : LonelyBoi_13
- Track 22 : Pollux_13, Lilas_13, Bradissa_13, BritBrat_13, Floral_13, EMSquaredA_13, EnalisNailo_13, Marteena_13
- Track 23 : Angelique_13
- Track 24 : PhorbessPhlower_11, Morkie_11
- Track 25 : Lucky10_11
- Track 26 : Ecliptus_12, ODay_12
- Track 27 : Crater_12, BearBQ_12, MortyNRick_12, Birdsong_12, Kuwabara_12, Apricot_12
- Track 28 : Jabbawokkie_14, Avani_13, Yoshi_13, Soul22_13, Che9d_13, Demsculpinboyz_13, Blarby_14, Zapner_14
- Track 29 : Nebkiss_9, Gaia_9
- Track 30 : LilSpotty_11

- Track 31 : Sleepyhead_12
- Track 32 : Juicebox_13
- Track 33 : DS6A_15

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

The start number called the most often in the published annotations is 6, it was called in 47 of the 87 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_12, AikoCarson_11, Amok_11, AndPeggy_11, Axym_12, Azira_14, BigChungus_11, BillDoor_14, Biskit_13, Burnsey_12, Button_13, Buttrmikedreams_12, CherryonLim_13, Cleo_12, Cozz_12, Dre3_12, Elinal_13, Elliott_12, Emalyn_11, Feastonyeet_11, Fribs8_13, GiKK_15, Gibbous_12, Hexbug_14, HippoPololi_14, Horseradish_13, Jamzy_15, KayGee_11, Lauer_11, MScarn_14, MaVan_16, Margaret_15, Mayweather_13, MunkgeeRoachy_13, Nibbles_14, Nina_13, Nodigi_14, Orla_14, Pons_12, PotPie_13, PsychoKiller_12, Quasar_12, RedBaron_13, SheckWes_11, SketchMex_11, Sopespian_12, SteamedHams_14, SummitAcademy_11, Survivors_14, SweatNTears_14, Tolls_14, Troje_12, Typhonomachy_13, Vine_13, Yakult_13, Yarn_11, Yummy_13, Zareef_16,

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

- GTE2_10,

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

- Angelique_13, Apricot_12, Avani_13, BearBQ_12, BeeGee_13, Birdsong_12, Blarby_14, Bradissa_13, BritBrat_13, Cashline_13, Che9d_13, Confidence_13, Crater_12, DS6A_15, Demsculpinboyz_13, EMSquaredA_13, Ecliptus_12, EnalisNailo_13, Floral_13, Gaia_9, Jabbawokkie_14, Jablanski_13, Juicebox_13, Kuwabara_12, LilSpotty_11, Lilas_13, LonelyBoi_13, Lucky10_11, Marteena_13, Morkie_11, MortyNRick_12, Nebkiss_9, ODay_12, PhorbessPhlower_11, Pollux_13, Posh_13, Pytheas_13, Sleepyhead_12, Soul22_13, Wrigley_13, Yoshi_13, Zapner_14,

Summary by start number:

Start 6:

- Found in 59 of 101 (58.4%) of genes in pham
- Manual Annotations of this start: 47 of 87
- Called 98.3% of time when present
- Phage (with cluster) where this start called: Agatha_12 (CT), AikoCarson_11 (CT), Amok_11 (CT), AndPeggy_11 (CT), Axym_12 (CT), Azira_14 (CT), BigChungus_11 (CT), BillDoor_14 (CT), Biskit_13 (CT), Burnsey_12 (CT), Button_13 (CT), Buttrmikedreams_12 (CT), CherryonLim_13 (CT), Cleo_12 (CT), Cozz_12 (CT), Dre3_12 (CT), Elinal_13 (CT), Elliott_12 (CT), Emalyn_11 (CT), Feastonyeet_11 (CT), Fribs8_13 (CT), GiKK_15 (CT), Gibbous_12 (CT), Hexbug_14 (CT), HippoPololi_14 (CT), Horseradish_13 (CT), Jamzy_15 (CT), KayGee_11 (CT), Lauer_11 (CT), MScarn_14 (CT), MaVan_16 (CT), Margaret_15 (CT), Mayweather_13 (CT), MunkgeeRoachy_13 (CT), Nibbles_14 (CT), Nina_13 (CT), Nodigi_14 (CT), Orla_14 (CT), Pons_12 (CT), PotPie_13 (CT), PsychoKiller_12 (CT), Quasar_12 (CT),

RedBaron_13 (CT), SheckWes_11 (CT), SketchMex_11 (CT), Sopespian_12 (CT), SteamedHams_14 (CT), SummitAcademy_11 (CT), Survivors_14 (CT), SweatNTears_14 (CT), Tolls_14 (CT), Troje_12 (CT), Typhonmarchy_13 (CT), Vine_13 (CT), Yakult_13 (CT), Yarn_11 (CT), Yummy_13 (CT), Zareef_16 (CT),

Start 7:

- Found in 8 of 101 (7.9%) of genes in pham
- Manual Annotations of this start: 7 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avani_13 (F2), Blarby_14 (F), Che9d_13 (F2), Demsculpinboyz_13 (F2), Jabbawokkie_14 (F2), Soul22_13 (F2), Yoshi_13 (F2), Zapner_14 (F2),

Start 8:

- Found in 11 of 101 (10.9%) of genes in pham
- Manual Annotations of this start: 10 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot_12 (DN3), BearBQ_12 (DN), Birdsong_12 (DN), Crater_12 (DN3), Ecliptus_12 (DN), Kuwabara_12 (DN4), Lucky10_11 (DH), Morkie_11 (DH), MortyNRick_12 (DN), ODay_12 (DN), PhorbesPhlower_11 (DH),

Start 9:

- Found in 1 of 101 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Juicebox_13 (singleton),

Start 12:

- Found in 4 of 101 (4.0%) of genes in pham
- Manual Annotations of this start: 4 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DS6A_15 (singleton), Gaia_9 (X), LilSpotty_11 (singleton), Nebkiss_9 (X),

Start 14:

- Found in 17 of 101 (16.8%) of genes in pham
- Manual Annotations of this start: 17 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique_13 (CY1), BeeGee_13 (CY), Bradissa_13 (CY1), BritBrat_13 (CY2), Cashline_13 (CY), Confidence_13 (CY1), EMSquaredA_13 (CY1), EnalisNailo_13 (CY1), Floral_13 (CY1), Jablanski_13 (CY), Lilas_13 (CY1), LonelyBoi_13 (CY), Marteena_13 (CY1), Pollux_13 (CY1), Posh_13 (CY), Pytheas_13 (CY), Wrigley_13 (CY),

Start 15:

- Found in 1 of 101 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sleepyhead_12 (singleton),

Start 21:

- Found in 52 of 101 (51.5%) of genes in pham

- No Manual Annotations of this start.
- Called 1.9% of time when present
- Phage (with cluster) where this start called: GTE2_10 (CT),

Summary by clusters:

There are 12 clusters represented in this pham: DN, CY2, F2, DH, F, CY1, DN4, CY, DN3, X, singleton, CT,

Info for manual annotations of cluster CT:

- Start number 6 was manually annotated 47 times for cluster CT.

Info for manual annotations of cluster CY:

- Start number 14 was manually annotated 7 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 14 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 14 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DH:

- Start number 8 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 8 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN3:

- Start number 8 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 8 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F2:

- Start number 7 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster X:

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

Gene Information:

Gene: Agatha_12 Start: 7522, Stop: 7932, Start Num: 6

Candidate Starts for Agatha_12:

(Start: 6 @7522 has 47 MA's), (19, 7564), (21, 7570), (28, 7609), (37, 7651), (50, 7705), (60, 7765),

Gene: AikoCarson_11 Start: 7243, Stop: 7653, Start Num: 6

Candidate Starts for AikoCarson_11:

(Start: 6 @7243 has 47 MA's), (19, 7285), (21, 7291), (28, 7330), (37, 7372), (50, 7426), (59, 7474),

Gene: Amok_11 Start: 7243, Stop: 7653, Start Num: 6

Candidate Starts for Amok_11:

(Start: 6 @7243 has 47 MA's), (19, 7285), (21, 7291), (28, 7330), (37, 7372), (50, 7426), (59, 7474),

Gene: AndPeggy_11 Start: 7534, Stop: 7944, Start Num: 6

Candidate Starts for AndPeggy_11:

(Start: 6 @7534 has 47 MA's), (17, 7570), (19, 7576), (21, 7582), (28, 7621), (37, 7663), (50, 7717), (60, 7777),

Gene: Angelique_13 Start: 8261, Stop: 8653, Start Num: 14

Candidate Starts for Angelique_13:

(Start: 14 @8261 has 17 MA's), (57, 8465),

Gene: Apricot_12 Start: 7390, Stop: 7773, Start Num: 8

Candidate Starts for Apricot_12:

(Start: 8 @7390 has 10 MA's), (25, 7444), (26, 7450), (29, 7462), (33, 7486), (70, 7669), (84, 7759),

Gene: Avani_13 Start: 7213, Stop: 7617, Start Num: 7

Candidate Starts for Avani_13:

(Start: 7 @7213 has 7 MA's), (18, 7246), (30, 7306), (44, 7372), (65, 7492), (67, 7504), (75, 7540), (79, 7570),

Gene: Axym_12 Start: 7522, Stop: 7932, Start Num: 6

Candidate Starts for Axym_12:

(Start: 6 @7522 has 47 MA's), (19, 7564), (21, 7570), (28, 7609), (37, 7651), (50, 7705), (60, 7765),

Gene: Azira_14 Start: 8446, Stop: 8850, Start Num: 6

Candidate Starts for Azira_14:

(Start: 6 @8446 has 47 MA's), (21, 8494), (38, 8575), (48, 8614), (53, 8641), (61, 8689), (73, 8755),

Gene: BearBQ_12 Start: 7390, Stop: 7773, Start Num: 8

Candidate Starts for BearBQ_12:

(Start: 8 @7390 has 10 MA's), (25, 7444), (26, 7450), (29, 7462), (33, 7486), (70, 7669), (84, 7759),

Gene: BeeGee_13 Start: 8263, Stop: 8649, Start Num: 14

Candidate Starts for BeeGee_13:

(4, 8182), (Start: 14 @8263 has 17 MA's),

Gene: BigChungus_11 Start: 7313, Stop: 7723, Start Num: 6

Candidate Starts for BigChungus_11:

(Start: 6 @7313 has 47 MA's), (21, 7358), (28, 7397), (36, 7436), (40, 7448), (55, 7517), (73, 7622), (84, 7697),

Gene: BillDoor_14 Start: 7499, Stop: 7909, Start Num: 6

Candidate Starts for BillDoor_14:

(Start: 6 @7499 has 47 MA's), (17, 7535), (19, 7541), (21, 7547), (28, 7586), (37, 7628), (50, 7682), (60, 7742),

Gene: Birdsong_12 Start: 7390, Stop: 7773, Start Num: 8

Candidate Starts for Birdsong_12:

(Start: 8 @7390 has 10 MA's), (25, 7444), (26, 7450), (29, 7462), (33, 7486), (70, 7669), (84, 7759),

Gene: Biskit_13 Start: 7506, Stop: 7916, Start Num: 6

Candidate Starts for Biskit_13:

(Start: 6 @7506 has 47 MA's), (19, 7548), (21, 7554), (28, 7593), (37, 7635), (50, 7689), (59, 7737), (60, 7749),

Gene: Blarby_14 Start: 7737, Stop: 8141, Start Num: 7

Candidate Starts for Blarby_14:

(Start: 7 @7737 has 7 MA's), (18, 7770), (30, 7830), (44, 7896), (65, 8016), (67, 8028), (75, 8064), (79, 8094),

Gene: Bradissa_13 Start: 8267, Stop: 8653, Start Num: 14

Candidate Starts for Bradissa_13:

(Start: 14 @8267 has 17 MA's), (27, 8324),

Gene: BritBrat_13 Start: 8269, Stop: 8655, Start Num: 14

Candidate Starts for BritBrat_13:

(Start: 14 @8269 has 17 MA's), (27, 8326),

Gene: Burnsey_12 Start: 7523, Stop: 7933, Start Num: 6

Candidate Starts for Burnsey_12:

(Start: 6 @7523 has 47 MA's), (18, 7562), (19, 7565), (21, 7571), (28, 7610), (37, 7652), (50, 7706), (60, 7766),

Gene: Button_13 Start: 7530, Stop: 7934, Start Num: 6

Candidate Starts for Button_13:

(Start: 6 @7530 has 47 MA's), (18, 7572), (28, 7620), (31, 7641), (59, 7764), (66, 7809),

Gene: Buttrmlkdreams_12 Start: 7491, Stop: 7901, Start Num: 6

Candidate Starts for Buttrmlkdreams_12:

(Start: 6 @7491 has 47 MA's), (19, 7533), (21, 7539), (28, 7578), (37, 7620), (50, 7674), (59, 7722), (60, 7734),

Gene: Cashline_13 Start: 8116, Stop: 8508, Start Num: 14

Candidate Starts for Cashline_13:

(4, 8035), (Start: 14 @8116 has 17 MA's),

Gene: Che9d_13 Start: 7222, Stop: 7626, Start Num: 7

Candidate Starts for Che9d_13:

(Start: 7 @7222 has 7 MA's), (18, 7255), (30, 7315), (44, 7381), (65, 7501), (67, 7513), (75, 7549), (79, 7579),

Gene: CherryonLim_13 Start: 8039, Stop: 8449, Start Num: 6

Candidate Starts for CherryonLim_13:

(Start: 6 @8039 has 47 MA's), (21, 8084), (28, 8123), (36, 8162), (40, 8174), (55, 8243), (73, 8348), (84, 8423),

Gene: Cleo_12 Start: 7746, Stop: 8144, Start Num: 6

Candidate Starts for Cleo_12:

(Start: 6 @7746 has 47 MA's), (21, 7794), (28, 7830), (38, 7875), (42, 7884), (48, 7914), (53, 7941), (55, 7950), (57, 7962), (61, 7989), (73, 8055), (78, 8088),

Gene: Confidence_13 Start: 8263, Stop: 8649, Start Num: 14

Candidate Starts for Confidence_13:

(4, 8182), (Start: 14 @8263 has 17 MA's), (23, 8299), (27, 8320),

Gene: Cozz_12 Start: 7523, Stop: 7933, Start Num: 6
Candidate Starts for Cozz_12:
(Start: 6 @7523 has 47 MA's), (19, 7565), (21, 7571), (28, 7610), (37, 7652), (50, 7706), (60, 7766),

Gene: Crater_12 Start: 7390, Stop: 7773, Start Num: 8
Candidate Starts for Crater_12:
(Start: 8 @7390 has 10 MA's), (25, 7444), (26, 7450), (29, 7462), (33, 7486), (70, 7669), (84, 7759),

Gene: DS6A_15 Start: 10364, Stop: 10735, Start Num: 12
Candidate Starts for DS6A_15:
(Start: 12 @10364 has 4 MA's), (28, 10427), (30, 10439), (36, 10466), (47, 10511), (52, 10532), (60, 10586), (64, 10601), (68, 10628), (72, 10643), (77, 10664), (79, 10688),

Gene: Demsculpinboyz_13 Start: 7213, Stop: 7617, Start Num: 7
Candidate Starts for Demsculpinboyz_13:
(Start: 7 @7213 has 7 MA's), (18, 7246), (30, 7306), (44, 7372), (65, 7492), (67, 7504), (75, 7540), (79, 7570),

Gene: Dre3_12 Start: 7693, Stop: 8091, Start Num: 6
Candidate Starts for Dre3_12:
(Start: 6 @7693 has 47 MA's), (21, 7741), (28, 7777), (38, 7822), (42, 7831), (48, 7861), (53, 7888), (55, 7897), (57, 7909), (61, 7936), (73, 8002), (78, 8035),

Gene: EMSquaredA_13 Start: 8269, Stop: 8655, Start Num: 14
Candidate Starts for EMSquaredA_13:
(Start: 14 @8269 has 17 MA's), (27, 8326),

Gene: Ecliptus_12 Start: 7118, Stop: 7501, Start Num: 8
Candidate Starts for Ecliptus_12:
(Start: 8 @7118 has 10 MA's), (16, 7133), (25, 7172), (26, 7178), (29, 7190), (33, 7214), (70, 7397), (84, 7487),

Gene: Elinal_13 Start: 7294, Stop: 7704, Start Num: 6
Candidate Starts for Elinal_13:
(Start: 6 @7294 has 47 MA's), (21, 7339), (28, 7378), (36, 7417), (40, 7429), (55, 7498), (73, 7603), (84, 7678),

Gene: Elliott_12 Start: 7522, Stop: 7932, Start Num: 6
Candidate Starts for Elliott_12:
(Start: 6 @7522 has 47 MA's), (19, 7564), (21, 7570), (28, 7609), (37, 7651), (50, 7705), (60, 7765),

Gene: Emalyn_11 Start: 7242, Stop: 7652, Start Num: 6
Candidate Starts for Emalyn_11:
(Start: 6 @7242 has 47 MA's), (19, 7284), (21, 7290), (28, 7329), (37, 7371), (50, 7425), (59, 7473),

Gene: EnalisNailo_13 Start: 8269, Stop: 8655, Start Num: 14
Candidate Starts for EnalisNailo_13:
(Start: 14 @8269 has 17 MA's), (27, 8326),

Gene: Feastonyeet_11 Start: 7313, Stop: 7723, Start Num: 6
Candidate Starts for Feastonyeet_11:
(Start: 6 @7313 has 47 MA's), (21, 7358), (28, 7397), (36, 7436), (40, 7448), (55, 7517), (73, 7622), (84, 7697),

Gene: Floral_13 Start: 8269, Stop: 8655, Start Num: 14

Candidate Starts for Floral_13:

(Start: 14 @8269 has 17 MA's), (27, 8326),

Gene: Fribs8_13 Start: 8259, Stop: 8663, Start Num: 6

Candidate Starts for Fribs8_13:

(Start: 6 @8259 has 47 MA's), (21, 8307), (38, 8388), (48, 8427), (53, 8454), (61, 8502), (62, 8511), (73, 8568),

Gene: GTE2_10 Start: 7243, Stop: 7605, Start Num: 21

Candidate Starts for GTE2_10:

(Start: 6 @7195 has 47 MA's), (17, 7231), (19, 7237), (21, 7243), (28, 7282), (37, 7324), (50, 7378), (59, 7426), (60, 7438),

Gene: Gaia_9 Start: 7642, Stop: 8013, Start Num: 12

Candidate Starts for Gaia_9:

(Start: 12 @7642 has 4 MA's), (34, 7738), (39, 7759), (46, 7786), (47, 7789), (48, 7792), (51, 7807), (60, 7864), (62, 7876), (71, 7921), (80, 7981), (81, 7987), (82, 7993),

Gene: GiKK_15 Start: 7833, Stop: 8237, Start Num: 6

Candidate Starts for GiKK_15:

(Start: 6 @7833 has 47 MA's), (18, 7875), (28, 7923), (31, 7944), (59, 8067), (66, 8112),

Gene: Gibbous_12 Start: 7693, Stop: 8091, Start Num: 6

Candidate Starts for Gibbous_12:

(Start: 6 @7693 has 47 MA's), (21, 7741), (28, 7777), (38, 7822), (42, 7831), (48, 7861), (53, 7888), (55, 7897), (57, 7909), (61, 7936), (73, 8002), (78, 8035),

Gene: Hexbug_14 Start: 8519, Stop: 8923, Start Num: 6

Candidate Starts for Hexbug_14:

(Start: 6 @8519 has 47 MA's), (11, 8540), (20, 8567), (28, 8609), (51, 8708), (66, 8798), (74, 8840), (81, 8894), (85, 8918),

Gene: HippoPololi_14 Start: 8345, Stop: 8743, Start Num: 6

Candidate Starts for HippoPololi_14:

(Start: 6 @8345 has 47 MA's), (21, 8393), (38, 8474), (42, 8483), (45, 8504), (48, 8513), (53, 8540), (55, 8549), (57, 8561), (61, 8588), (62, 8597), (73, 8654),

Gene: Horseradish_13 Start: 7404, Stop: 7814, Start Num: 6

Candidate Starts for Horseradish_13:

(Start: 6 @7404 has 47 MA's), (21, 7452), (28, 7491), (37, 7533), (50, 7587), (60, 7647),

Gene: Jabbawokkie_14 Start: 7736, Stop: 8140, Start Num: 7

Candidate Starts for Jabbawokkie_14:

(Start: 7 @7736 has 7 MA's), (18, 7769), (30, 7829), (44, 7895), (65, 8015), (67, 8027), (75, 8063), (79, 8093),

Gene: Jablanski_13 Start: 8116, Stop: 8502, Start Num: 14

Candidate Starts for Jablanski_13:

(4, 8035), (Start: 14 @8116 has 17 MA's), (23, 8152), (27, 8173),

Gene: Jamzy_15 Start: 7843, Stop: 8247, Start Num: 6

Candidate Starts for Jamzy_15:

(Start: 6 @7843 has 47 MA's), (18, 7885), (28, 7933), (31, 7954), (59, 8077), (66, 8122),

Gene: Juicebox_13 Start: 8820, Stop: 9218, Start Num: 9

Candidate Starts for Juicebox_13:

(Start: 9 @8820 has 1 MA's), (24, 8877), (32, 8916), (76, 9132),

Gene: KayGee_11 Start: 7294, Stop: 7704, Start Num: 6

Candidate Starts for KayGee_11:

(Start: 6 @7294 has 47 MA's), (21, 7339), (28, 7378), (36, 7417), (40, 7429), (55, 7498), (73, 7603), (84, 7678),

Gene: Kuwabara_12 Start: 7390, Stop: 7773, Start Num: 8

Candidate Starts for Kuwabara_12:

(Start: 8 @7390 has 10 MA's), (25, 7444), (26, 7450), (29, 7462), (33, 7486), (70, 7669), (84, 7759),

Gene: Lauer_11 Start: 7343, Stop: 7753, Start Num: 6

Candidate Starts for Lauer_11:

(Start: 6 @7343 has 47 MA's), (21, 7388), (28, 7427), (36, 7466), (40, 7478), (55, 7547), (73, 7652), (84, 7727),

Gene: LilSpotty_11 Start: 7105, Stop: 7479, Start Num: 12

Candidate Starts for LilSpotty_11:

(10, 7102), (Start: 12 @7105 has 4 MA's), (39, 7219), (41, 7222), (60, 7330), (62, 7342), (64, 7345), (71, 7384), (83, 7459),

Gene: Lilas_13 Start: 8269, Stop: 8655, Start Num: 14

Candidate Starts for Lilas_13:

(Start: 14 @8269 has 17 MA's), (27, 8326),

Gene: LonelyBoi_13 Start: 8116, Stop: 8502, Start Num: 14

Candidate Starts for LonelyBoi_13:

(4, 8035), (Start: 14 @8116 has 17 MA's), (27, 8173),

Gene: Lucky10_11 Start: 6599, Stop: 6982, Start Num: 8

Candidate Starts for Lucky10_11:

(Start: 8 @6599 has 10 MA's), (25, 6653), (26, 6659), (29, 6671), (33, 6695), (49, 6755),

Gene: MScarn_14 Start: 7491, Stop: 7901, Start Num: 6

Candidate Starts for MScarn_14:

(Start: 6 @7491 has 47 MA's), (19, 7533), (21, 7539), (28, 7578), (37, 7620), (50, 7674), (59, 7722), (60, 7734),

Gene: MaVan_16 Start: 8446, Stop: 8850, Start Num: 6

Candidate Starts for MaVan_16:

(Start: 6 @8446 has 47 MA's), (21, 8494), (38, 8575), (48, 8614), (53, 8641), (61, 8689), (73, 8755),

Gene: Margaret_15 Start: 8228, Stop: 8632, Start Num: 6

Candidate Starts for Margaret_15:

(Start: 6 @8228 has 47 MA's), (11, 8249), (13, 8252), (18, 8270), (28, 8318), (30, 8330), (51, 8417), (59, 8462), (74, 8549), (85, 8627),

Gene: Marteenaa_13 Start: 8269, Stop: 8655, Start Num: 14

Candidate Starts for Marteena_13:
(Start: 14 @8269 has 17 MA's), (27, 8326),

Gene: Mayweather_13 Start: 7917, Stop: 8327, Start Num: 6
Candidate Starts for Mayweather_13:
(Start: 6 @7917 has 47 MA's), (21, 7962), (28, 8001), (36, 8040), (40, 8052), (55, 8121), (73, 8226),
(84, 8301),

Gene: Morkie_11 Start: 6561, Stop: 6944, Start Num: 8
Candidate Starts for Morkie_11:
(Start: 8 @6561 has 10 MA's), (25, 6615), (26, 6621), (29, 6633), (33, 6657), (49, 6717), (69, 6834),
(70, 6840), (84, 6930),

Gene: MortyNRick_12 Start: 7390, Stop: 7773, Start Num: 8
Candidate Starts for MortyNRick_12:
(Start: 8 @7390 has 10 MA's), (25, 7444), (26, 7450), (29, 7462), (33, 7486), (70, 7669), (84, 7759),

Gene: MunkgeeRoachy_13 Start: 7570, Stop: 7980, Start Num: 6
Candidate Starts for MunkgeeRoachy_13:
(Start: 6 @7570 has 47 MA's), (19, 7612), (21, 7618), (28, 7657), (37, 7699), (50, 7753), (60, 7813),

Gene: Nebkiss_9 Start: 7643, Stop: 8014, Start Num: 12
Candidate Starts for Nebkiss_9:
(Start: 12 @7643 has 4 MA's), (34, 7739), (39, 7760), (46, 7787), (47, 7790), (48, 7793), (51, 7808),
(60, 7865), (62, 7877), (71, 7922), (80, 7982), (81, 7988), (82, 7994),

Gene: Nibbles_14 Start: 8446, Stop: 8850, Start Num: 6
Candidate Starts for Nibbles_14:
(Start: 6 @8446 has 47 MA's), (21, 8494), (38, 8575), (48, 8614), (53, 8641), (61, 8689), (73, 8755),

Gene: Nina_13 Start: 8556, Stop: 8966, Start Num: 6
Candidate Starts for Nina_13:
(Start: 6 @8556 has 47 MA's), (19, 8598), (21, 8604), (28, 8643), (37, 8685), (50, 8739), (60, 8799),

Gene: Nodigi_14 Start: 8512, Stop: 8916, Start Num: 6
Candidate Starts for Nodigi_14:
(Start: 6 @8512 has 47 MA's), (20, 8560), (28, 8602), (51, 8701), (66, 8791), (74, 8833), (81, 8887),
(85, 8911),

Gene: ODay_12 Start: 7116, Stop: 7499, Start Num: 8
Candidate Starts for ODay_12:
(Start: 8 @7116 has 10 MA's), (16, 7131), (25, 7170), (26, 7176), (29, 7188), (33, 7212), (70, 7395),
(84, 7485),

Gene: Orla_14 Start: 8516, Stop: 8920, Start Num: 6
Candidate Starts for Orla_14:
(Start: 6 @8516 has 47 MA's), (20, 8564), (28, 8606), (51, 8705), (66, 8795), (74, 8837), (81, 8891),
(85, 8915),

Gene: PhorbesPhlower_11 Start: 6561, Stop: 6944, Start Num: 8
Candidate Starts for PhorbesPhlower_11:
(Start: 8 @6561 has 10 MA's), (25, 6615), (26, 6621), (29, 6633), (33, 6657), (49, 6717), (69, 6834),
(70, 6840), (84, 6930),

Gene: Pollux_13 Start: 8269, Stop: 8655, Start Num: 14

Candidate Starts for Pollux_13:

(Start: 14 @8269 has 17 MA's), (27, 8326),

Gene: Pons_12 Start: 7296, Stop: 7706, Start Num: 6

Candidate Starts for Pons_12:

(Start: 6 @7296 has 47 MA's), (21, 7341), (28, 7380), (36, 7419), (40, 7431), (55, 7500), (73, 7605), (84, 7680),

Gene: Posh_13 Start: 8263, Stop: 8655, Start Num: 14

Candidate Starts for Posh_13:

(4, 8182), (Start: 14 @8263 has 17 MA's),

Gene: PotPie_13 Start: 8147, Stop: 8557, Start Num: 6

Candidate Starts for PotPie_13:

(Start: 6 @8147 has 47 MA's), (21, 8192), (28, 8231), (36, 8270), (40, 8282), (55, 8351), (73, 8456), (84, 8531),

Gene: PsychoKiller_12 Start: 7522, Stop: 7932, Start Num: 6

Candidate Starts for PsychoKiller_12:

(Start: 6 @7522 has 47 MA's), (19, 7564), (21, 7570), (28, 7609), (37, 7651), (50, 7705), (60, 7765),

Gene: Pytheas_13 Start: 8116, Stop: 8502, Start Num: 14

Candidate Starts for Pytheas_13:

(4, 8035), (Start: 14 @8116 has 17 MA's), (23, 8152), (27, 8173),

Gene: Quasar_12 Start: 8131, Stop: 8541, Start Num: 6

Candidate Starts for Quasar_12:

(Start: 6 @8131 has 47 MA's), (19, 8173), (21, 8179), (28, 8218), (37, 8260), (50, 8314), (60, 8374),

Gene: RedBaron_13 Start: 7567, Stop: 7977, Start Num: 6

Candidate Starts for RedBaron_13:

(Start: 6 @7567 has 47 MA's), (19, 7609), (21, 7615), (28, 7654), (37, 7696), (50, 7750), (60, 7810),

Gene: SheckWes_11 Start: 7284, Stop: 7694, Start Num: 6

Candidate Starts for SheckWes_11:

(Start: 6 @7284 has 47 MA's), (21, 7329), (28, 7368), (36, 7407), (40, 7419), (55, 7488), (73, 7593), (84, 7668),

Gene: SketchMex_11 Start: 7506, Stop: 7916, Start Num: 6

Candidate Starts for SketchMex_11:

(Start: 6 @7506 has 47 MA's), (19, 7548), (21, 7554), (28, 7593), (37, 7635), (50, 7689), (59, 7737), (60, 7749),

Gene: Sleepyhead_12 Start: 7869, Stop: 8279, Start Num: 15

Candidate Starts for Sleepyhead_12:

(5, 7833), (Start: 15 @7869 has 1 MA's), (35, 7962), (43, 8004), (54, 8061), (56, 8070), (58, 8082), (63, 8124),

Gene: Sopespian_12 Start: 7522, Stop: 7932, Start Num: 6

Candidate Starts for Sopespian_12:

(Start: 6 @7522 has 47 MA's), (19, 7564), (21, 7570), (28, 7609), (37, 7651), (50, 7705), (60, 7765),

Gene: Soul22_13 Start: 7212, Stop: 7616, Start Num: 7

Candidate Starts for Soul22_13:

(Start: 7 @7212 has 7 MA's), (18, 7245), (30, 7305), (44, 7371), (65, 7491), (67, 7503), (75, 7539), (79, 7569),

Gene: SteamedHams_14 Start: 7535, Stop: 7945, Start Num: 6

Candidate Starts for SteamedHams_14:

(Start: 6 @7535 has 47 MA's), (17, 7571), (19, 7577), (21, 7583), (28, 7622), (37, 7664), (50, 7718), (60, 7778),

Gene: SummitAcademy_11 Start: 7362, Stop: 7772, Start Num: 6

Candidate Starts for SummitAcademy_11:

(Start: 6 @7362 has 47 MA's), (21, 7407), (28, 7446), (36, 7485), (40, 7497), (55, 7566), (73, 7671), (84, 7746),

Gene: Survivors_14 Start: 8300, Stop: 8704, Start Num: 6

Candidate Starts for Survivors_14:

(Start: 6 @8300 has 47 MA's), (21, 8348), (38, 8429), (48, 8468), (53, 8495), (61, 8543), (73, 8609),

Gene: SweatNTears_14 Start: 8017, Stop: 8427, Start Num: 6

Candidate Starts for SweatNTears_14:

(Start: 6 @8017 has 47 MA's), (19, 8059), (21, 8065), (28, 8104), (37, 8146), (50, 8200), (59, 8248), (60, 8260),

Gene: Tolls_14 Start: 7538, Stop: 7948, Start Num: 6

Candidate Starts for Tolls_14:

(Start: 6 @7538 has 47 MA's), (17, 7574), (19, 7580), (21, 7586), (28, 7625), (37, 7667), (50, 7721), (60, 7781),

Gene: Troje_12 Start: 7491, Stop: 7901, Start Num: 6

Candidate Starts for Troje_12:

(Start: 6 @7491 has 47 MA's), (19, 7533), (21, 7539), (28, 7578), (37, 7620), (50, 7674), (59, 7722), (60, 7734),

Gene: Typhonomachy_13 Start: 7522, Stop: 7932, Start Num: 6

Candidate Starts for Typhonomachy_13:

(Start: 6 @7522 has 47 MA's), (19, 7564), (21, 7570), (28, 7609), (37, 7651), (50, 7705), (60, 7765),

Gene: Vine_13 Start: 8291, Stop: 8701, Start Num: 6

Candidate Starts for Vine_13:

(Start: 6 @8291 has 47 MA's), (21, 8336), (28, 8375), (36, 8414), (40, 8426), (55, 8495), (73, 8600), (84, 8675),

Gene: Wrigley_13 Start: 8113, Stop: 8499, Start Num: 14

Candidate Starts for Wrigley_13:

(4, 8032), (Start: 14 @8113 has 17 MA's), (23, 8149), (27, 8170),

Gene: Yakult_13 Start: 7424, Stop: 7828, Start Num: 6

Candidate Starts for Yakult_13:

(1, 7289), (2, 7292), (3, 7319), (Start: 6 @7424 has 47 MA's), (18, 7466), (21, 7475), (22, 7478), (28, 7514), (55, 7634),

Gene: Yarn_11 Start: 7528, Stop: 7938, Start Num: 6

Candidate Starts for Yarn_11:

(Start: 6 @7528 has 47 MA's), (17, 7564), (19, 7570), (21, 7576), (28, 7615), (37, 7657), (50, 7711), (60, 7771),

Gene: Yoshi_13 Start: 7212, Stop: 7616, Start Num: 7

Candidate Starts for Yoshi_13:

(Start: 7 @7212 has 7 MA's), (18, 7245), (30, 7305), (44, 7371), (65, 7491), (67, 7503), (75, 7539), (79, 7569),

Gene: Yummy_13 Start: 7404, Stop: 7814, Start Num: 6

Candidate Starts for Yummy_13:

(Start: 6 @7404 has 47 MA's), (21, 7452), (28, 7491), (37, 7533), (50, 7587), (60, 7647),

Gene: Zapner_14 Start: 7737, Stop: 8141, Start Num: 7

Candidate Starts for Zapner_14:

(Start: 7 @7737 has 7 MA's), (18, 7770), (30, 7830), (44, 7896), (65, 8016), (67, 8028), (75, 8064), (79, 8094),

Gene: Zareef_16 Start: 8447, Stop: 8851, Start Num: 6

Candidate Starts for Zareef_16:

(Start: 6 @8447 has 47 MA's), (21, 8495), (38, 8576), (48, 8615), (53, 8642), (61, 8690), (73, 8756),