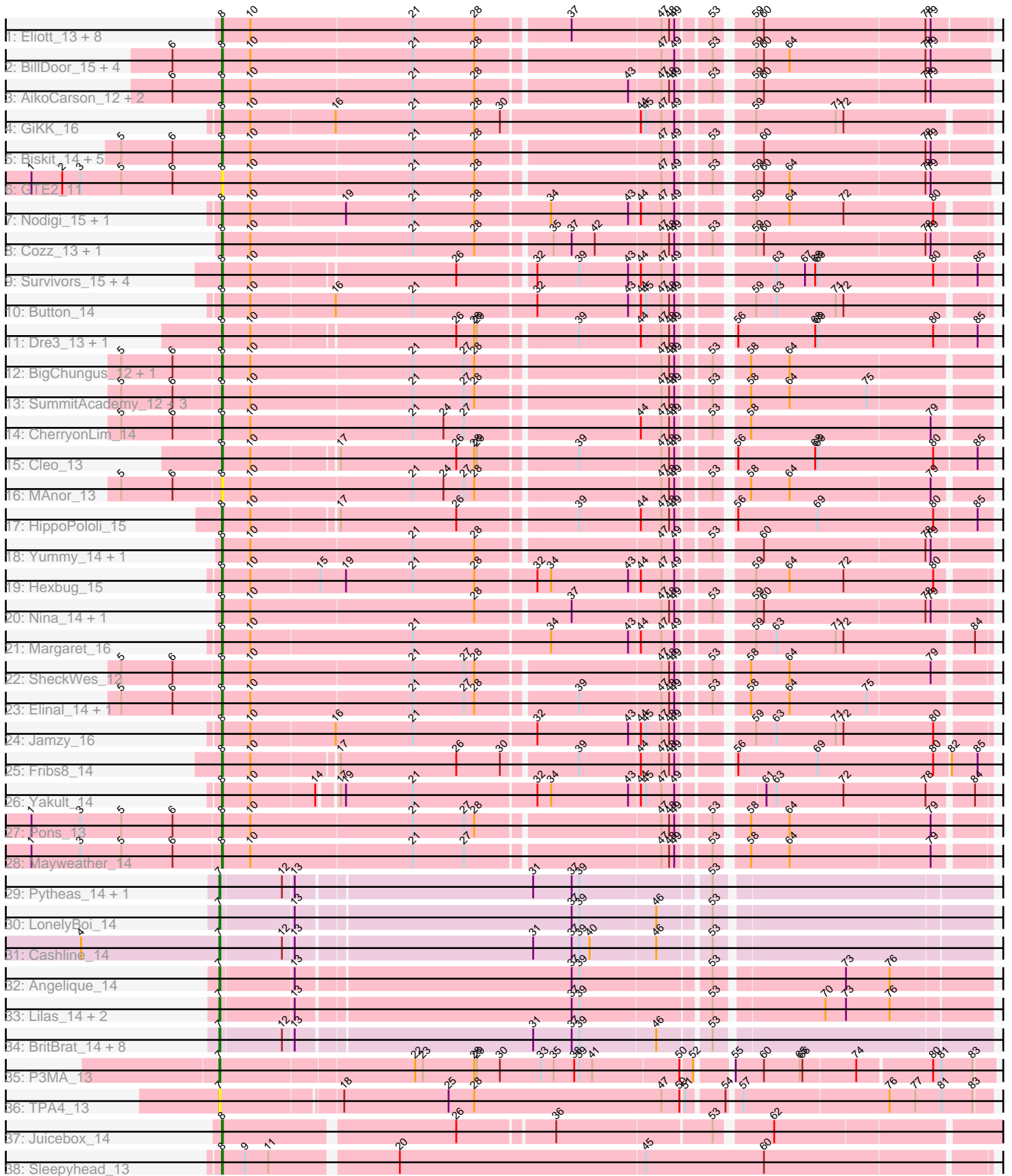


Pham 171392



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 171392 Report

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

Pham number 171392 has 82 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Elliott_13, Agatha_13, GoldHunter_14, MunkgeeRoachy_14, PsychoKiller_13, Typhonmarchy_14, RedBaron_14, Sopespian_13, Burnsey_13
- Track 2 : BillDoor_15, Yarn_12, SteamedHams_15, Tolls_15, AndPeggy_12
- Track 3 : AikoCarson_12, Amok_12, Emalyn_12
- Track 4 : GiKK_16
- Track 5 : Biskit_14, Buttrmlkdreams_13, Troje_13, SweatNTears_15, MScarn_15, SketchMex_12
- Track 6 : GTE2_11
- Track 7 : Nodigi_15, Orla_15
- Track 8 : Cozz_13, Axym_13
- Track 9 : Survivors_15, Azira_15, Nibbles_15, MaVan_15, Zareef_17
- Track 10 : Button_14
- Track 11 : Dre3_13, Gibbous_13
- Track 12 : BigChungus_12, Feastonyeet_12
- Track 13 : SummitAcademy_12, Lauer_12, PotPie_13, Vine_14
- Track 14 : CherryonLim_14
- Track 15 : Cleo_13
- Track 16 : MAnor_13
- Track 17 : HippoPololi_15
- Track 18 : Yummy_14, Horseradish_14
- Track 19 : Hexbug_15
- Track 20 : Nina_14, Quasar_13
- Track 21 : Margaret_16
- Track 22 : SheckWes_12
- Track 23 : Elinal_14, KayGee_12
- Track 24 : Jamzy_16
- Track 25 : Fribs8_14
- Track 26 : Yakult_14
- Track 27 : Pons_13
- Track 28 : Mayweather_14
- Track 29 : Pytheas_14, Jablanski_14
- Track 30 : LonelyBoi_14
- Track 31 : Cashline_14
- Track 32 : Angelique_14
- Track 33 : Lilas_14, Bradissa_14, EnalisNailo_14
- Track 34 : BritBrat_14, Posh_14, Wrigley_14, Pollux_14, Floral_14, Marteena_14, EMSquaredA_14, Confidence_14, BeeGee_14

- Track 35 : P3MA_13
- Track 36 : TPA4_13
- Track 37 : Juicebox_14
- Track 38 : Sleepyhead_13

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

The start number called the most often in the published annotations is 8, it was called in 52 of the 70 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_13, AikoCarson_12, Amok_12, AndPeggy_12, Axym_13, Azira_15, BigChungus_12, BillDoor_15, Biskit_14, Burnsey_13, Button_14, Buttrmilkdreams_13, CherryonLim_14, Cleo_13, Cozz_13, Dre3_13, Elinal_14, Elliott_13, Emalyn_12, Feastonyeet_12, Fribs8_14, GTE2_11, GiKK_16, Gibbous_13, GoldHunter_14, Hexbug_15, HippoPololi_15, Horseradish_14, Jamzy_16, Juicebox_14, KayGee_12, Lauer_12, MAnor_13, MScarn_15, MaVan_15, Margaret_16, Mayweather_14, MunkgeeRoachy_14, Nibbles_15, Nina_14, Nodigi_15, Orla_15, Pons_13, PotPie_13, PsychoKiller_13, Quasar_13, RedBaron_14, SheckWes_12, SketchMex_12, Sleepyhead_13, Sopespian_13, SteamedHams_15, SummitAcademy_12, Survivors_15, SweatNTears_15, Tolls_15, Troje_13, Typhonomachy_14, Vine_14, Yakult_14, Yarn_12, Yummy_14, Zareef_17,

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

-

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

- Angelique_14, BeeGee_14, Bradissa_14, BritBrat_14, Cashline_14, Confidence_14, EMSquaredA_14, EnalisNailo_14, Floral_14, Jablanski_14, Lilas_14, LonelyBoi_14, Marteena_14, P3MA_13, Pollux_14, Posh_14, Pytheas_14, TPA4_13, Wrigley_14,

Summary by start number:

Start 7:

- Found in 19 of 82 (23.2%) of genes in pham
- Manual Annotations of this start: 18 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique_14 (CY1), BeeGee_14 (CY), Bradissa_14 (CY1), BritBrat_14 (CY2), Cashline_14 (CY), Confidence_14 (CY1), EMSquaredA_14 (CY1), EnalisNailo_14 (CY1), Floral_14 (CY1), Jablanski_14 (CY), Lilas_14 (CY1), LonelyBoi_14 (CY), Marteena_14 (CY1), P3MA_13 (singleton), Pollux_14 (CY1), Posh_14 (CY), Pytheas_14 (CY), TPA4_13 (singleton), Wrigley_14 (CY),

Start 8:

- Found in 63 of 82 (76.8%) of genes in pham
- Manual Annotations of this start: 52 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agatha_13 (CT), AikoCarson_12 (CT), Amok_12 (CT), AndPeggy_12 (CT), Axym_13 (CT), Azira_15 (CT), BigChungus_12

(CT), BillDoor_15 (CT), Biskit_14 (CT), Burnsey_13 (CT), Button_14 (CT), Buttrmlkdreams_13 (CT), CherryonLim_14 (CT), Cleo_13 (CT), Cozz_13 (CT), Dre3_13 (CT), Elinal_14 (CT), Elliott_13 (CT), Emalyn_12 (CT), Feastonyeet_12 (CT), Fribs8_14 (CT), GTE2_11 (CT), GiKK_16 (CT), Gibbous_13 (CT), GoldHunter_14 (CT), Hexbug_15 (CT), HippoPololi_15 (CT), Horseradish_14 (CT), Jamzy_16 (CT), Juicebox_14 (singleton), KayGee_12 (CT), Lauer_12 (CT), MAnor_13 (CT), MScarn_15 (CT), MaVan_15 (CT), Margaret_16 (CT), Mayweather_14 (CT), MunkgeeRoachy_14 (CT), Nibbles_15 (CT), Nina_14 (CT), Nodigi_15 (CT), Orla_15 (CT), Pons_13 (CT), PotPie_13 (CT), PsychoKiller_13 (CT), Quasar_13 (CT), RedBaron_14 (CT), SheckWes_12 (CT), SketchMex_12 (CT), Sleepyhead_13 (singleton), Sopespian_13 (CT), SteamedHams_15 (CT), SummitAcademy_12 (CT), Survivors_15 (CT), SweatNTears_15 (CT), Tolls_15 (CT), Troje_13 (CT), Typhonomachy_14 (CT), Vine_14 (CT), Yakult_14 (CT), Yarn_12 (CT), Yummy_14 (CT), Zareef_17 (CT),

Summary by clusters:

There are 5 clusters represented in this pham: CY1, CY2, CY, singleton, CT,

Info for manual annotations of cluster CT:

- Start number 8 was manually annotated 50 times for cluster CT.

Info for manual annotations of cluster CY:

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

Info for manual annotations of cluster CY1:

- Start number 7 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 7 was manually annotated 1 time for cluster CY2.

Gene Information:

Gene: Agatha_13 Start: 7939, Stop: 8781, Start Num: 8

Candidate Starts for Agatha_13:

(Start: 8 @7939 has 52 MA's), (10, 7972), (21, 8158), (28, 8230), (37, 8329), (47, 8431), (48, 8440), (49, 8446), (53, 8479), (59, 8515), (60, 8524), (78, 8710), (79, 8716),

Gene: AikoCarson_12 Start: 7662, Stop: 8510, Start Num: 8

Candidate Starts for AikoCarson_12:

(6, 7605), (Start: 8 @7662 has 52 MA's), (10, 7695), (21, 7881), (28, 7953), (43, 8118), (47, 8154), (48, 8163), (49, 8169), (53, 8202), (59, 8238), (60, 8247), (78, 8433), (79, 8439),

Gene: Amok_12 Start: 7662, Stop: 8510, Start Num: 8

Candidate Starts for Amok_12:

(6, 7605), (Start: 8 @7662 has 52 MA's), (10, 7695), (21, 7881), (28, 7953), (43, 8118), (47, 8154), (48, 8163), (49, 8169), (53, 8202), (59, 8238), (60, 8247), (78, 8433), (79, 8439),

Gene: AndPeggy_12 Start: 7953, Stop: 8798, Start Num: 8

Candidate Starts for AndPeggy_12:

(6, 7896), (Start: 8 @7953 has 52 MA's), (10, 7986), (21, 8172), (28, 8244), (47, 8445), (49, 8460), (53, 8493), (59, 8529), (60, 8538), (64, 8568), (78, 8724), (79, 8730),

Gene: Angelique_14 Start: 8715, Stop: 9560, Start Num: 7

Candidate Starts for Angelique_14:

(Start: 7 @8715 has 18 MA's), (13, 8796), (37, 9105), (39, 9114), (53, 9255), (73, 9396), (76, 9447),

Gene: Axym_13 Start: 7939, Stop: 8781, Start Num: 8

Candidate Starts for Axym_13:

(Start: 8 @7939 has 52 MA's), (10, 7972), (21, 8158), (28, 8230), (35, 8308), (37, 8329), (42, 8356), (47, 8431), (48, 8440), (49, 8446), (53, 8479), (59, 8515), (60, 8524), (78, 8710), (79, 8716),

Gene: Azira_15 Start: 8878, Stop: 9717, Start Num: 8

Candidate Starts for Azira_15:

(Start: 8 @8878 has 52 MA's), (10, 8911), (26, 9139), (32, 9220), (39, 9268), (43, 9325), (44, 9337), (47, 9361), (49, 9376), (63, 9469), (67, 9502), (68, 9514), (69, 9517), (80, 9652), (85, 9700),

Gene: BeeGee_14 Start: 8711, Stop: 9556, Start Num: 7

Candidate Starts for BeeGee_14:

(Start: 7 @8711 has 18 MA's), (12, 8780), (13, 8792), (31, 9056), (37, 9101), (39, 9110), (46, 9197), (53, 9251),

Gene: BigChungus_12 Start: 7726, Stop: 8565, Start Num: 8

Candidate Starts for BigChungus_12:

(5, 7612), (6, 7672), (Start: 8 @7726 has 52 MA's), (10, 7759), (21, 7945), (27, 8005), (28, 8017), (47, 8218), (48, 8227), (49, 8233), (53, 8266), (58, 8296), (64, 8341),

Gene: BillDoor_15 Start: 7918, Stop: 8763, Start Num: 8

Candidate Starts for BillDoor_15:

(6, 7861), (Start: 8 @7918 has 52 MA's), (10, 7951), (21, 8137), (28, 8209), (47, 8410), (49, 8425), (53, 8458), (59, 8494), (60, 8503), (64, 8533), (78, 8689), (79, 8695),

Gene: Biskit_14 Start: 7925, Stop: 8770, Start Num: 8

Candidate Starts for Biskit_14:

(5, 7808), (6, 7868), (Start: 8 @7925 has 52 MA's), (10, 7958), (21, 8144), (28, 8216), (47, 8417), (49, 8432), (53, 8465), (60, 8510), (78, 8696), (79, 8702),

Gene: Bradissa_14 Start: 8715, Stop: 9560, Start Num: 7

Candidate Starts for Bradissa_14:

(Start: 7 @8715 has 18 MA's), (13, 8796), (37, 9105), (39, 9114), (53, 9255), (70, 9372), (73, 9396), (76, 9447),

Gene: BritBrat_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for BritBrat_14:

(Start: 7 @8717 has 18 MA's), (12, 8786), (13, 8798), (31, 9062), (37, 9107), (39, 9116), (46, 9203), (53, 9257),

Gene: Burnsey_13 Start: 7940, Stop: 8782, Start Num: 8

Candidate Starts for Burnsey_13:

(Start: 8 @7940 has 52 MA's), (10, 7973), (21, 8159), (28, 8231), (37, 8330), (47, 8432), (48, 8441), (49, 8447), (53, 8480), (59, 8516), (60, 8525), (78, 8711), (79, 8717),

Gene: Button_14 Start: 7947, Stop: 8795, Start Num: 8

Candidate Starts for Button_14:

(Start: 8 @7947 has 52 MA's), (10, 7980), (16, 8076), (21, 8166), (32, 8307), (43, 8412), (44, 8424), (45, 8430), (47, 8448), (48, 8457), (49, 8463), (59, 8532), (63, 8556), (71, 8625), (72, 8634),

Gene: Buttrmlkdreams_13 Start: 7910, Stop: 8755, Start Num: 8

Candidate Starts for Buttrmlkdreams_13:

(5, 7793), (6, 7853), (Start: 8 @7910 has 52 MA's), (10, 7943), (21, 8129), (28, 8201), (47, 8402), (49, 8417), (53, 8450), (60, 8495), (78, 8681), (79, 8687),

Gene: Cashline_14 Start: 8571, Stop: 9416, Start Num: 7

Candidate Starts for Cashline_14:

(4, 8409), (Start: 7 @8571 has 18 MA's), (12, 8640), (13, 8652), (31, 8916), (37, 8961), (39, 8970), (40, 8982), (46, 9057), (53, 9111),

Gene: CherryonLim_14 Start: 8452, Stop: 9291, Start Num: 8

Candidate Starts for CherryonLim_14:

(5, 8338), (6, 8398), (Start: 8 @8452 has 52 MA's), (10, 8485), (21, 8671), (24, 8707), (27, 8731), (44, 8920), (47, 8944), (48, 8953), (49, 8959), (53, 8992), (58, 9022), (79, 9229),

Gene: Cleo_13 Start: 8168, Stop: 9007, Start Num: 8

Candidate Starts for Cleo_13:

(Start: 8 @8168 has 52 MA's), (10, 8201), (17, 8294), (26, 8429), (28, 8450), (29, 8453), (39, 8558), (47, 8651), (48, 8660), (49, 8666), (56, 8714), (68, 8804), (69, 8807), (80, 8942), (85, 8990),

Gene: Confidence_14 Start: 8711, Stop: 9556, Start Num: 7

Candidate Starts for Confidence_14:

(Start: 7 @8711 has 18 MA's), (12, 8780), (13, 8792), (31, 9056), (37, 9101), (39, 9110), (46, 9197), (53, 9251),

Gene: Cozz_13 Start: 7940, Stop: 8782, Start Num: 8

Candidate Starts for Cozz_13:

(Start: 8 @7940 has 52 MA's), (10, 7973), (21, 8159), (28, 8231), (35, 8309), (37, 8330), (42, 8357), (47, 8432), (48, 8441), (49, 8447), (53, 8480), (59, 8516), (60, 8525), (78, 8711), (79, 8717),

Gene: Dre3_13 Start: 8115, Stop: 8954, Start Num: 8

Candidate Starts for Dre3_13:

(Start: 8 @8115 has 52 MA's), (10, 8148), (26, 8376), (28, 8397), (29, 8400), (39, 8505), (44, 8574), (47, 8598), (48, 8607), (49, 8613), (56, 8661), (68, 8751), (69, 8754), (80, 8889), (85, 8937),

Gene: EMSquaredA_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for EMSquaredA_14:

(Start: 7 @8717 has 18 MA's), (12, 8786), (13, 8798), (31, 9062), (37, 9107), (39, 9116), (46, 9203), (53, 9257),

Gene: Elinal_14 Start: 7707, Stop: 8546, Start Num: 8

Candidate Starts for Elinal_14:

(5, 7593), (6, 7653), (Start: 8 @7707 has 52 MA's), (10, 7740), (21, 7926), (27, 7986), (28, 7998), (39, 8106), (47, 8199), (48, 8208), (49, 8214), (53, 8247), (58, 8277), (64, 8322), (75, 8412),

Gene: Elliott_13 Start: 7939, Stop: 8781, Start Num: 8

Candidate Starts for Elliott_13:

(Start: 8 @7939 has 52 MA's), (10, 7972), (21, 8158), (28, 8230), (37, 8329), (47, 8431), (48, 8440), (49, 8446), (53, 8479), (59, 8515), (60, 8524), (78, 8710), (79, 8716),

Gene: Emalyn_12 Start: 7661, Stop: 8509, Start Num: 8

Candidate Starts for Emalyn_12:

(6, 7604), (Start: 8 @7661 has 52 MA's), (10, 7694), (21, 7880), (28, 7952), (43, 8117), (47, 8153), (48, 8162), (49, 8168), (53, 8201), (59, 8237), (60, 8246), (78, 8432), (79, 8438),

Gene: EnalisNailo_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for EnalisNailo_14:

(Start: 7 @8717 has 18 MA's), (13, 8798), (37, 9107), (39, 9116), (53, 9257), (70, 9374), (73, 9398), (76, 9449),

Gene: Feastonyeet_12 Start: 7726, Stop: 8565, Start Num: 8

Candidate Starts for Feastonyeet_12:

(5, 7612), (6, 7672), (Start: 8 @7726 has 52 MA's), (10, 7759), (21, 7945), (27, 8005), (28, 8017), (47, 8218), (48, 8227), (49, 8233), (53, 8266), (58, 8296), (64, 8341),

Gene: Floral_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for Floral_14:

(Start: 7 @8717 has 18 MA's), (12, 8786), (13, 8798), (31, 9062), (37, 9107), (39, 9116), (46, 9203), (53, 9257),

Gene: Fribs8_14 Start: 8691, Stop: 9530, Start Num: 8

Candidate Starts for Fribs8_14:

(Start: 8 @8691 has 52 MA's), (10, 8724), (17, 8817), (26, 8952), (30, 9003), (39, 9081), (44, 9150), (47, 9174), (48, 9183), (49, 9189), (56, 9237), (69, 9330), (80, 9465), (82, 9483), (85, 9513),

Gene: GTE2_11 Start: 7614, Stop: 8459, Start Num: 8

Candidate Starts for GTE2_11:

(1, 7392), (2, 7428), (3, 7449), (5, 7497), (6, 7557), (Start: 8 @7614 has 52 MA's), (10, 7647), (21, 7833), (28, 7905), (47, 8106), (49, 8121), (53, 8154), (59, 8190), (60, 8199), (64, 8229), (78, 8385), (79, 8391),

Gene: GiKK_16 Start: 8250, Stop: 9098, Start Num: 8

Candidate Starts for GiKK_16:

(Start: 8 @8250 has 52 MA's), (10, 8283), (16, 8379), (21, 8469), (28, 8541), (30, 8571), (44, 8727), (45, 8733), (47, 8751), (49, 8766), (59, 8835), (71, 8928), (72, 8937),

Gene: Gibbous_13 Start: 8115, Stop: 8954, Start Num: 8

Candidate Starts for Gibbous_13:

(Start: 8 @8115 has 52 MA's), (10, 8148), (26, 8376), (28, 8397), (29, 8400), (39, 8505), (44, 8574), (47, 8598), (48, 8607), (49, 8613), (56, 8661), (68, 8751), (69, 8754), (80, 8889), (85, 8937),

Gene: GoldHunter_14 Start: 7940, Stop: 8782, Start Num: 8

Candidate Starts for GoldHunter_14:

(Start: 8 @7940 has 52 MA's), (10, 7973), (21, 8159), (28, 8231), (37, 8330), (47, 8432), (48, 8441), (49, 8447), (53, 8480), (59, 8516), (60, 8525), (78, 8711), (79, 8717),

Gene: Hexbug_15 Start: 8936, Stop: 9784, Start Num: 8

Candidate Starts for Hexbug_15:

(Start: 8 @8936 has 52 MA's), (10, 8969), (15, 9047), (19, 9077), (21, 9155), (28, 9227), (32, 9296), (34, 9311), (43, 9401), (44, 9413), (47, 9437), (49, 9452), (59, 9521), (64, 9560), (72, 9623), (80, 9728),

Gene: HippoPololi_15 Start: 8768, Stop: 9607, Start Num: 8

Candidate Starts for HippoPololi_15:

(Start: 8 @8768 has 52 MA's), (10, 8801), (17, 8894), (26, 9029), (39, 9158), (44, 9227), (47, 9251), (48, 9260), (49, 9266), (56, 9314), (69, 9407), (80, 9542), (85, 9590),

Gene: Horseradish_14 Start: 7821, Stop: 8666, Start Num: 8

Candidate Starts for Horseradish_14:

(Start: 8 @7821 has 52 MA's), (10, 7854), (21, 8040), (28, 8112), (47, 8313), (49, 8328), (53, 8361), (60, 8406), (78, 8592), (79, 8598),

Gene: Jablanski_14 Start: 8564, Stop: 9409, Start Num: 7

Candidate Starts for Jablanski_14:

(Start: 7 @8564 has 18 MA's), (12, 8633), (13, 8645), (31, 8909), (37, 8954), (39, 8963), (53, 9104),

Gene: Jamzy_16 Start: 8260, Stop: 9108, Start Num: 8

Candidate Starts for Jamzy_16:

(Start: 8 @8260 has 52 MA's), (10, 8293), (16, 8389), (21, 8479), (32, 8620), (43, 8725), (44, 8737), (45, 8743), (47, 8761), (48, 8770), (49, 8776), (59, 8845), (63, 8869), (71, 8938), (72, 8947), (80, 9052),

Gene: Juicebox_14 Start: 9288, Stop: 10136, Start Num: 8

Candidate Starts for Juicebox_14:

(Start: 8 @9288 has 52 MA's), (26, 9543), (36, 9648), (53, 9822), (62, 9879),

Gene: KayGee_12 Start: 7707, Stop: 8546, Start Num: 8

Candidate Starts for KayGee_12:

(5, 7593), (6, 7653), (Start: 8 @7707 has 52 MA's), (10, 7740), (21, 7926), (27, 7986), (28, 7998), (39, 8106), (47, 8199), (48, 8208), (49, 8214), (53, 8247), (58, 8277), (64, 8322), (75, 8412),

Gene: Lauer_12 Start: 7756, Stop: 8595, Start Num: 8

Candidate Starts for Lauer_12:

(5, 7642), (6, 7702), (Start: 8 @7756 has 52 MA's), (10, 7789), (21, 7975), (27, 8035), (28, 8047), (47, 8248), (48, 8257), (49, 8263), (53, 8296), (58, 8326), (64, 8371), (75, 8461),

Gene: Lilas_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for Lilas_14:

(Start: 7 @8717 has 18 MA's), (13, 8798), (37, 9107), (39, 9116), (53, 9257), (70, 9374), (73, 9398), (76, 9449),

Gene: LonelyBoi_14 Start: 8564, Stop: 9409, Start Num: 7

Candidate Starts for LonelyBoi_14:

(Start: 7 @8564 has 18 MA's), (13, 8645), (37, 8954), (39, 8963), (46, 9050), (53, 9104),

Gene: MAnor_13 Start: 7697, Stop: 8536, Start Num: 8

Candidate Starts for MAnor_13:

(5, 7583), (6, 7643), (Start: 8 @7697 has 52 MA's), (10, 7730), (21, 7916), (24, 7952), (27, 7976), (28, 7988), (47, 8189), (48, 8198), (49, 8204), (53, 8237), (58, 8267), (64, 8312), (79, 8474),

Gene: MScarn_15 Start: 7910, Stop: 8755, Start Num: 8

Candidate Starts for MScarn_15:

(5, 7793), (6, 7853), (Start: 8 @7910 has 52 MA's), (10, 7943), (21, 8129), (28, 8201), (47, 8402), (49, 8417), (53, 8450), (60, 8495), (78, 8681), (79, 8687),

Gene: MaVan_15 Start: 8878, Stop: 9717, Start Num: 8

Candidate Starts for MaVan_15:

(Start: 8 @8878 has 52 MA's), (10, 8911), (26, 9139), (32, 9220), (39, 9268), (43, 9325), (44, 9337), (47, 9361), (49, 9376), (63, 9469), (67, 9502), (68, 9514), (69, 9517), (80, 9652), (85, 9700),

Gene: Margaret_16 Start: 8645, Stop: 9493, Start Num: 8

Candidate Starts for Margaret_16:

(Start: 8 @8645 has 52 MA's), (10, 8678), (21, 8864), (34, 9020), (43, 9110), (44, 9122), (47, 9146), (49, 9161), (59, 9230), (63, 9254), (71, 9323), (72, 9332), (84, 9476),

Gene: Marteena_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for Marteena_14:

(Start: 7 @8717 has 18 MA's), (12, 8786), (13, 8798), (31, 9062), (37, 9107), (39, 9116), (46, 9203), (53, 9257),

Gene: Mayweather_14 Start: 8330, Stop: 9166, Start Num: 8

Candidate Starts for Mayweather_14:

(1, 8111), (3, 8168), (5, 8216), (6, 8276), (Start: 8 @8330 has 52 MA's), (10, 8363), (21, 8549), (27, 8609), (47, 8822), (48, 8831), (49, 8837), (53, 8870), (58, 8900), (64, 8945), (79, 9107),

Gene: MunkgeeRoachy_14 Start: 7987, Stop: 8829, Start Num: 8

Candidate Starts for MunkgeeRoachy_14:

(Start: 8 @7987 has 52 MA's), (10, 8020), (21, 8206), (28, 8278), (37, 8377), (47, 8479), (48, 8488), (49, 8494), (53, 8527), (59, 8563), (60, 8572), (78, 8758), (79, 8764),

Gene: Nibbles_15 Start: 8878, Stop: 9717, Start Num: 8

Candidate Starts for Nibbles_15:

(Start: 8 @8878 has 52 MA's), (10, 8911), (26, 9139), (32, 9220), (39, 9268), (43, 9325), (44, 9337), (47, 9361), (49, 9376), (63, 9469), (67, 9502), (68, 9514), (69, 9517), (80, 9652), (85, 9700),

Gene: Nina_14 Start: 8973, Stop: 9815, Start Num: 8

Candidate Starts for Nina_14:

(Start: 8 @8973 has 52 MA's), (10, 9006), (28, 9264), (37, 9363), (47, 9465), (48, 9474), (49, 9480), (53, 9513), (59, 9549), (60, 9558), (78, 9744), (79, 9750),

Gene: Nodigi_15 Start: 8929, Stop: 9777, Start Num: 8

Candidate Starts for Nodigi_15:

(Start: 8 @8929 has 52 MA's), (10, 8962), (19, 9070), (21, 9148), (28, 9220), (34, 9304), (43, 9394), (44, 9406), (47, 9430), (49, 9445), (59, 9514), (64, 9553), (72, 9616), (80, 9721),

Gene: Orla_15 Start: 8933, Stop: 9781, Start Num: 8

Candidate Starts for Orla_15:

(Start: 8 @8933 has 52 MA's), (10, 8966), (19, 9074), (21, 9152), (28, 9224), (34, 9308), (43, 9398), (44, 9410), (47, 9434), (49, 9449), (59, 9518), (64, 9557), (72, 9620), (80, 9725),

Gene: P3MA_13 Start: 8229, Stop: 9089, Start Num: 7

Candidate Starts for P3MA_13:

(Start: 7 @8229 has 18 MA's), (22, 8448), (23, 8457), (28, 8517), (29, 8520), (30, 8547), (33, 8595), (35, 8610), (38, 8634), (39, 8640), (41, 8655), (50, 8754), (52, 8766), (55, 8799), (60, 8832), (65, 8874), (66, 8877), (74, 8937), (80, 9021), (81, 9030), (83, 9066),

Gene: Pollux_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for Pollux_14:

(Start: 7 @8717 has 18 MA's), (12, 8786), (13, 8798), (31, 9062), (37, 9107), (39, 9116), (46, 9203), (53, 9257),

Gene: Pons_13 Start: 7709, Stop: 8545, Start Num: 8

Candidate Starts for Pons_13:

(1, 7490), (3, 7547), (5, 7595), (6, 7655), (Start: 8 @7709 has 52 MA's), (10, 7742), (21, 7928), (27, 7988), (28, 8000), (47, 8201), (48, 8210), (49, 8216), (53, 8249), (58, 8279), (64, 8324), (79, 8486),

Gene: Posh_14 Start: 8717, Stop: 9562, Start Num: 7

Candidate Starts for Posh_14:

(Start: 7 @8717 has 18 MA's), (12, 8786), (13, 8798), (31, 9062), (37, 9107), (39, 9116), (46, 9203), (53, 9257),

Gene: PotPie_13 Start: 8560, Stop: 9399, Start Num: 8

Candidate Starts for PotPie_13:

(5, 8446), (6, 8506), (Start: 8 @8560 has 52 MA's), (10, 8593), (21, 8779), (27, 8839), (28, 8851), (47, 9052), (48, 9061), (49, 9067), (53, 9100), (58, 9130), (64, 9175), (75, 9265),

Gene: PsychoKiller_13 Start: 7939, Stop: 8781, Start Num: 8

Candidate Starts for PsychoKiller_13:

(Start: 8 @7939 has 52 MA's), (10, 7972), (21, 8158), (28, 8230), (37, 8329), (47, 8431), (48, 8440), (49, 8446), (53, 8479), (59, 8515), (60, 8524), (78, 8710), (79, 8716),

Gene: Pytheas_14 Start: 8564, Stop: 9409, Start Num: 7

Candidate Starts for Pytheas_14:

(Start: 7 @8564 has 18 MA's), (12, 8633), (13, 8645), (31, 8909), (37, 8954), (39, 8963), (53, 9104),

Gene: Quasar_13 Start: 8548, Stop: 9390, Start Num: 8

Candidate Starts for Quasar_13:

(Start: 8 @8548 has 52 MA's), (10, 8581), (28, 8839), (37, 8938), (47, 9040), (48, 9049), (49, 9055), (53, 9088), (59, 9124), (60, 9133), (78, 9319), (79, 9325),

Gene: RedBaron_14 Start: 7984, Stop: 8826, Start Num: 8

Candidate Starts for RedBaron_14:

(Start: 8 @7984 has 52 MA's), (10, 8017), (21, 8203), (28, 8275), (37, 8374), (47, 8476), (48, 8485), (49, 8491), (53, 8524), (59, 8560), (60, 8569), (78, 8755), (79, 8761),

Gene: SheckWes_12 Start: 7697, Stop: 8533, Start Num: 8

Candidate Starts for SheckWes_12:

(5, 7583), (6, 7643), (Start: 8 @7697 has 52 MA's), (10, 7730), (21, 7916), (27, 7976), (28, 7988), (47, 8189), (48, 8198), (49, 8204), (53, 8237), (58, 8267), (64, 8312), (79, 8474),

Gene: SketchMex_12 Start: 7925, Stop: 8770, Start Num: 8

Candidate Starts for SketchMex_12:

(5, 7808), (6, 7868), (Start: 8 @7925 has 52 MA's), (10, 7958), (21, 8144), (28, 8216), (47, 8417), (49, 8432), (53, 8465), (60, 8510), (78, 8696), (79, 8702),

Gene: Sleepyhead_13 Start: 8334, Stop: 9200, Start Num: 8

Candidate Starts for Sleepyhead_13:

(Start: 8 @8334 has 52 MA's), (9, 8361), (11, 8388), (20, 8526), (45, 8811), (60, 8949),

Gene: Sopespian_13 Start: 7939, Stop: 8781, Start Num: 8

Candidate Starts for Sopespian_13:

(Start: 8 @7939 has 52 MA's), (10, 7972), (21, 8158), (28, 8230), (37, 8329), (47, 8431), (48, 8440), (49, 8446), (53, 8479), (59, 8515), (60, 8524), (78, 8710), (79, 8716),

Gene: SteamedHams_15 Start: 7954, Stop: 8799, Start Num: 8

Candidate Starts for SteamedHams_15:

(6, 7897), (Start: 8 @7954 has 52 MA's), (10, 7987), (21, 8173), (28, 8245), (47, 8446), (49, 8461), (53, 8494), (59, 8530), (60, 8539), (64, 8569), (78, 8725), (79, 8731),

Gene: SummitAcademy_12 Start: 7775, Stop: 8614, Start Num: 8

Candidate Starts for SummitAcademy_12:

(5, 7661), (6, 7721), (Start: 8 @7775 has 52 MA's), (10, 7808), (21, 7994), (27, 8054), (28, 8066), (47, 8267), (48, 8276), (49, 8282), (53, 8315), (58, 8345), (64, 8390), (75, 8480),

Gene: Survivors_15 Start: 8732, Stop: 9571, Start Num: 8

Candidate Starts for Survivors_15:

(Start: 8 @8732 has 52 MA's), (10, 8765), (26, 8993), (32, 9074), (39, 9122), (43, 9179), (44, 9191), (47, 9215), (49, 9230), (63, 9323), (67, 9356), (68, 9368), (69, 9371), (80, 9506), (85, 9554),

Gene: SweatNTears_15 Start: 8436, Stop: 9281, Start Num: 8

Candidate Starts for SweatNTears_15:

(5, 8319), (6, 8379), (Start: 8 @8436 has 52 MA's), (10, 8469), (21, 8655), (28, 8727), (47, 8928), (49, 8943), (53, 8976), (60, 9021), (78, 9207), (79, 9213),

Gene: TPA4_13 Start: 9127, Stop: 9984, Start Num: 7

Candidate Starts for TPA4_13:

(Start: 7 @9127 has 18 MA's), (18, 9256), (25, 9376), (28, 9406), (47, 9625), (50, 9646), (51, 9649), (54, 9688), (57, 9700), (76, 9868), (77, 9898), (81, 9928), (83, 9964),

Gene: Tolls_15 Start: 7957, Stop: 8802, Start Num: 8

Candidate Starts for Tolls_15:

(6, 7900), (Start: 8 @7957 has 52 MA's), (10, 7990), (21, 8176), (28, 8248), (47, 8449), (49, 8464), (53, 8497), (59, 8533), (60, 8542), (64, 8572), (78, 8728), (79, 8734),

Gene: Troje_13 Start: 7910, Stop: 8755, Start Num: 8

Candidate Starts for Troje_13:

(5, 7793), (6, 7853), (Start: 8 @7910 has 52 MA's), (10, 7943), (21, 8129), (28, 8201), (47, 8402), (49, 8417), (53, 8450), (60, 8495), (78, 8681), (79, 8687),

Gene: Typhonomachy_14 Start: 7939, Stop: 8781, Start Num: 8

Candidate Starts for Typhonomachy_14:

(Start: 8 @7939 has 52 MA's), (10, 7972), (21, 8158), (28, 8230), (37, 8329), (47, 8431), (48, 8440), (49, 8446), (53, 8479), (59, 8515), (60, 8524), (78, 8710), (79, 8716),

Gene: Vine_14 Start: 8704, Stop: 9543, Start Num: 8

Candidate Starts for Vine_14:

(5, 8590), (6, 8650), (Start: 8 @8704 has 52 MA's), (10, 8737), (21, 8923), (27, 8983), (28, 8995), (47, 9196), (48, 9205), (49, 9211), (53, 9244), (58, 9274), (64, 9319), (75, 9409),

Gene: Wrigley_14 Start: 8561, Stop: 9406, Start Num: 7

Candidate Starts for Wrigley_14:

(Start: 7 @8561 has 18 MA's), (12, 8630), (13, 8642), (31, 8906), (37, 8951), (39, 8960), (46, 9047), (53, 9101),

Gene: Yakult_14 Start: 7841, Stop: 8674, Start Num: 8

Candidate Starts for Yakult_14:

(Start: 8 @7841 has 52 MA's), (10, 7874), (14, 7946), (17, 7964), (19, 7970), (21, 8048), (32, 8189), (34, 8204), (43, 8294), (44, 8306), (45, 8312), (47, 8330), (49, 8345), (61, 8423), (63, 8435), (72, 8513), (78, 8609), (84, 8657),

Gene: Yarn_12 Start: 7947, Stop: 8792, Start Num: 8

Candidate Starts for Yarn_12:

(6, 7890), (Start: 8 @7947 has 52 MA's), (10, 7980), (21, 8166), (28, 8238), (47, 8439), (49, 8454), (53, 8487), (59, 8523), (60, 8532), (64, 8562), (78, 8718), (79, 8724),

Gene: Yummy_14 Start: 7821, Stop: 8666, Start Num: 8

Candidate Starts for Yummy_14:

(Start: 8 @7821 has 52 MA's), (10, 7854), (21, 8040), (28, 8112), (47, 8313), (49, 8328), (53, 8361), (60, 8406), (78, 8592), (79, 8598),

Gene: Zareef_17 Start: 8879, Stop: 9718, Start Num: 8

Candidate Starts for Zareef_17:

(Start: 8 @8879 has 52 MA's), (10, 8912), (26, 9140), (32, 9221), (39, 9269), (43, 9326), (44, 9338), (47, 9362), (49, 9377), (63, 9470), (67, 9503), (68, 9515), (69, 9518), (80, 9653), (85, 9701),