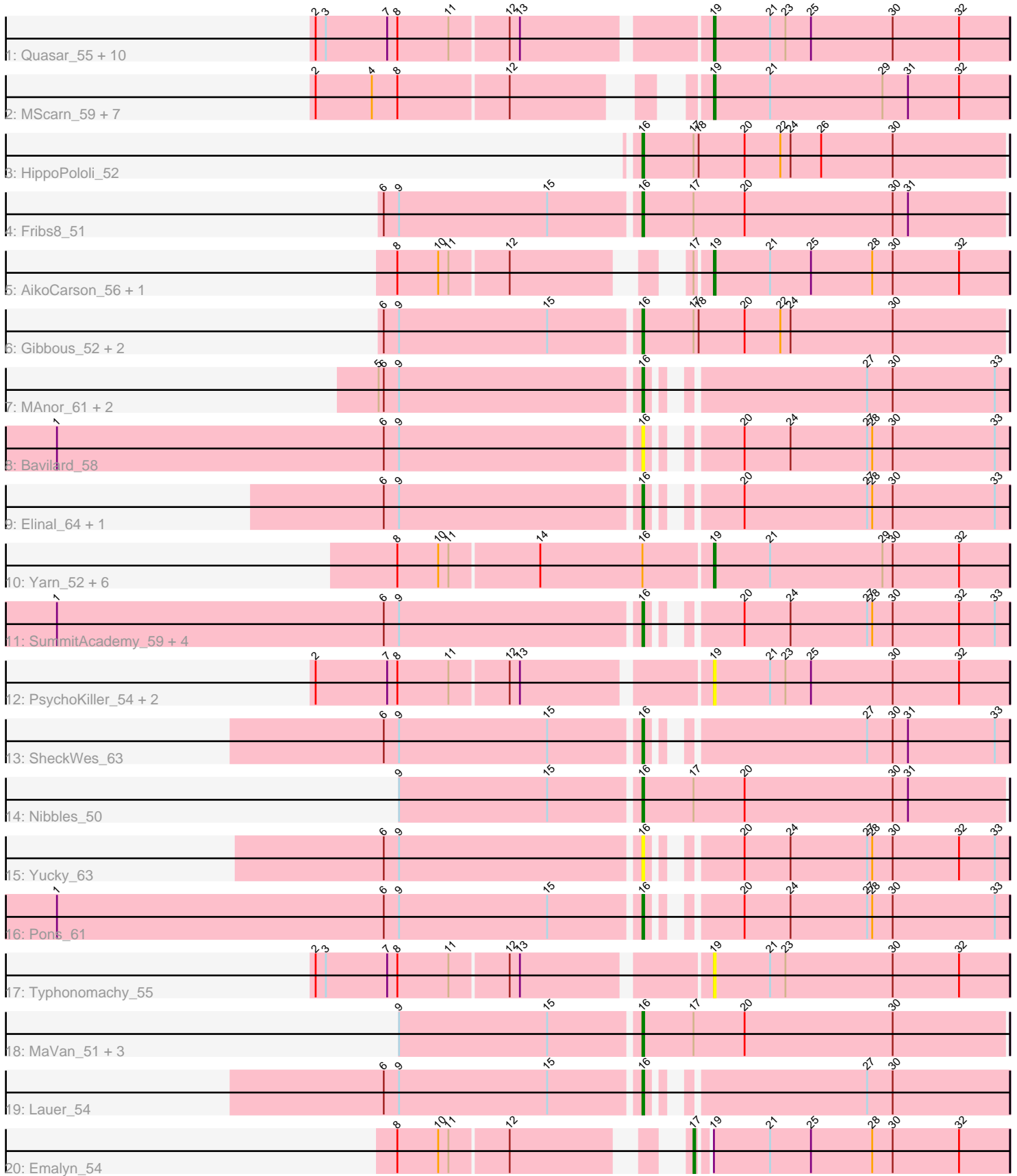


Pham 202971



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 202971 Report

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

Pham number 202971 has 58 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Quasar_55, Agatha_55, Nina_55, Cozz_53, MunkgeeRoachy_53, Starburst_55, Axym_54, Carsonalex_58, GoldHunter_56, Burnsey_55, SweatNTears_57
- Track 2 : MScarn_59, Biskit_57, SketchMex_55, Horseradish_57, Buttrmlkdreams_57, Yummy_57, Troje_57, Blondies_57
- Track 3 : HippoPololi_52
- Track 4 : Fribs8_51
- Track 5 : AikoCarson_56, Amok_56
- Track 6 : Gibbous_52, Dre3_52, Cleo_49
- Track 7 : MAnor_61, CherryonLim_60, Mayweather_63
- Track 8 : Bavidard_58
- Track 9 : Elinal_64, KayGee_62
- Track 10 : Yarn_52, CanesSauce_54, SteamedHams_56, Tolls_56, AndPeggy_52, BillDoor_55, ChocoMunchkin_54
- Track 11 : SummitAcademy_59, BigChungus_59, Vine_62, PotPie_59, Feastonyeet_59
- Track 12 : PsychoKiller_54, Sopespian_52, Elliott_55
- Track 13 : SheckWes_63
- Track 14 : Nibbles_50
- Track 15 : Yucky_63
- Track 16 : Pons_61
- Track 17 : Typhonomachy_55
- Track 18 : MaVan_51, Survivors_51, Azira_51, Zareef_53
- Track 19 : Lauer_54
- Track 20 : Emalyn_54

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

The start number called the most often in the published annotations is 19, it was called in 22 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_55, AikoCarson_56, Amok_56, AndPeggy_52, Axym_54, BillDoor_55, Biskit_57, Blondies_57, Burnsey_55, Buttrmlkdreams_57, CanesSauce_54,

Carsonalex_58, ChocoMunchkin_54, Cozz_53, Elliott_55, GoldHunter_56, Horseradish_57, MScarn_59, MunkgeeRoachy_53, Nina_55, PsychoKiller_54, Quasar_55, SketchMex_55, Sopespian_52, Starburst_55, SteamedHams_56, SweatNTears_57, Tolls_56, Troje_57, Typhonomachy_55, Yarn_52, Yummy_57,

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

- Emalyn_54,

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

- Azira_51, Bavailard_58, BigChungus_59, CherryonLim_60, Cleo_49, Dre3_52, Elinal_64, Feastonyeet_59, Fribs8_51, Gibbous_52, HippoPololi_52, KayGee_62, Lauer_54, MAnor_61, MaVan_51, Mayweather_63, Nibbles_50, Pons_61, PotPie_59, SheckWes_63, SummitAcademy_59, Survivors_51, Vine_62, Yucky_63, Zareef_53,

Summary by start number:

Start 16:

- Found in 32 of 58 (55.2%) of genes in pham
- Manual Annotations of this start: 22 of 45
- Called 78.1% of time when present
- Phage (with cluster) where this start called: Azira_51 (CT), Bavailard_58 (CT), BigChungus_59 (CT), CherryonLim_60 (CT), Cleo_49 (CT), Dre3_52 (CT), Elinal_64 (CT), Feastonyeet_59 (CT), Fribs8_51 (CT), Gibbous_52 (CT), HippoPololi_52 (CT), KayGee_62 (CT), Lauer_54 (CT), MAnor_61 (CT), MaVan_51 (CT), Mayweather_63 (CT), Nibbles_50 (CT), Pons_61 (CT), PotPie_59 (CT), SheckWes_63 (CT), SummitAcademy_59 (CT), Survivors_51 (CT), Vine_62 (CT), Yucky_63 (CT), Zareef_53 (CT),

Start 17:

- Found in 13 of 58 (22.4%) of genes in pham
- Manual Annotations of this start: 1 of 45
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Emalyn_54 (CT),

Start 19:

- Found in 33 of 58 (56.9%) of genes in pham
- Manual Annotations of this start: 22 of 45
- Called 97.0% of time when present
- Phage (with cluster) where this start called: Agatha_55 (CT), AikoCarson_56 (CT), Amok_56 (CT), AndPeggy_52 (CT), Axym_54 (CT), BillDoor_55 (CT), Biskit_57 (CT), Blondies_57 (CT), Burnsey_55 (CT), Buttrmlkdreams_57 (CT), CanesSauce_54 (CT), Carsonalex_58 (CT), ChocoMunchkin_54 (CT), Cozz_53 (CT), Elliott_55 (CT), GoldHunter_56 (CT), Horseradish_57 (CT), MScarn_59 (CT), MunkgeeRoachy_53 (CT), Nina_55 (CT), PsychoKiller_54 (CT), Quasar_55 (CT), SketchMex_55 (CT), Sopespian_52 (CT), Starburst_55 (CT), SteamedHams_56 (CT), SweatNTears_57 (CT), Tolls_56 (CT), Troje_57 (CT), Typhonomachy_55 (CT), Yarn_52 (CT), Yummy_57 (CT),

Summary by clusters:

There is one cluster represented in this pham: CT

Info for manual annotations of cluster CT:

- Start number 16 was manually annotated 22 times for cluster CT.
- Start number 17 was manually annotated 1 time for cluster CT.
- Start number 19 was manually annotated 22 times for cluster CT.

Gene Information:

Gene: Agatha_55 Start: 39281, Stop: 39108, Start Num: 19

Candidate Starts for Agatha_55:

(2, 39500), (3, 39494), (7, 39458), (8, 39452), (11, 39422), (12, 39389), (13, 39383), (Start: 19 @39281 has 22 MA's), (21, 39248), (23, 39239), (25, 39224), (30, 39176), (32, 39137),

Gene: AikoCarson_56 Start: 39495, Stop: 39322, Start Num: 19

Candidate Starts for AikoCarson_56:

(8, 39639), (10, 39615), (11, 39609), (12, 39576), (Start: 17 @39501 has 1 MA's), (Start: 19 @39495 has 22 MA's), (21, 39462), (25, 39438), (28, 39402), (30, 39390), (32, 39351),

Gene: Amok_56 Start: 39423, Stop: 39250, Start Num: 19

Candidate Starts for Amok_56:

(8, 39567), (10, 39543), (11, 39537), (12, 39504), (Start: 17 @39429 has 1 MA's), (Start: 19 @39423 has 22 MA's), (21, 39390), (25, 39366), (28, 39330), (30, 39318), (32, 39279),

Gene: AndPeggy_52 Start: 38688, Stop: 38515, Start Num: 19

Candidate Starts for AndPeggy_52:

(8, 38868), (10, 38844), (11, 38838), (14, 38787), (Start: 16 @38727 has 22 MA's), (Start: 19 @38688 has 22 MA's), (21, 38655), (29, 38589), (30, 38583), (32, 38544),

Gene: Axym_54 Start: 39178, Stop: 39005, Start Num: 19

Candidate Starts for Axym_54:

(2, 39397), (3, 39391), (7, 39355), (8, 39349), (11, 39319), (12, 39286), (13, 39280), (Start: 19 @39178 has 22 MA's), (21, 39145), (23, 39136), (25, 39121), (30, 39073), (32, 39034),

Gene: Azira_51 Start: 38488, Stop: 38276, Start Num: 16

Candidate Starts for Azira_51:

(9, 38626), (15, 38539), (Start: 16 @38488 has 22 MA's), (Start: 17 @38458 has 1 MA's), (20, 38428), (30, 38341),

Gene: Bavilard_58 Start: 40544, Stop: 40350, Start Num: 16

Candidate Starts for Bavilard_58:

(1, 40883), (6, 40691), (9, 40682), (Start: 16 @40544 has 22 MA's), (20, 40505), (24, 40478), (27, 40433), (28, 40430), (30, 40418), (33, 40358),

Gene: BigChungus_59 Start: 41075, Stop: 40881, Start Num: 16

Candidate Starts for BigChungus_59:

(1, 41414), (6, 41222), (9, 41213), (Start: 16 @41075 has 22 MA's), (20, 41036), (24, 41009), (27, 40964), (28, 40961), (30, 40949), (32, 40910), (33, 40889),

Gene: BillDoor_55 Start: 38364, Stop: 38191, Start Num: 19

Candidate Starts for BillDoor_55:

(8, 38544), (10, 38520), (11, 38514), (14, 38463), (Start: 16 @38403 has 22 MA's), (Start: 19 @38364 has 22 MA's), (21, 38331), (29, 38265), (30, 38259), (32, 38220),

Gene: Biskit_57 Start: 39090, Stop: 38917, Start Num: 19

Candidate Starts for Biskit_57:

(2, 39282), (4, 39249), (8, 39234), (12, 39171), (Start: 19 @39090 has 22 MA's), (21, 39057), (29, 38991), (31, 38976), (32, 38946),

Gene: Blondies_57 Start: 39407, Stop: 39234, Start Num: 19

Candidate Starts for Blondies_57:

(2, 39599), (4, 39566), (8, 39551), (12, 39488), (Start: 19 @39407 has 22 MA's), (21, 39374), (29, 39308), (31, 39293), (32, 39263),

Gene: Burnsey_55 Start: 39272, Stop: 39099, Start Num: 19

Candidate Starts for Burnsey_55:

(2, 39491), (3, 39485), (7, 39449), (8, 39443), (11, 39413), (12, 39380), (13, 39374), (Start: 19 @39272 has 22 MA's), (21, 39239), (23, 39230), (25, 39215), (30, 39167), (32, 39128),

Gene: Buttrmlkdreams_57 Start: 39537, Stop: 39364, Start Num: 19

Candidate Starts for Buttrmlkdreams_57:

(2, 39729), (4, 39696), (8, 39681), (12, 39618), (Start: 19 @39537 has 22 MA's), (21, 39504), (29, 39438), (31, 39423), (32, 39393),

Gene: CanesSauce_54 Start: 38849, Stop: 38676, Start Num: 19

Candidate Starts for CanesSauce_54:

(8, 39029), (10, 39005), (11, 38999), (14, 38948), (Start: 16 @38888 has 22 MA's), (Start: 19 @38849 has 22 MA's), (21, 38816), (29, 38750), (30, 38744), (32, 38705),

Gene: Carsonalex_58 Start: 39660, Stop: 39487, Start Num: 19

Candidate Starts for Carsonalex_58:

(2, 39879), (3, 39873), (7, 39837), (8, 39831), (11, 39801), (12, 39768), (13, 39762), (Start: 19 @39660 has 22 MA's), (21, 39627), (23, 39618), (25, 39603), (30, 39555), (32, 39516),

Gene: CherryonLim_60 Start: 42554, Stop: 42360, Start Num: 16

Candidate Starts for CherryonLim_60:

(5, 42704), (6, 42701), (9, 42692), (Start: 16 @42554 has 22 MA's), (27, 42443), (30, 42428), (33, 42368),

Gene: ChocoMunchkin_54 Start: 38849, Stop: 38676, Start Num: 19

Candidate Starts for ChocoMunchkin_54:

(8, 39029), (10, 39005), (11, 38999), (14, 38948), (Start: 16 @38888 has 22 MA's), (Start: 19 @38849 has 22 MA's), (21, 38816), (29, 38750), (30, 38744), (32, 38705),

Gene: Cleo_49 Start: 38249, Stop: 38037, Start Num: 16

Candidate Starts for Cleo_49:

(6, 38396), (9, 38387), (15, 38300), (Start: 16 @38249 has 22 MA's), (Start: 17 @38219 has 1 MA's), (18, 38216), (20, 38189), (22, 38168), (24, 38162), (30, 38102),

Gene: Cozz_53 Start: 38869, Stop: 38696, Start Num: 19

Candidate Starts for Cozz_53:

(2, 39088), (3, 39082), (7, 39046), (8, 39040), (11, 39010), (12, 38977), (13, 38971), (Start: 19 @38869 has 22 MA's), (21, 38836), (23, 38827), (25, 38812), (30, 38764), (32, 38725),

Gene: Dre3_52 Start: 39093, Stop: 38881, Start Num: 16

Candidate Starts for Dre3_52:

(6, 39240), (9, 39231), (15, 39144), (Start: 16 @39093 has 22 MA's), (Start: 17 @39063 has 1 MA's), (18, 39060), (20, 39033), (22, 39012), (24, 39006), (30, 38946),

Gene: Elinal_64 Start: 41883, Stop: 41689, Start Num: 16

Candidate Starts for Elinal_64:

(6, 42030), (9, 42021), (Start: 16 @41883 has 22 MA's), (20, 41844), (27, 41772), (28, 41769), (30, 41757), (33, 41697),

Gene: Elliott_55 Start: 39165, Stop: 38992, Start Num: 19

Candidate Starts for Elliott_55:

(2, 39384), (7, 39342), (8, 39336), (11, 39306), (12, 39273), (13, 39267), (Start: 19 @39165 has 22 MA's), (21, 39132), (23, 39123), (25, 39108), (30, 39060), (32, 39021),

Gene: Emalyn_54 Start: 38221, Stop: 38042, Start Num: 17

Candidate Starts for Emalyn_54:

(8, 38359), (10, 38335), (11, 38329), (12, 38296), (Start: 17 @38221 has 1 MA's), (Start: 19 @38215 has 22 MA's), (21, 38182), (25, 38158), (28, 38122), (30, 38110), (32, 38071),

Gene: Feastonyeet_59 Start: 41075, Stop: 40881, Start Num: 16

Candidate Starts for Feastonyeet_59:

(1, 41414), (6, 41222), (9, 41213), (Start: 16 @41075 has 22 MA's), (20, 41036), (24, 41009), (27, 40964), (28, 40961), (30, 40949), (32, 40910), (33, 40889),

Gene: Fribs8_51 Start: 39165, Stop: 38953, Start Num: 16

Candidate Starts for Fribs8_51:

(6, 39312), (9, 39303), (15, 39216), (Start: 16 @39165 has 22 MA's), (Start: 17 @39135 has 1 MA's), (20, 39105), (30, 39018), (31, 39009),

Gene: Gibbous_52 Start: 39093, Stop: 38881, Start Num: 16

Candidate Starts for Gibbous_52:

(6, 39240), (9, 39231), (15, 39144), (Start: 16 @39093 has 22 MA's), (Start: 17 @39063 has 1 MA's), (18, 39060), (20, 39033), (22, 39012), (24, 39006), (30, 38946),

Gene: GoldHunter_56 Start: 39282, Stop: 39109, Start Num: 19

Candidate Starts for GoldHunter_56:

(2, 39501), (3, 39495), (7, 39459), (8, 39453), (11, 39423), (12, 39390), (13, 39384), (Start: 19 @39282 has 22 MA's), (21, 39249), (23, 39240), (25, 39225), (30, 39177), (32, 39138),

Gene: HippoPololi_52 Start: 38402, Stop: 38190, Start Num: 16

Candidate Starts for HippoPololi_52:

(Start: 16 @38402 has 22 MA's), (Start: 17 @38372 has 1 MA's), (18, 38369), (20, 38342), (22, 38321), (24, 38315), (26, 38297), (30, 38255),

Gene: Horseradish_57 Start: 39023, Stop: 38850, Start Num: 19

Candidate Starts for Horseradish_57:

(2, 39215), (4, 39182), (8, 39167), (12, 39104), (Start: 19 @39023 has 22 MA's), (21, 38990), (29, 38924), (31, 38909), (32, 38879),

Gene: KayGee_62 Start: 41883, Stop: 41689, Start Num: 16

Candidate Starts for KayGee_62:

(6, 42030), (9, 42021), (Start: 16 @41883 has 22 MA's), (20, 41844), (27, 41772), (28, 41769), (30, 41757), (33, 41697),

Gene: Lauer_54 Start: 42060, Stop: 41866, Start Num: 16
Candidate Starts for Lauer_54:
(6, 42207), (9, 42198), (15, 42111), (Start: 16 @42060 has 22 MA's), (27, 41949), (30, 41934),

Gene: MAnor_61 Start: 42014, Stop: 41820, Start Num: 16
Candidate Starts for MAnor_61:
(5, 42164), (6, 42161), (9, 42152), (Start: 16 @42014 has 22 MA's), (27, 41903), (30, 41888), (33, 41828),

Gene: MScarn_59 Start: 39205, Stop: 39032, Start Num: 19
Candidate Starts for MScarn_59:
(2, 39397), (4, 39364), (8, 39349), (12, 39286), (Start: 19 @39205 has 22 MA's), (21, 39172), (29, 39106), (31, 39091), (32, 39061),

Gene: MaVan_51 Start: 38517, Stop: 38305, Start Num: 16
Candidate Starts for MaVan_51:
(9, 38655), (15, 38568), (Start: 16 @38517 has 22 MA's), (Start: 17 @38487 has 1 MA's), (20, 38457), (30, 38370),

Gene: Mayweather_63 Start: 42277, Stop: 42083, Start Num: 16
Candidate Starts for Mayweather_63:
(5, 42427), (6, 42424), (9, 42415), (Start: 16 @42277 has 22 MA's), (27, 42166), (30, 42151), (33, 42091),

Gene: MunkgeeRoachy_53 Start: 38628, Stop: 38455, Start Num: 19
Candidate Starts for MunkgeeRoachy_53:
(2, 38847), (3, 38841), (7, 38805), (8, 38799), (11, 38769), (12, 38736), (13, 38730), (Start: 19 @38628 has 22 MA's), (21, 38595), (23, 38586), (25, 38571), (30, 38523), (32, 38484),

Gene: Nibbles_50 Start: 38210, Stop: 37998, Start Num: 16
Candidate Starts for Nibbles_50:
(9, 38348), (15, 38261), (Start: 16 @38210 has 22 MA's), (Start: 17 @38180 has 1 MA's), (20, 38150), (30, 38063), (31, 38054),

Gene: Nina_55 Start: 39768, Stop: 39595, Start Num: 19
Candidate Starts for Nina_55:
(2, 39987), (3, 39981), (7, 39945), (8, 39939), (11, 39909), (12, 39876), (13, 39870), (Start: 19 @39768 has 22 MA's), (21, 39735), (23, 39726), (25, 39711), (30, 39663), (32, 39624),

Gene: Pons_61 Start: 41619, Stop: 41425, Start Num: 16
Candidate Starts for Pons_61:
(1, 41958), (6, 41766), (9, 41757), (15, 41670), (Start: 16 @41619 has 22 MA's), (20, 41580), (24, 41553), (27, 41508), (28, 41505), (30, 41493), (33, 41433),

Gene: PotPie_59 Start: 42110, Stop: 41916, Start Num: 16
Candidate Starts for PotPie_59:
(1, 42449), (6, 42257), (9, 42248), (Start: 16 @42110 has 22 MA's), (20, 42071), (24, 42044), (27, 41999), (28, 41996), (30, 41984), (32, 41945), (33, 41924),

Gene: PsychoKiller_54 Start: 39166, Stop: 38993, Start Num: 19
Candidate Starts for PsychoKiller_54:
(2, 39385), (7, 39343), (8, 39337), (11, 39307), (12, 39274), (13, 39268), (Start: 19 @39166 has 22 MA's), (21, 39133), (23, 39124), (25, 39109), (30, 39061), (32, 39022),

Gene: Quasar_55 Start: 39870, Stop: 39697, Start Num: 19

Candidate Starts for Quasar_55:

(2, 40089), (3, 40083), (7, 40047), (8, 40041), (11, 40011), (12, 39978), (13, 39972), (Start: 19 @39870 has 22 MA's), (21, 39837), (23, 39828), (25, 39813), (30, 39765), (32, 39726),

Gene: SheckWes_63 Start: 41150, Stop: 40956, Start Num: 16

Candidate Starts for SheckWes_63:

(6, 41297), (9, 41288), (15, 41201), (Start: 16 @41150 has 22 MA's), (27, 41039), (30, 41024), (31, 41015), (33, 40964),

Gene: SketchMex_55 Start: 39090, Stop: 38917, Start Num: 19

Candidate Starts for SketchMex_55:

(2, 39282), (4, 39249), (8, 39234), (12, 39171), (Start: 19 @39090 has 22 MA's), (21, 39057), (29, 38991), (31, 38976), (32, 38946),

Gene: Sopespian_52 Start: 39167, Stop: 38994, Start Num: 19

Candidate Starts for Sopespian_52:

(2, 39386), (7, 39344), (8, 39338), (11, 39308), (12, 39275), (13, 39269), (Start: 19 @39167 has 22 MA's), (21, 39134), (23, 39125), (25, 39110), (30, 39062), (32, 39023),

Gene: Starburst_55 Start: 39162, Stop: 38989, Start Num: 19

Candidate Starts for Starburst_55:

(2, 39381), (3, 39375), (7, 39339), (8, 39333), (11, 39303), (12, 39270), (13, 39264), (Start: 19 @39162 has 22 MA's), (21, 39129), (23, 39120), (25, 39105), (30, 39057), (32, 39018),

Gene: SteamedHams_56 Start: 38665, Stop: 38492, Start Num: 19

Candidate Starts for SteamedHams_56:

(8, 38845), (10, 38821), (11, 38815), (14, 38764), (Start: 16 @38704 has 22 MA's), (Start: 19 @38665 has 22 MA's), (21, 38632), (29, 38566), (30, 38560), (32, 38521),

Gene: SummitAcademy_59 Start: 41253, Stop: 41059, Start Num: 16

Candidate Starts for SummitAcademy_59:

(1, 41592), (6, 41400), (9, 41391), (Start: 16 @41253 has 22 MA's), (20, 41214), (24, 41187), (27, 41142), (28, 41139), (30, 41127), (32, 41088), (33, 41067),

Gene: Survivors_51 Start: 38410, Stop: 38198, Start Num: 16

Candidate Starts for Survivors_51:

(9, 38548), (15, 38461), (Start: 16 @38410 has 22 MA's), (Start: 17 @38380 has 1 MA's), (20, 38350), (30, 38263),

Gene: SweatNTears_57 Start: 39409, Stop: 39236, Start Num: 19

Candidate Starts for SweatNTears_57:

(2, 39628), (3, 39622), (7, 39586), (8, 39580), (11, 39550), (12, 39517), (13, 39511), (Start: 19 @39409 has 22 MA's), (21, 39376), (23, 39367), (25, 39352), (30, 39304), (32, 39265),

Gene: Tolls_56 Start: 38936, Stop: 38763, Start Num: 19

Candidate Starts for Tolls_56:

(8, 39116), (10, 39092), (11, 39086), (14, 39035), (Start: 16 @38975 has 22 MA's), (Start: 19 @38936 has 22 MA's), (21, 38903), (29, 38837), (30, 38831), (32, 38792),

Gene: Troje_57 Start: 39428, Stop: 39255, Start Num: 19

Candidate Starts for Troje_57:

(2, 39620), (4, 39587), (8, 39572), (12, 39509), (Start: 19 @39428 has 22 MA's), (21, 39395), (29, 39329), (31, 39314), (32, 39284),

Gene: Typhonomachy_55 Start: 38991, Stop: 38818, Start Num: 19

Candidate Starts for Typhonomachy_55:

(2, 39210), (3, 39204), (7, 39168), (8, 39162), (11, 39132), (12, 39099), (13, 39093), (Start: 19 @38991 has 22 MA's), (21, 38958), (23, 38949), (30, 38886), (32, 38847),

Gene: Vine_62 Start: 41876, Stop: 41682, Start Num: 16

Candidate Starts for Vine_62:

(1, 42215), (6, 42023), (9, 42014), (Start: 16 @41876 has 22 MA's), (20, 41837), (24, 41810), (27, 41765), (28, 41762), (30, 41750), (32, 41711), (33, 41690),

Gene: Yarn_52 Start: 38693, Stop: 38520, Start Num: 19

Candidate Starts for Yarn_52:

(8, 38873), (10, 38849), (11, 38843), (14, 38792), (Start: 16 @38732 has 22 MA's), (Start: 19 @38693 has 22 MA's), (21, 38660), (29, 38594), (30, 38588), (32, 38549),

Gene: Yucky_63 Start: 41668, Stop: 41474, Start Num: 16

Candidate Starts for Yucky_63:

(6, 41815), (9, 41806), (Start: 16 @41668 has 22 MA's), (20, 41629), (24, 41602), (27, 41557), (28, 41554), (30, 41542), (32, 41503), (33, 41482),

Gene: Yummy_57 Start: 39137, Stop: 38964, Start Num: 19

Candidate Starts for Yummy_57:

(2, 39329), (4, 39296), (8, 39281), (12, 39218), (Start: 19 @39137 has 22 MA's), (21, 39104), (29, 39038), (31, 39023), (32, 38993),

Gene: Zareef_53 Start: 38507, Stop: 38295, Start Num: 16

Candidate Starts for Zareef_53:

(9, 38645), (15, 38558), (Start: 16 @38507 has 22 MA's), (Start: 17 @38477 has 1 MA's), (20, 38447), (30, 38360),