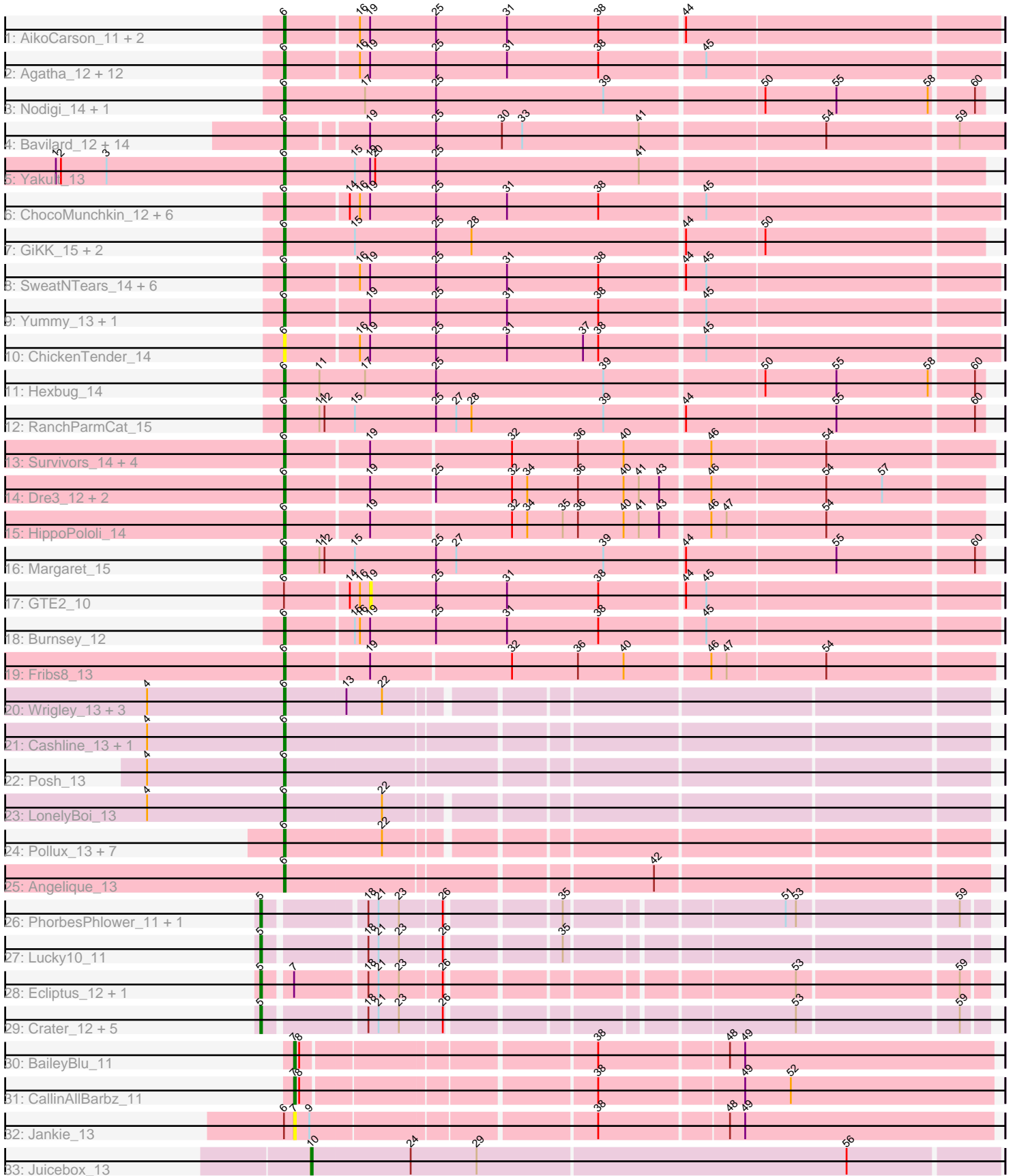


Pham 202827



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 202827 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202827 has 101 members, 17 are drafts.

Phages represented in each track:

- Track 1 : AikoCarson_11, Amok_11, Emalyn_11
- Track 2 : Agatha_12, Elliott_12, Quasar_12, Cozz_12, RedBaron_13, Nina_13, PsychoKiller_12, Starburst_13, Carsonalex_13, MunkgeeRoachy_12, Typhonomachy_13, Sopespian_12, Axym_12
- Track 3 : Nodigi_14, Orla_14
- Track 4 : Bavidard_12, Feastonyeet_11, Mayweather_13, Vine_13, CherryonLim_13, BigChungus_11, SummitAcademy_11, SheckWes_11, KayGee_12, PotPie_12, MAAnor_12, Elinal_13, Pons_12, Yucky_14, Lauer_11
- Track 5 : Yakult_13
- Track 6 : ChocoMunchkin_12, SteamedHams_14, Tolls_14, BillDoor_14, Yarn_11, CanesSauce_12, AndPeggy_11
- Track 7 : GiKK_15, Jamzy_15, Button_13
- Track 8 : SweatNTears_14, Biskit_13, Buttrmlkdreams_12, Troje_12, SketchMex_11, MScarn_14, Blondies_12
- Track 9 : Yummy_13, Horseradish_13
- Track 10 : ChickenTender_14
- Track 11 : Hexbug_14
- Track 12 : RanchParmCat_15
- Track 13 : Survivors_14, Nibbles_14, Zareef_16, MaVan_14, Azira_14
- Track 14 : Dre3_12, Cleo_12, Gibbous_12
- Track 15 : HippoPololi_14
- Track 16 : Margaret_15
- Track 17 : GTE2_10
- Track 18 : Burnsey_12
- Track 19 : Fribs8_13
- Track 20 : Wrigley_13, Pytheas_13, Jablanski_13, Confidence_13
- Track 21 : Cashline_13, BeeGee_13
- Track 22 : Posh_13
- Track 23 : LonelyBoi_13
- Track 24 : Pollux_13, Lilas_13, Bradissa_13, BritBrat_13, Floral_13, EMSquaredA_13, EnalisNailo_13, Marteena_13
- Track 25 : Angelique_13
- Track 26 : PhorbesPhlower_11, Morkie_11
- Track 27 : Lucky10_11
- Track 28 : Ecliptus_12, ODay_12
- Track 29 : Crater_12, BearBQ_12, MortyNRick_12, Birdsong_12, Kuwabara_12, Apricot_12

- Track 30 : BaileyBlu_11
- Track 31 : CallinAllBarbz_11
- Track 32 : Jankie_13
- Track 33 : Juicebox_13

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 71 of the 84 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_12, AikoCarson_11, Amok_11, AndPeggy_11, Angelique_13, Axym_12, Azira_14, Bavidard_12, BeeGee_13, BigChungus_11, BillDoor_14, Biskit_13, Blondies_12, Bradissa_13, BritBrat_13, Burnsey_12, Button_13, Buttrmlkdreams_12, CanesSauce_12, Carsonalex_13, Cashline_13, CherryonLim_13, ChickenTender_14, ChocoMunchkin_12, Cleo_12, Confidence_13, Cozz_12, Dre3_12, EMSquaredA_13, Elinal_13, Elliott_12, Emalyn_11, EnalisNailo_13, Feastonyeet_11, Floral_13, Fribs8_13, GiKK_15, Gibbous_12, Hexbug_14, HippoPololi_14, Horseradish_13, Jablanski_13, Jamzy_15, KayGee_12, Lauer_11, Lilas_13, LonelyBoi_13, MAnor_12, MScarn_14, MaVan_14, Margaret_15, Marteena_13, Mayweather_13, MunkgeeRoachy_12, Nibbles_14, Nina_13, Nodigi_14, Orla_14, Pollux_13, Pons_12, Posh_13, PotPie_12, PsychoKiller_12, Pytheas_13, Quasar_12, RanchParmCat_15, RedBaron_13, SheckWes_11, SketchMex_11, Sopespian_12, Starburst_13, SteamedHams_14, SummitAcademy_11, Survivors_14, SweatNTears_14, Tolls_14, Troje_12, Typhonmarchy_13, Vine_13, Wrigley_13, Yakult_13, Yarn_11, Yucky_14, Yummy_13, Zareef_16,

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

- GTE2_10, Jankie_13,

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

- Apricot_12, BaileyBlu_11, BearBQ_12, Birdsong_12, CallinAllBarbz_11, Crater_12, Ecliptus_12, Juicebox_13, Kuwabara_12, Lucky10_11, Morkie_11, MortyNRick_12, ODay_12, PhorbesPhlower_11,

Summary by start number:

Start 5:

- Found in 11 of 101 (10.9%) of genes in pham
- Manual Annotations of this start: 10 of 84
- 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 6:

- Found in 87 of 101 (86.1%) of genes in pham
- Manual Annotations of this start: 71 of 84
- Called 97.7% of time when present

- Phage (with cluster) where this start called: Agatha_12 (CT), AikoCarson_11 (CT), Amok_11 (CT), AndPeggy_11 (CT), Angelique_13 (CY1), Axym_12 (CT), Azira_14 (CT), Bavidard_12 (CT), BeeGee_13 (CY), BigChungus_11 (CT), BillDoor_14 (CT), Biskit_13 (CT), Blondies_12 (CT), Bradissa_13 (CY1), BritBrat_13 (CY2), Burnsey_12 (CT), Button_13 (CT), Buttrmilkdreams_12 (CT), CanesSauce_12 (CT), Carsonalex_13 (CT), Cashline_13 (CY), CherryonLim_13 (CT), ChickenTender_14 (CT), ChocoMunchkin_12 (CT), Cleo_12 (CT), Confidence_13 (CY1), Cozz_12 (CT), Dre3_12 (CT), EMSquaredA_13 (CY1), Elinal_13 (CT), Elliott_12 (CT), Emalyn_11 (CT), EnalisNailo_13 (CY1), Feastonyeet_11 (CT), Floral_13 (CY1), Fribs8_13 (CT), GiKK_15 (CT), Gibbous_12 (CT), Hexbug_14 (CT), HippoPololi_14 (CT), Horseradish_13 (CT), Jablanski_13 (CY), Jamzy_15 (CT), KayGee_12 (CT), Lauer_11 (CT), Lilas_13 (CY1), LonelyBoi_13 (CY), MAnor_12 (CT), MScarn_14 (CT), MaVan_14 (CT), Margaret_15 (CT), Marteena_13 (CY1), Mayweather_13 (CT), MunkgeeRoachy_12 (CT), Nibbles_14 (CT), Nina_13 (CT), Nodigi_14 (CT), Orla_14 (CT), Pollux_13 (CY1), Pons_12 (CT), Posh_13 (CY), PotPie_12 (CT), PsychoKiller_12 (CT), Pytheas_13 (CY), Quasar_12 (CT), RanchParmCat_15 (CT), RedBaron_13 (CT), SheckWes_11 (CT), SketchMex_11 (CT), Sopespian_12 (CT), Starburst_13 (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), Wrigley_13 (CY), Yakult_13 (CT), Yarn_11 (CT), Yucky_14 (CT), Yummy_13 (CT), Zareef_16 (CT),

Start 7:

- Found in 5 of 101 (5.0%) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 60.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_11 (FP), CallinAllBarbz_11 (FP), Jankie_13 (FP),

Start 10:

- Found in 1 of 101 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Juicebox_13 (singleton),

Start 19:

- Found in 61 of 101 (60.4%) of genes in pham
- No Manual Annotations of this start.
- Called 1.6% of time when present
- Phage (with cluster) where this start called: GTE2_10 (CT),

Summary by clusters:

There are 10 clusters represented in this pham: DN, CY2, CY1, DH, singleton, FP, DN4, CY, DN3, CT,

Info for manual annotations of cluster CT:

- Start number 6 was manually annotated 54 times for cluster CT.

Info for manual annotations of cluster CY:

- Start number 6 was manually annotated 7 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 6 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 6 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DH:

- Start number 5 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 5 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN3:

- Start number 5 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 5 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster FP:

- Start number 7 was manually annotated 2 times for cluster FP.

Gene Information:

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

Candidate Starts for Agatha_12:

(Start: 6 @7522 has 71 MA's), (16, 7564), (19, 7570), (25, 7609), (31, 7651), (38, 7705), (45, 7765),

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

Candidate Starts for AikoCarson_11:

(Start: 6 @7243 has 71 MA's), (16, 7285), (19, 7291), (25, 7330), (31, 7372), (38, 7426), (44, 7474),

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

Candidate Starts for Amok_11:

(Start: 6 @7243 has 71 MA's), (16, 7285), (19, 7291), (25, 7330), (31, 7372), (38, 7426), (44, 7474),

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

Candidate Starts for AndPeggy_11:

(Start: 6 @7534 has 71 MA's), (14, 7570), (16, 7576), (19, 7582), (25, 7621), (31, 7663), (38, 7717), (45, 7777),

Gene: Angelique_13 Start: 8261, Stop: 8653, Start Num: 6

Candidate Starts for Angelique_13:

(Start: 6 @8261 has 71 MA's), (42, 8465),

Gene: Apricot_12 Start: 7390, Stop: 7773, Start Num: 5

Candidate Starts for Apricot_12:

(Start: 5 @7390 has 10 MA's), (18, 7444), (21, 7450), (23, 7462), (26, 7486), (53, 7669), (59, 7759),

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

Candidate Starts for Axym_12:

(Start: 6 @7522 has 71 MA's), (16, 7564), (19, 7570), (25, 7609), (31, 7651), (38, 7705), (45, 7765),

Gene: Azira_14 Start: 8446, Stop: 8850, Start Num: 6
Candidate Starts for Azira_14:
(Start: 6 @8446 has 71 MA's), (19, 8494), (32, 8575), (36, 8614), (40, 8641), (46, 8689), (54, 8755),

Gene: BaileyBlu_11 Start: 6789, Stop: 7178, Start Num: 7
Candidate Starts for BaileyBlu_11:
(Start: 7 @6789 has 2 MA's), (8, 6792), (38, 6951), (48, 7023), (49, 7032),

Gene: Bavilard_12 Start: 8068, Stop: 8478, Start Num: 6
Candidate Starts for Bavilard_12:
(Start: 6 @8068 has 71 MA's), (19, 8113), (25, 8152), (30, 8191), (33, 8203), (41, 8272), (54, 8377),
(59, 8452),

Gene: BearBQ_12 Start: 7390, Stop: 7773, Start Num: 5
Candidate Starts for BearBQ_12:
(Start: 5 @7390 has 10 MA's), (18, 7444), (21, 7450), (23, 7462), (26, 7486), (53, 7669), (59, 7759),

Gene: BeeGee_13 Start: 8263, Stop: 8649, Start Num: 6
Candidate Starts for BeeGee_13:
(4, 8182), (Start: 6 @8263 has 71 MA's),

Gene: BigChungus_11 Start: 7313, Stop: 7723, Start Num: 6
Candidate Starts for BigChungus_11:
(Start: 6 @7313 has 71 MA's), (19, 7358), (25, 7397), (30, 7436), (33, 7448), (41, 7517), (54, 7622),
(59, 7697),

Gene: BillDoor_14 Start: 7499, Stop: 7909, Start Num: 6
Candidate Starts for BillDoor_14:
(Start: 6 @7499 has 71 MA's), (14, 7535), (16, 7541), (19, 7547), (25, 7586), (31, 7628), (38, 7682),
(45, 7742),

Gene: Birdsong_12 Start: 7390, Stop: 7773, Start Num: 5
Candidate Starts for Birdsong_12:
(Start: 5 @7390 has 10 MA's), (18, 7444), (21, 7450), (23, 7462), (26, 7486), (53, 7669), (59, 7759),

Gene: Biskit_13 Start: 7506, Stop: 7916, Start Num: 6
Candidate Starts for Biskit_13:
(Start: 6 @7506 has 71 MA's), (16, 7548), (19, 7554), (25, 7593), (31, 7635), (38, 7689), (44, 7737),
(45, 7749),

Gene: Blondies_12 Start: 7492, Stop: 7902, Start Num: 6
Candidate Starts for Blondies_12:
(Start: 6 @7492 has 71 MA's), (16, 7534), (19, 7540), (25, 7579), (31, 7621), (38, 7675), (44, 7723),
(45, 7735),

Gene: Bradissa_13 Start: 8267, Stop: 8653, Start Num: 6
Candidate Starts for Bradissa_13:
(Start: 6 @8267 has 71 MA's), (22, 8324),

Gene: BritBrat_13 Start: 8269, Stop: 8655, Start Num: 6
Candidate Starts for BritBrat_13:
(Start: 6 @8269 has 71 MA's), (22, 8326),

Gene: Burnsey_12 Start: 7523, Stop: 7933, Start Num: 6
Candidate Starts for Burnsey_12:
(Start: 6 @7523 has 71 MA's), (15, 7562), (16, 7565), (19, 7571), (25, 7610), (31, 7652), (38, 7706),
(45, 7766),

Gene: Button_13 Start: 7530, Stop: 7934, Start Num: 6
Candidate Starts for Button_13:
(Start: 6 @7530 has 71 MA's), (15, 7572), (25, 7620), (28, 7641), (44, 7764), (50, 7809),

Gene: Buttrmlkdreams_12 Start: 7491, Stop: 7901, Start Num: 6
Candidate Starts for Buttrmlkdreams_12:
(Start: 6 @7491 has 71 MA's), (16, 7533), (19, 7539), (25, 7578), (31, 7620), (38, 7674), (44, 7722),
(45, 7734),

Gene: CallinAllBarbz_11 Start: 6799, Stop: 7188, Start Num: 7
Candidate Starts for CallinAllBarbz_11:
(Start: 7 @6799 has 2 MA's), (8, 6802), (38, 6961), (49, 7042), (52, 7069),

Gene: CanesSauce_12 Start: 7535, Stop: 7945, Start Num: 6
Candidate Starts for CanesSauce_12:
(Start: 6 @7535 has 71 MA's), (14, 7571), (16, 7577), (19, 7583), (25, 7622), (31, 7664), (38, 7718),
(45, 7778),

Gene: Carsonalex_13 Start: 7579, Stop: 7989, Start Num: 6
Candidate Starts for Carsonalex_13:
(Start: 6 @7579 has 71 MA's), (16, 7621), (19, 7627), (25, 7666), (31, 7708), (38, 7762), (45, 7822),

Gene: Cashline_13 Start: 8116, Stop: 8508, Start Num: 6
Candidate Starts for Cashline_13:
(4, 8035), (Start: 6 @8116 has 71 MA's),

Gene: CherryonLim_13 Start: 8039, Stop: 8449, Start Num: 6
Candidate Starts for CherryonLim_13:
(Start: 6 @8039 has 71 MA's), (19, 8084), (25, 8123), (30, 8162), (33, 8174), (41, 8243), (54, 8348),
(59, 8423),

Gene: ChickenTender_14 Start: 7565, Stop: 7975, Start Num: 6
Candidate Starts for ChickenTender_14:
(Start: 6 @7565 has 71 MA's), (16, 7607), (19, 7613), (25, 7652), (31, 7694), (37, 7739), (38, 7748),
(45, 7808),

Gene: ChocoMunchkin_12 Start: 7535, Stop: 7945, Start Num: 6
Candidate Starts for ChocoMunchkin_12:
(Start: 6 @7535 has 71 MA's), (14, 7571), (16, 7577), (19, 7583), (25, 7622), (31, 7664), (38, 7718),
(45, 7778),

Gene: Cleo_12 Start: 7746, Stop: 8144, Start Num: 6
Candidate Starts for Cleo_12:
(Start: 6 @7746 has 71 MA's), (19, 7794), (25, 7830), (32, 7875), (34, 7884), (36, 7914), (40, 7941),
(41, 7950), (43, 7962), (46, 7989), (54, 8055), (57, 8088),

Gene: Confidence_13 Start: 8263, Stop: 8649, Start Num: 6
Candidate Starts for Confidence_13:

(4, 8182), (Start: 6 @8263 has 71 MA's), (13, 8299), (22, 8320),

Gene: Cozz_12 Start: 7523, Stop: 7933, Start Num: 6

Candidate Starts for Cozz_12:

(Start: 6 @7523 has 71 MA's), (16, 7565), (19, 7571), (25, 7610), (31, 7652), (38, 7706), (45, 7766),

Gene: Crater_12 Start: 7390, Stop: 7773, Start Num: 5

Candidate Starts for Crater_12:

(Start: 5 @7390 has 10 MA's), (18, 7444), (21, 7450), (23, 7462), (26, 7486), (53, 7669), (59, 7759),

Gene: Dre3_12 Start: 7693, Stop: 8091, Start Num: 6

Candidate Starts for Dre3_12:

(Start: 6 @7693 has 71 MA's), (19, 7741), (25, 7777), (32, 7822), (34, 7831), (36, 7861), (40, 7888), (41, 7897), (43, 7909), (46, 7936), (54, 8002), (57, 8035),

Gene: EMSquaredA_13 Start: 8269, Stop: 8655, Start Num: 6

Candidate Starts for EMSquaredA_13:

(Start: 6 @8269 has 71 MA's), (22, 8326),

Gene: Ecliptus_12 Start: 7118, Stop: 7501, Start Num: 5

Candidate Starts for Ecliptus_12:

(Start: 5 @7118 has 10 MA's), (Start: 7 @7133 has 2 MA's), (18, 7172), (21, 7178), (23, 7190), (26, 7214), (53, 7397), (59, 7487),

Gene: Elinal_13 Start: 7294, Stop: 7704, Start Num: 6

Candidate Starts for Elinal_13:

(Start: 6 @7294 has 71 MA's), (19, 7339), (25, 7378), (30, 7417), (33, 7429), (41, 7498), (54, 7603), (59, 7678),

Gene: Elliott_12 Start: 7522, Stop: 7932, Start Num: 6

Candidate Starts for Elliott_12:

(Start: 6 @7522 has 71 MA's), (16, 7564), (19, 7570), (25, 7609), (31, 7651), (38, 7705), (45, 7765),

Gene: Emalyn_11 Start: 7242, Stop: 7652, Start Num: 6

Candidate Starts for Emalyn_11:

(Start: 6 @7242 has 71 MA's), (16, 7284), (19, 7290), (25, 7329), (31, 7371), (38, 7425), (44, 7473),

Gene: EnalisNailo_13 Start: 8269, Stop: 8655, Start Num: 6

Candidate Starts for EnalisNailo_13:

(Start: 6 @8269 has 71 MA's), (22, 8326),

Gene: Feastonyeet_11 Start: 7313, Stop: 7723, Start Num: 6

Candidate Starts for Feastonyeet_11:

(Start: 6 @7313 has 71 MA's), (19, 7358), (25, 7397), (30, 7436), (33, 7448), (41, 7517), (54, 7622), (59, 7697),

Gene: Floral_13 Start: 8269, Stop: 8655, Start Num: 6

Candidate Starts for Floral_13:

(Start: 6 @8269 has 71 MA's), (22, 8326),

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

Candidate Starts for Fribs8_13:

(Start: 6 @8259 has 71 MA's), (19, 8307), (32, 8388), (36, 8427), (40, 8454), (46, 8502), (47, 8511), (54, 8568),

Gene: GTE2_10 Start: 7243, Stop: 7605, Start Num: 19

Candidate Starts for GTE2_10:

(Start: 6 @7195 has 71 MA's), (14, 7231), (16, 7237), (19, 7243), (25, 7282), (31, 7324), (38, 7378), (44, 7426), (45, 7438),

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

Candidate Starts for GiKK_15:

(Start: 6 @7833 has 71 MA's), (15, 7875), (25, 7923), (28, 7944), (44, 8067), (50, 8112),

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

Candidate Starts for Gibbous_12:

(Start: 6 @7693 has 71 MA's), (19, 7741), (25, 7777), (32, 7822), (34, 7831), (36, 7861), (40, 7888), (41, 7897), (43, 7909), (46, 7936), (54, 8002), (57, 8035),

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

Candidate Starts for Hexbug_14:

(Start: 6 @8519 has 71 MA's), (11, 8540), (17, 8567), (25, 8609), (39, 8708), (50, 8798), (55, 8840), (58, 8894), (60, 8918),

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

Candidate Starts for HippoPololi_14:

(Start: 6 @8345 has 71 MA's), (19, 8393), (32, 8474), (34, 8483), (35, 8504), (36, 8513), (40, 8540), (41, 8549), (43, 8561), (46, 8588), (47, 8597), (54, 8654),

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

Candidate Starts for Horseradish_13:

(Start: 6 @7404 has 71 MA's), (19, 7452), (25, 7491), (31, 7533), (38, 7587), (45, 7647),

Gene: Jablanski_13 Start: 8116, Stop: 8502, Start Num: 6

Candidate Starts for Jablanski_13:

(4, 8035), (Start: 6 @8116 has 71 MA's), (13, 8152), (22, 8173),

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

Candidate Starts for Jamzy_15:

(Start: 6 @7843 has 71 MA's), (15, 7885), (25, 7933), (28, 7954), (44, 8077), (50, 8122),

Gene: Jankie_13 Start: 6796, Stop: 7188, Start Num: 7

Candidate Starts for Jankie_13:

(Start: 6 @6790 has 71 MA's), (Start: 7 @6796 has 2 MA's), (9, 6805), (38, 6961), (48, 7033), (49, 7042),

Gene: Juicebox_13 Start: 8820, Stop: 9218, Start Num: 10

Candidate Starts for Juicebox_13:

(Start: 10 @8820 has 1 MA's), (24, 8877), (29, 8916), (56, 9132),

Gene: KayGee_12 Start: 7294, Stop: 7704, Start Num: 6

Candidate Starts for KayGee_12:

(Start: 6 @7294 has 71 MA's), (19, 7339), (25, 7378), (30, 7417), (33, 7429), (41, 7498), (54, 7603), (59, 7678),

Gene: Kuwabara_12 Start: 7390, Stop: 7773, Start Num: 5
Candidate Starts for Kuwabara_12:
(Start: 5 @7390 has 10 MA's), (18, 7444), (21, 7450), (23, 7462), (26, 7486), (53, 7669), (59, 7759),

Gene: Lauer_11 Start: 7343, Stop: 7753, Start Num: 6
Candidate Starts for Lauer_11:
(Start: 6 @7343 has 71 MA's), (19, 7388), (25, 7427), (30, 7466), (33, 7478), (41, 7547), (54, 7652), (59, 7727),

Gene: Lilas_13 Start: 8269, Stop: 8655, Start Num: 6
Candidate Starts for Lilas_13:
(Start: 6 @8269 has 71 MA's), (22, 8326),

Gene: LonelyBoi_13 Start: 8116, Stop: 8502, Start Num: 6
Candidate Starts for LonelyBoi_13:
(4, 8035), (Start: 6 @8116 has 71 MA's), (22, 8173),

Gene: Lucky10_11 Start: 6599, Stop: 6982, Start Num: 5
Candidate Starts for Lucky10_11:
(Start: 5 @6599 has 10 MA's), (18, 6653), (21, 6659), (23, 6671), (26, 6695), (35, 6755),

Gene: MAnor_12 Start: 7284, Stop: 7694, Start Num: 6
Candidate Starts for MAnor_12:
(Start: 6 @7284 has 71 MA's), (19, 7329), (25, 7368), (30, 7407), (33, 7419), (41, 7488), (54, 7593), (59, 7668),

Gene: MScarn_14 Start: 7491, Stop: 7901, Start Num: 6
Candidate Starts for MScarn_14:
(Start: 6 @7491 has 71 MA's), (16, 7533), (19, 7539), (25, 7578), (31, 7620), (38, 7674), (44, 7722), (45, 7734),

Gene: MaVan_14 Start: 8446, Stop: 8850, Start Num: 6
Candidate Starts for MaVan_14:
(Start: 6 @8446 has 71 MA's), (19, 8494), (32, 8575), (36, 8614), (40, 8641), (46, 8689), (54, 8755),

Gene: Margaret_15 Start: 8228, Stop: 8632, Start Num: 6
Candidate Starts for Margaret_15:
(Start: 6 @8228 has 71 MA's), (11, 8249), (12, 8252), (15, 8270), (25, 8318), (27, 8330), (39, 8417), (44, 8462), (55, 8549), (60, 8627),

Gene: Marteena_13 Start: 8269, Stop: 8655, Start Num: 6
Candidate Starts for Marteena_13:
(Start: 6 @8269 has 71 MA's), (22, 8326),

Gene: Mayweather_13 Start: 7917, Stop: 8327, Start Num: 6
Candidate Starts for Mayweather_13:
(Start: 6 @7917 has 71 MA's), (19, 7962), (25, 8001), (30, 8040), (33, 8052), (41, 8121), (54, 8226), (59, 8301),

Gene: Morkie_11 Start: 6561, Stop: 6944, Start Num: 5
Candidate Starts for Morkie_11:
(Start: 5 @6561 has 10 MA's), (18, 6615), (21, 6621), (23, 6633), (26, 6657), (35, 6717), (51, 6834), (53, 6840), (59, 6930),

Gene: MortyNRick_12 Start: 7390, Stop: 7773, Start Num: 5

Candidate Starts for MortyNRick_12:

(Start: 5 @7390 has 10 MA's), (18, 7444), (21, 7450), (23, 7462), (26, 7486), (53, 7669), (59, 7759),

Gene: MunkgeeRoachy_12 Start: 7570, Stop: 7980, Start Num: 6

Candidate Starts for MunkgeeRoachy_12:

(Start: 6 @7570 has 71 MA's), (16, 7612), (19, 7618), (25, 7657), (31, 7699), (38, 7753), (45, 7813),

Gene: Nibbles_14 Start: 8446, Stop: 8850, Start Num: 6

Candidate Starts for Nibbles_14:

(Start: 6 @8446 has 71 MA's), (19, 8494), (32, 8575), (36, 8614), (40, 8641), (46, 8689), (54, 8755),

Gene: Nina_13 Start: 8556, Stop: 8966, Start Num: 6

Candidate Starts for Nina_13:

(Start: 6 @8556 has 71 MA's), (16, 8598), (19, 8604), (25, 8643), (31, 8685), (38, 8739), (45, 8799),

Gene: Nodigi_14 Start: 8512, Stop: 8916, Start Num: 6

Candidate Starts for Nodigi_14:

(Start: 6 @8512 has 71 MA's), (17, 8560), (25, 8602), (39, 8701), (50, 8791), (55, 8833), (58, 8887), (60, 8911),

Gene: ODay_12 Start: 7116, Stop: 7499, Start Num: 5

Candidate Starts for ODay_12:

(Start: 5 @7116 has 10 MA's), (Start: 7 @7131 has 2 MA's), (18, 7170), (21, 7176), (23, 7188), (26, 7212), (53, 7395), (59, 7485),

Gene: Orla_14 Start: 8516, Stop: 8920, Start Num: 6

Candidate Starts for Orla_14:

(Start: 6 @8516 has 71 MA's), (17, 8564), (25, 8606), (39, 8705), (50, 8795), (55, 8837), (58, 8891), (60, 8915),

Gene: PhorbesPhlower_11 Start: 6561, Stop: 6944, Start Num: 5

Candidate Starts for PhorbesPhlower_11:

(Start: 5 @6561 has 10 MA's), (18, 6615), (21, 6621), (23, 6633), (26, 6657), (35, 6717), (51, 6834), (53, 6840), (59, 6930),

Gene: Pollux_13 Start: 8269, Stop: 8655, Start Num: 6

Candidate Starts for Pollux_13:

(Start: 6 @8269 has 71 MA's), (22, 8326),

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

Candidate Starts for Pons_12:

(Start: 6 @7296 has 71 MA's), (19, 7341), (25, 7380), (30, 7419), (33, 7431), (41, 7500), (54, 7605), (59, 7680),

Gene: Posh_13 Start: 8263, Stop: 8655, Start Num: 6

Candidate Starts for Posh_13:

(4, 8182), (Start: 6 @8263 has 71 MA's),

Gene: PotPie_12 Start: 8147, Stop: 8557, Start Num: 6

Candidate Starts for PotPie_12:

(Start: 6 @8147 has 71 MA's), (19, 8192), (25, 8231), (30, 8270), (33, 8282), (41, 8351), (54, 8456), (59, 8531),

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

Candidate Starts for PsychoKiller_12:

(Start: 6 @7522 has 71 MA's), (16, 7564), (19, 7570), (25, 7609), (31, 7651), (38, 7705), (45, 7765),

Gene: Pytheas_13 Start: 8116, Stop: 8502, Start Num: 6

Candidate Starts for Pytheas_13:

(4, 8035), (Start: 6 @8116 has 71 MA's), (13, 8152), (22, 8173),

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

Candidate Starts for Quasar_12:

(Start: 6 @8131 has 71 MA's), (16, 8173), (19, 8179), (25, 8218), (31, 8260), (38, 8314), (45, 8374),

Gene: RanchParmCat_15 Start: 8228, Stop: 8632, Start Num: 6

Candidate Starts for RanchParmCat_15:

(Start: 6 @8228 has 71 MA's), (11, 8249), (12, 8252), (15, 8270), (25, 8318), (27, 8330), (28, 8339), (39, 8417), (44, 8462), (55, 8549), (60, 8627),

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

Candidate Starts for RedBaron_13:

(Start: 6 @7567 has 71 MA's), (16, 7609), (19, 7615), (25, 7654), (31, 7696), (38, 7750), (45, 7810),

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

Candidate Starts for SheckWes_11:

(Start: 6 @7284 has 71 MA's), (19, 7329), (25, 7368), (30, 7407), (33, 7419), (41, 7488), (54, 7593), (59, 7668),

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

Candidate Starts for SketchMex_11:

(Start: 6 @7506 has 71 MA's), (16, 7548), (19, 7554), (25, 7593), (31, 7635), (38, 7689), (44, 7737), (45, 7749),

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

Candidate Starts for Sopespian_12:

(Start: 6 @7522 has 71 MA's), (16, 7564), (19, 7570), (25, 7609), (31, 7651), (38, 7705), (45, 7765),

Gene: Starburst_13 Start: 7522, Stop: 7932, Start Num: 6

Candidate Starts for Starburst_13:

(Start: 6 @7522 has 71 MA's), (16, 7564), (19, 7570), (25, 7609), (31, 7651), (38, 7705), (45, 7765),

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

Candidate Starts for SteamedHams_14:

(Start: 6 @7535 has 71 MA's), (14, 7571), (16, 7577), (19, 7583), (25, 7622), (31, 7664), (38, 7718), (45, 7778),

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

Candidate Starts for SummitAcademy_11:

(Start: 6 @7362 has 71 MA's), (19, 7407), (25, 7446), (30, 7485), (33, 7497), (41, 7566), (54, 7671), (59, 7746),

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

Candidate Starts for Survivors_14:

(Start: 6 @8300 has 71 MA's), (19, 8348), (32, 8429), (36, 8468), (40, 8495), (46, 8543), (54, 8609),

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

Candidate Starts for SweatNTears_14:

(Start: 6 @8017 has 71 MA's), (16, 8059), (19, 8065), (25, 8104), (31, 8146), (38, 8200), (44, 8248), (45, 8260),

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

Candidate Starts for Tolls_14:

(Start: 6 @7538 has 71 MA's), (14, 7574), (16, 7580), (19, 7586), (25, 7625), (31, 7667), (38, 7721), (45, 7781),

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

Candidate Starts for Troje_12:

(Start: 6 @7491 has 71 MA's), (16, 7533), (19, 7539), (25, 7578), (31, 7620), (38, 7674), (44, 7722), (45, 7734),

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

Candidate Starts for Typhonomachy_13:

(Start: 6 @7522 has 71 MA's), (16, 7564), (19, 7570), (25, 7609), (31, 7651), (38, 7705), (45, 7765),

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

Candidate Starts for Vine_13:

(Start: 6 @8291 has 71 MA's), (19, 8336), (25, 8375), (30, 8414), (33, 8426), (41, 8495), (54, 8600), (59, 8675),

Gene: Wrigley_13 Start: 8113, Stop: 8499, Start Num: 6

Candidate Starts for Wrigley_13:

(4, 8032), (Start: 6 @8113 has 71 MA's), (13, 8149), (22, 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 71 MA's), (15, 7466), (19, 7475), (20, 7478), (25, 7514), (41, 7634),

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

Candidate Starts for Yarn_11:

(Start: 6 @7528 has 71 MA's), (14, 7564), (16, 7570), (19, 7576), (25, 7615), (31, 7657), (38, 7711), (45, 7771),

Gene: Yucky_14 Start: 8151, Stop: 8561, Start Num: 6

Candidate Starts for Yucky_14:

(Start: 6 @8151 has 71 MA's), (19, 8196), (25, 8235), (30, 8274), (33, 8286), (41, 8355), (54, 8460), (59, 8535),

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

Candidate Starts for Yummy_13:

(Start: 6 @7404 has 71 MA's), (19, 7452), (25, 7491), (31, 7533), (38, 7587), (45, 7647),

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

Candidate Starts for Zareef_16:

(Start: 6 @8447 has 71 MA's), (19, 8495), (32, 8576), (36, 8615), (40, 8642), (46, 8690), (54, 8756),

