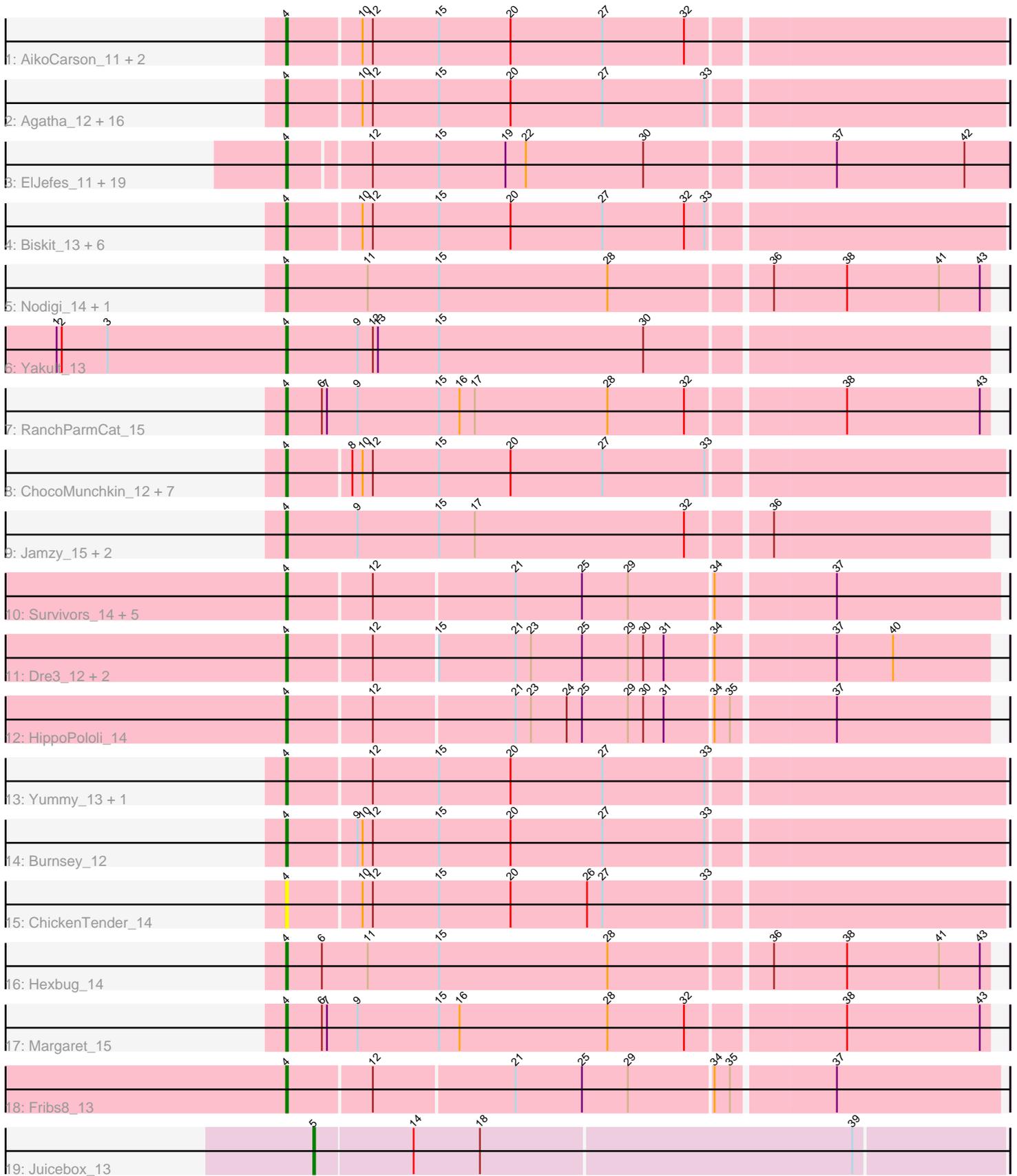# Pham 291089

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 291089 Report

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

Pham number 291089 has 80 members, 20 are drafts.

Phages represented in each track:
• Track 1 : AikoCarson_11, Amok_11, Emalyn_11
• Track 2 : Agatha_12, Eliott_12, Starburst_13, Quasar_12, Cozz_12, RADical_13, Carsonalex_13, Socotra_13, MunkgeeRoachy_12, PsychoKiller_12, Typhonomachy_12, Nina_13, RSchmailzl_13, RedBaron_13, Axym_12, Sopespian_12, Bubble_12
• Track 3 : ElJefes_11, McDazzle_11, Bavilard_12, Feastonyeet_11, CherryonLim_13, BigChungus_11, Yucky_12, Lauer_11, SheckWes_11, SummitAcademy_11, CocoaPuff_11, MAnor_12, Mayweather_13, Elinal_13, Tarnish_11, Vine_13, PotPie_12, Pons_12, KayGee_12, Balloona_11
• Track 4 : Biskit_13, Buttrmlkdreams_12, Blondies_13, SweatNTears_14, Troje_12, SketchMex_11, MScarn_14
• Track 5 : Nodigi_14, Orla_14
• Track 6 : Yakult_13
• Track 7 : RanchParmCat_15
• Track 8 : ChocoMunchkin_12, Yarn_11, CaramelLatte_12, CanesSauce_12, SteamedHams_14, AndPeggy_11, Tolls_14, BillDoor_14
• Track 9 : Jamzy_15, Button_13, GiKK_15
• Track 10 : Survivors_14, Wolfwood_16, MaVan_14, Nibbles_14, Azira_14, Zareef_14
• Track 11 : Dre3_12, Gibbous_12, Cleo_12
• Track 12 : HippoPololi_14
• Track 13 : Yummy_13, Horseradish_13
• Track 14 : Burnsey_12
• Track 15 : ChickenTender_14
• Track 16 : Hexbug_14
• Track 17 : Margaret_15
• Track 18 : Fribs8_13
• Track 19 : 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 4, it was called in 59 of the 60 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, Balloona_11, Bavilard_12, BigChungus_11, BillDoor_14, Biskit_13, Blondies_13, Bubble_12, Burnsey_12, Button_13, Buttrmlkdreams_12, CanesSauce_12, CaramelLatte_12, Carsonalex_13, CherryonLim_13, ChickenTender_14, ChocoMunchkin_12, Cleo_12, CocoaPuff_11, Cozz_12, Dre3_12, ElJefes_11, Elinal_13, Eliott_12, Emalyn_11, Feastonyeet_11, Fribs8_13, GiKK_15, Gibbous_12, Hexbug_14, HippoPololi_14, Horseradish_13, Jamzy_15, KayGee_12, Lauer_11, MAnor_12, MScarn_14, MaVan_14, Margaret_15, Mayweather_13, McDazzle_11, MunkgeeRoachy_12, Nibbles_14, Nina_13, Nodigi_14, Orla_14, Pons_12, PotPie_12, PsychoKiller_12, Quasar_12, RADical_13, RSchmailzl_13, RanchParmCat_15, RedBaron_13, SheckWes_11, SketchMex_11, Socotra_13, Sopespian_12, Starburst_13, SteamedHams_14, SummitAcademy_11, Survivors_14, SweatNTears_14, Tarnish_11, Tolls_14, Troje_12, Typhonomachy_12, Vine_13, Wolfwood_16, Yakult_13, Yarn_11, Yucky_12, Yummy_13, Zareef_14,

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

Genes that do not have the "Most Annotated" start:
• Juicebox_13,

Summary by start number:

Start 4:
• Found in 79 of 80 (98.8%) of genes in pham
• Manual Annotations of this start: 59 of 60
• Called 100.0% 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), Balloona_11 (CT), Bavilard_12 (CT), BigChungus_11 (CT), BillDoor_14 (CT), Biskit_13 (CT), Blondies_13 (CT), Bubble_12 (CT), Burnsey_12 (CT), Button_13 (CT), Buttrmlkdreams_12 (CT), CanesSauce_12 (CT), CaramelLatte_12 (CT), Carsonalex_13 (CT), CherryonLim_13 (CT), ChickenTender_14 (CT), ChocoMunchkin_12 (CT), Cleo_12 (CT), CocoaPuff_11 (CT), Cozz_12 (CT), Dre3_12 (CT), ElJefes_11 (CT), Elinal_13 (CT), Eliott_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_12 (CT), Lauer_11 (CT), MAnor_12 (CT), MScarn_14 (CT), MaVan_14 (CT), Margaret_15 (CT), Mayweather_13 (CT), McDazzle_11 (CT), MunkgeeRoachy_12 (CT), Nibbles_14 (CT), Nina_13 (CT), Nodigi_14 (CT), Orla_14 (CT), Pons_12 (CT), PotPie_12 (CT), PsychoKiller_12 (CT), Quasar_12 (CT), RADical_13 (CT), RSchmailzl_13 (CT), RanchParmCat_15 (CT), RedBaron_13 (CT), SheckWes_11 (CT), SketchMex_11 (CT), Socotra_13 (CT), Sopespian_12 (CT), Starburst_13 (CT), SteamedHams_14 (CT), SummitAcademy_11 (CT), Survivors_14 (CT), SweatNTears_14 (CT), Tarnish_11 (CT), Tolls_14 (CT), Troje_12 (CT), Typhonomachy_12 (CT), Vine_13 (CT), Wolfwood_16 (CT), Yakult_13 (CT), Yarn_11 (CT), Yucky_12 (CT), Yummy_13 (CT), Zareef_14 (CT),

Start 5:
• Found in 1 of 80 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Juicebox_13 (singleton),

Summary by clusters:

There are 2 clusters represented in this pham: singleton, CT,

Info for manual annotations of cluster CT:
•Start number 4 was manually annotated 59 times for cluster CT.

Gene Information:
Gene: Agatha_12 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Agatha_12:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: AikoCarson_11 Start: 7243, Stop: 7653, Start Num: 4
Candidate Starts for AikoCarson_11:
(Start: 4 @7243 has 59 MA's), (10, 7285), (12, 7291), (15, 7330), (20, 7372), (27, 7426), (32, 7474),

Gene: Amok_11 Start: 7243, Stop: 7653, Start Num: 4
Candidate Starts for Amok_11:
(Start: 4 @7243 has 59 MA's), (10, 7285), (12, 7291), (15, 7330), (20, 7372), (27, 7426), (32, 7474),

Gene: AndPeggy_11 Start: 7534, Stop: 7944, Start Num: 4
Candidate Starts for AndPeggy_11:
(Start: 4 @7534 has 59 MA's), (8, 7570), (10, 7576), (12, 7582), (15, 7621), (20, 7663), (27, 7717), (33, 7777),

Gene: Axym_12 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Axym_12:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: Azira_14 Start: 8446, Stop: 8850, Start Num: 4
Candidate Starts for Azira_14:
(Start: 4 @8446 has 59 MA's), (12, 8494), (21, 8575), (25, 8614), (29, 8641), (34, 8689), (37, 8755),

Gene: Balloona_11 Start: 7288, Stop: 7698, Start Num: 4
Candidate Starts for Balloona_11:
(Start: 4 @7288 has 59 MA's), (12, 7333), (15, 7372), (19, 7411), (22, 7423), (30, 7492), (37, 7597), (42, 7672),

Gene: Bavilard_12 Start: 8068, Stop: 8478, Start Num: 4
Candidate Starts for Bavilard_12:
(Start: 4 @8068 has 59 MA's), (12, 8113), (15, 8152), (19, 8191), (22, 8203), (30, 8272), (37, 8377), (42, 8452),

Gene: BigChungus_11 Start: 7313, Stop: 7723, Start Num: 4
Candidate Starts for BigChungus_11:
(Start: 4 @7313 has 59 MA's), (12, 7358), (15, 7397), (19, 7436), (22, 7448), (30, 7517), (37, 7622), (42, 7697),

Gene: BillDoor_14 Start: 7499, Stop: 7909, Start Num: 4
Candidate Starts for BillDoor_14:
(Start: 4 @7499 has 59 MA's), (8, 7535), (10, 7541), (12, 7547), (15, 7586), (20, 7628), (27, 7682), (33, 7742),

Gene: Biskit_13 Start: 7506, Stop: 7916, Start Num: 4
Candidate Starts for Biskit_13:
(Start: 4 @7506 has 59 MA's), (10, 7548), (12, 7554), (15, 7593), (20, 7635), (27, 7689), (32, 7737), (33, 7749),

Gene: Blondies_13 Start: 7492, Stop: 7902, Start Num: 4
Candidate Starts for Blondies_13:
(Start: 4 @7492 has 59 MA's), (10, 7534), (12, 7540), (15, 7579), (20, 7621), (27, 7675), (32, 7723), (33, 7735),

Gene: Bubble_12 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Bubble_12:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: Burnsey_12 Start: 7523, Stop: 7933, Start Num: 4
Candidate Starts for Burnsey_12:
(Start: 4 @7523 has 59 MA's), (9, 7562), (10, 7565), (12, 7571), (15, 7610), (20, 7652), (27, 7706), (33, 7766),

Gene: Button_13 Start: 7530, Stop: 7934, Start Num: 4
Candidate Starts for Button_13:
(Start: 4 @7530 has 59 MA's), (9, 7572), (15, 7620), (17, 7641), (32, 7764), (36, 7809),

Gene: Buttrmlkdreams_12 Start: 7491, Stop: 7901, Start Num: 4
Candidate Starts for Buttrmlkdreams_12:
(Start: 4 @7491 has 59 MA's), (10, 7533), (12, 7539), (15, 7578), (20, 7620), (27, 7674), (32, 7722), (33, 7734),

Gene: CanesSauce_12 Start: 7535, Stop: 7945, Start Num: 4
Candidate Starts for CanesSauce_12:
(Start: 4 @7535 has 59 MA's), (8, 7571), (10, 7577), (12, 7583), (15, 7622), (20, 7664), (27, 7718), (33, 7778),

Gene: CaramelLatte_12 Start: 7535, Stop: 7945, Start Num: 4
Candidate Starts for CaramelLatte_12:
(Start: 4 @7535 has 59 MA's), (8, 7571), (10, 7577), (12, 7583), (15, 7622), (20, 7664), (27, 7718), (33, 7778),

Gene: Carsonalex_13 Start: 7579, Stop: 7989, Start Num: 4
Candidate Starts for Carsonalex_13:
(Start: 4 @7579 has 59 MA's), (10, 7621), (12, 7627), (15, 7666), (20, 7708), (27, 7762), (33, 7822),

Gene: CherryonLim_13 Start: 8039, Stop: 8449, Start Num: 4
Candidate Starts for CherryonLim_13:
(Start: 4 @8039 has 59 MA's), (12, 8084), (15, 8123), (19, 8162), (22, 8174), (30, 8243), (37, 8348), (42, 8423),

Gene: ChickenTender_14 Start: 7565, Stop: 7975, Start Num: 4

Candidate Starts for ChickenTender_14:
(Start: 4 @7565 has 59 MA's), (10, 7607), (12, 7613), (15, 7652), (20, 7694), (26, 7739), (27, 7748), (33, 7808),

Gene: ChocoMunchkin_12 Start: 7535, Stop: 7945, Start Num: 4
Candidate Starts for ChocoMunchkin_12:
(Start: 4 @7535 has 59 MA's), (8, 7571), (10, 7577), (12, 7583), (15, 7622), (20, 7664), (27, 7718), (33, 7778),

Gene: Cleo_12 Start: 7746, Stop: 8144, Start Num: 4
Candidate Starts for Cleo_12:
(Start: 4 @7746 has 59 MA's), (12, 7794), (15, 7830), (21, 7875), (23, 7884), (25, 7914), (29, 7941), (30, 7950), (31, 7962), (34, 7989), (37, 8055), (40, 8088),

Gene: CocoaPuff_11 Start: 7288, Stop: 7698, Start Num: 4
Candidate Starts for CocoaPuff_11:
(Start: 4 @7288 has 59 MA's), (12, 7333), (15, 7372), (19, 7411), (22, 7423), (30, 7492), (37, 7597), (42, 7672),

Gene: Cozz_12 Start: 7523, Stop: 7933, Start Num: 4
Candidate Starts for Cozz_12:
(Start: 4 @7523 has 59 MA's), (10, 7565), (12, 7571), (15, 7610), (20, 7652), (27, 7706), (33, 7766),

Gene: Dre3_12 Start: 7693, Stop: 8091, Start Num: 4
Candidate Starts for Dre3_12:
(Start: 4 @7693 has 59 MA's), (12, 7741), (15, 7777), (21, 7822), (23, 7831), (25, 7861), (29, 7888), (30, 7897), (31, 7909), (34, 7936), (37, 8002), (40, 8035),

Gene: ElJefes_11 Start: 7765, Stop: 8175, Start Num: 4
Candidate Starts for ElJefes_11:
(Start: 4 @7765 has 59 MA's), (12, 7810), (15, 7849), (19, 7888), (22, 7900), (30, 7969), (37, 8074), (42, 8149),

Gene: Elinal_13 Start: 7294, Stop: 7704, Start Num: 4
Candidate Starts for Elinal_13:
(Start: 4 @7294 has 59 MA's), (12, 7339), (15, 7378), (19, 7417), (22, 7429), (30, 7498), (37, 7603), (42, 7678),

Gene: Eliott_12 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Eliott_12:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: Emalyn_11 Start: 7242, Stop: 7652, Start Num: 4
Candidate Starts for Emalyn_11:
(Start: 4 @7242 has 59 MA's), (10, 7284), (12, 7290), (15, 7329), (20, 7371), (27, 7425), (32, 7473),

Gene: Feastonyeet_11 Start: 7313, Stop: 7723, Start Num: 4
Candidate Starts for Feastonyeet_11:
(Start: 4 @7313 has 59 MA's), (12, 7358), (15, 7397), (19, 7436), (22, 7448), (30, 7517), (37, 7622), (42, 7697),

Gene: Fribs8_13 Start: 8259, Stop: 8663, Start Num: 4
Candidate Starts for Fribs8_13:

(Start: 4 @8259 has 59 MA's), (12, 8307), (21, 8388), (25, 8427), (29, 8454), (34, 8502), (35, 8511), (37, 8568),

Gene: GiKK_15 Start: 7833, Stop: 8237, Start Num: 4
Candidate Starts for GiKK_15:
(Start: 4 @7833 has 59 MA's), (9, 7875), (15, 7923), (17, 7944), (32, 8067), (36, 8112),

Gene: Gibbous_12 Start: 7693, Stop: 8091, Start Num: 4
Candidate Starts for Gibbous_12:
(Start: 4 @7693 has 59 MA's), (12, 7741), (15, 7777), (21, 7822), (23, 7831), (25, 7861), (29, 7888), (30, 7897), (31, 7909), (34, 7936), (37, 8002), (40, 8035),

Gene: Hexbug_14 Start: 8519, Stop: 8923, Start Num: 4
Candidate Starts for Hexbug_14:
(Start: 4 @8519 has 59 MA's), (6, 8540), (11, 8567), (15, 8609), (28, 8708), (36, 8798), (38, 8840), (41, 8894), (43, 8918),

Gene: HippoPololi_14 Start: 8345, Stop: 8743, Start Num: 4
Candidate Starts for HippoPololi_14:
(Start: 4 @8345 has 59 MA's), (12, 8393), (21, 8474), (23, 8483), (24, 8504), (25, 8513), (29, 8540), (30, 8549), (31, 8561), (34, 8588), (35, 8597), (37, 8654),

Gene: Horseradish_13 Start: 7404, Stop: 7814, Start Num: 4
Candidate Starts for Horseradish_13:
(Start: 4 @7404 has 59 MA's), (12, 7452), (15, 7491), (20, 7533), (27, 7587), (33, 7647),

Gene: Jamzy_15 Start: 7843, Stop: 8247, Start Num: 4
Candidate Starts for Jamzy_15:
(Start: 4 @7843 has 59 MA's), (9, 7885), (15, 7933), (17, 7954), (32, 8077), (36, 8122),

Gene: Juicebox_13 Start: 8820, Stop: 9218, Start Num: 5
Candidate Starts for Juicebox_13:
(Start: 5 @8820 has 1 MA's), (14, 8877), (18, 8916), (39, 9132),

Gene: KayGee_12 Start: 7294, Stop: 7704, Start Num: 4
Candidate Starts for KayGee_12:
(Start: 4 @7294 has 59 MA's), (12, 7339), (15, 7378), (19, 7417), (22, 7429), (30, 7498), (37, 7603), (42, 7678),

Gene: Lauer_11 Start: 7343, Stop: 7753, Start Num: 4
Candidate Starts for Lauer_11:
(Start: 4 @7343 has 59 MA's), (12, 7388), (15, 7427), (19, 7466), (22, 7478), (30, 7547), (37, 7652), (42, 7727),

Gene: MAnor_12 Start: 7284, Stop: 7694, Start Num: 4
Candidate Starts for MAnor_12:
(Start: 4 @7284 has 59 MA's), (12, 7329), (15, 7368), (19, 7407), (22, 7419), (30, 7488), (37, 7593), (42, 7668),

Gene: MScarn_14 Start: 7491, Stop: 7901, Start Num: 4
Candidate Starts for MScarn_14:
(Start: 4 @7491 has 59 MA's), (10, 7533), (12, 7539), (15, 7578), (20, 7620), (27, 7674), (32, 7722), (33, 7734),

Gene: MaVan_14 Start: 8446, Stop: 8850, Start Num: 4
Candidate Starts for MaVan_14:
(Start: 4 @8446 has 59 MA's), (12, 8494), (21, 8575), (25, 8614), (29, 8641), (34, 8689), (37, 8755),

Gene: Margaret_15 Start: 8228, Stop: 8632, Start Num: 4
Candidate Starts for Margaret_15:
(Start: 4 @8228 has 59 MA's), (6, 8249), (7, 8252), (9, 8270), (15, 8318), (16, 8330), (28, 8417), (32, 8462), (38, 8549), (43, 8627),

Gene: Mayweather_13 Start: 7917, Stop: 8327, Start Num: 4
Candidate Starts for Mayweather_13:
(Start: 4 @7917 has 59 MA's), (12, 7962), (15, 8001), (19, 8040), (22, 8052), (30, 8121), (37, 8226), (42, 8301),

Gene: McDazzle_11 Start: 7759, Stop: 8169, Start Num: 4
Candidate Starts for McDazzle_11:
(Start: 4 @7759 has 59 MA's), (12, 7804), (15, 7843), (19, 7882), (22, 7894), (30, 7963), (37, 8068), (42, 8143),

Gene: MunkgeeRoachy_12 Start: 7570, Stop: 7980, Start Num: 4
Candidate Starts for MunkgeeRoachy_12:
(Start: 4 @7570 has 59 MA's), (10, 7612), (12, 7618), (15, 7657), (20, 7699), (27, 7753), (33, 7813),

Gene: Nibbles_14 Start: 8446, Stop: 8850, Start Num: 4
Candidate Starts for Nibbles_14:
(Start: 4 @8446 has 59 MA's), (12, 8494), (21, 8575), (25, 8614), (29, 8641), (34, 8689), (37, 8755),

Gene: Nina_13 Start: 8556, Stop: 8966, Start Num: 4
Candidate Starts for Nina_13:
(Start: 4 @8556 has 59 MA's), (10, 8598), (12, 8604), (15, 8643), (20, 8685), (27, 8739), (33, 8799),

Gene: Nodigi_14 Start: 8512, Stop: 8916, Start Num: 4
Candidate Starts for Nodigi_14:
(Start: 4 @8512 has 59 MA's), (11, 8560), (15, 8602), (28, 8701), (36, 8791), (38, 8833), (41, 8887), (43, 8911),

Gene: Orla_14 Start: 8516, Stop: 8920, Start Num: 4
Candidate Starts for Orla_14:
(Start: 4 @8516 has 59 MA's), (11, 8564), (15, 8606), (28, 8705), (36, 8795), (38, 8837), (41, 8891), (43, 8915),

Gene: Pons_12 Start: 7296, Stop: 7706, Start Num: 4
Candidate Starts for Pons_12:
(Start: 4 @7296 has 59 MA's), (12, 7341), (15, 7380), (19, 7419), (22, 7431), (30, 7500), (37, 7605), (42, 7680),

Gene: PotPie_12 Start: 8147, Stop: 8557, Start Num: 4
Candidate Starts for PotPie_12:
(Start: 4 @8147 has 59 MA's), (12, 8192), (15, 8231), (19, 8270), (22, 8282), (30, 8351), (37, 8456), (42, 8531),

Gene: PsychoKiller_12 Start: 7522, Stop: 7932, Start Num: 4

Candidate Starts for PsychoKiller_12:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: Quasar_12 Start: 8131, Stop: 8541, Start Num: 4
Candidate Starts for Quasar_12:
(Start: 4 @8131 has 59 MA's), (10, 8173), (12, 8179), (15, 8218), (20, 8260), (27, 8314), (33, 8374),

Gene: RADical_13 Start: 7523, Stop: 7933, Start Num: 4
Candidate Starts for RADical_13:
(Start: 4 @7523 has 59 MA's), (10, 7565), (12, 7571), (15, 7610), (20, 7652), (27, 7706), (33, 7766),

Gene: RSchmailzl_13 Start: 7663, Stop: 8073, Start Num: 4
Candidate Starts for RSchmailzl_13:
(Start: 4 @7663 has 59 MA's), (10, 7705), (12, 7711), (15, 7750), (20, 7792), (27, 7846), (33, 7906),

Gene: RanchParmCat_15 Start: 8228, Stop: 8632, Start Num: 4
Candidate Starts for RanchParmCat_15:
(Start: 4 @8228 has 59 MA's), (6, 8249), (7, 8252), (9, 8270), (15, 8318), (16, 8330), (17, 8339), (28, 8417), (32, 8462), (38, 8549), (43, 8627),

Gene: RedBaron_13 Start: 7567, Stop: 7977, Start Num: 4
Candidate Starts for RedBaron_13:
(Start: 4 @7567 has 59 MA's), (10, 7609), (12, 7615), (15, 7654), (20, 7696), (27, 7750), (33, 7810),

Gene: SheckWes_11 Start: 7284, Stop: 7694, Start Num: 4
Candidate Starts for SheckWes_11:
(Start: 4 @7284 has 59 MA's), (12, 7329), (15, 7368), (19, 7407), (22, 7419), (30, 7488), (37, 7593), (42, 7668),

Gene: SketchMex_11 Start: 7506, Stop: 7916, Start Num: 4
Candidate Starts for SketchMex_11:
(Start: 4 @7506 has 59 MA's), (10, 7548), (12, 7554), (15, 7593), (20, 7635), (27, 7689), (32, 7737), (33, 7749),

Gene: Socotra_13 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Socotra_13:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: Sopespian_12 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Sopespian_12:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: Starburst_13 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Starburst_13:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: SteamedHams_14 Start: 7535, Stop: 7945, Start Num: 4
Candidate Starts for SteamedHams_14:
(Start: 4 @7535 has 59 MA's), (8, 7571), (10, 7577), (12, 7583), (15, 7622), (20, 7664), (27, 7718), (33, 7778),

Gene: SummitAcademy_11 Start: 7362, Stop: 7772, Start Num: 4
Candidate Starts for SummitAcademy_11:

(Start: 4 @7362 has 59 MA's), (12, 7407), (15, 7446), (19, 7485), (22, 7497), (30, 7566), (37, 7671), (42, 7746),

Gene: Survivors_14 Start: 8300, Stop: 8704, Start Num: 4
Candidate Starts for Survivors_14:
(Start: 4 @8300 has 59 MA's), (12, 8348), (21, 8429), (25, 8468), (29, 8495), (34, 8543), (37, 8609),

Gene: SweatNTears_14 Start: 8017, Stop: 8427, Start Num: 4
Candidate Starts for SweatNTears_14:
(Start: 4 @8017 has 59 MA's), (10, 8059), (12, 8065), (15, 8104), (20, 8146), (27, 8200), (32, 8248), (33, 8260),

Gene: Tarnish_11 Start: 7661, Stop: 8071, Start Num: 4
Candidate Starts for Tarnish_11:
(Start: 4 @7661 has 59 MA's), (12, 7706), (15, 7745), (19, 7784), (22, 7796), (30, 7865), (37, 7970), (42, 8045),

Gene: Tolls_14 Start: 7538, Stop: 7948, Start Num: 4
Candidate Starts for Tolls_14:
(Start: 4 @7538 has 59 MA's), (8, 7574), (10, 7580), (12, 7586), (15, 7625), (20, 7667), (27, 7721), (33, 7781),

Gene: Troje_12 Start: 7491, Stop: 7901, Start Num: 4
Candidate Starts for Troje_12:
(Start: 4 @7491 has 59 MA's), (10, 7533), (12, 7539), (15, 7578), (20, 7620), (27, 7674), (32, 7722), (33, 7734),

Gene: Typhonomachy_12 Start: 7522, Stop: 7932, Start Num: 4
Candidate Starts for Typhonomachy_12:
(Start: 4 @7522 has 59 MA's), (10, 7564), (12, 7570), (15, 7609), (20, 7651), (27, 7705), (33, 7765),

Gene: Vine_13 Start: 8291, Stop: 8701, Start Num: 4
Candidate Starts for Vine_13:
(Start: 4 @8291 has 59 MA's), (12, 8336), (15, 8375), (19, 8414), (22, 8426), (30, 8495), (37, 8600), (42, 8675),

Gene: Wolfwood_16 Start: 8445, Stop: 8849, Start Num: 4
Candidate Starts for Wolfwood_16:
(Start: 4 @8445 has 59 MA's), (12, 8493), (21, 8574), (25, 8613), (29, 8640), (34, 8688), (37, 8754),

Gene: Yakult_13 Start: 7424, Stop: 7828, Start Num: 4
Candidate Starts for Yakult_13:
(1, 7289), (2, 7292), (3, 7319), (Start: 4 @7424 has 59 MA's), (9, 7466), (12, 7475), (13, 7478), (15, 7514), (30, 7634),

Gene: Yarn_11 Start: 7528, Stop: 7938, Start Num: 4
Candidate Starts for Yarn_11:
(Start: 4 @7528 has 59 MA's), (8, 7564), (10, 7570), (12, 7576), (15, 7615), (20, 7657), (27, 7711), (33, 7771),

Gene: Yucky_12 Start: 8151, Stop: 8561, Start Num: 4
Candidate Starts for Yucky_12:

(Start: 4 @8151 has 59 MA's), (12, 8196), (15, 8235), (19, 8274), (22, 8286), (30, 8355), (37, 8460), (42, 8535),

Gene: Yummy_13 Start: 7404, Stop: 7814, Start Num: 4
Candidate Starts for Yummy_13:
(Start: 4 @7404 has 59 MA's), (12, 7452), (15, 7491), (20, 7533), (27, 7587), (33, 7647),

Gene: Zareef_14 Start: 8447, Stop: 8851, Start Num: 4
Candidate Starts for Zareef_14:
(Start: 4 @8447 has 59 MA's), (12, 8495), (21, 8576), (25, 8615), (29, 8642), (34, 8690), (37, 8756),