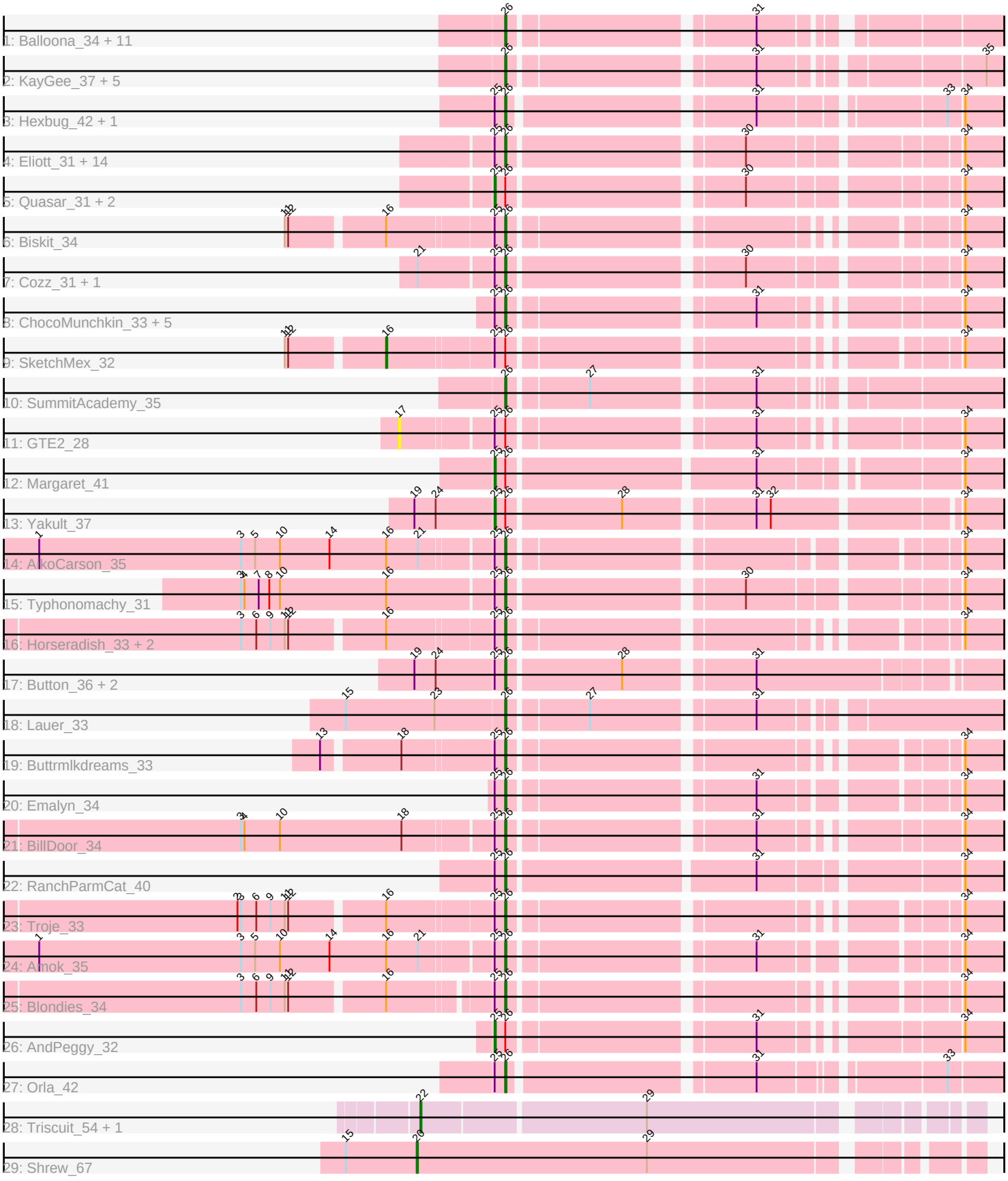
Pham 308530


1: Balloona_34 + 11
2: KayGee_37 + 5
3: Hexbug_42 + 1
4: Eliott_31 + 14
5: Quasar_31 + 2
6: Biskit_34
7: Cozz_31 + 1
8: ChocoMunchkin_33 + 5
9: SketchMex_32
10: SummitAcademy_35
11: GTE2_28
12: Margaret_41
13: Yakult_37
14: AikoCarson_35
15: Typhonomachy_31
16: Horseradish_33 + 2
17: Button_36 + 2
18: Lauer_33
19: Buttrmlkdreams_33
20: Emalyn_34
21: BillDoor_34
22: RanchParmCat_40
23: Troje_33
24: Amok_35
25: Blondies_34
26: AndPeggy_32
27: Orla_42
28: Triscuit_54 + 1
29: Shrew_67

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 308530 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308530 has 73 members, 18 are drafts.

Phages represented in each track:
• Track 1 : Balloona_34, Pons_37, McDazzle_36, BigChungus_35, Mayweather_39, CherryonLim_38, MAnor_37, ElJefes_36, PotPie_36, SheckWes_38, Feastonyeet_35, CocoaPuff_36
• Track 2 : KayGee_37, Bavilard_35, Elinal_39, Vine_38, Tarnish_36, Yucky_38
• Track 3 : Hexbug_42, Nodigi_42
• Track 4 : Eliott_31, Agatha_31, Socotra_32, PsychoKiller_31, MunkgeeRoachy_31, Carsonalex_36, SweatNTears_33, Sopespian_31, ChickenTender_35, Starburst_32, Axym_31, RSchmailzl_32, RADical_32, GoldHunter_32, RedBaron_34
• Track 5 : Quasar_31, Burnsey_31, Nina_31
• Track 6 : Biskit_34
• Track 7 : Cozz_31, Bubble_31
• Track 8 : ChocoMunchkin_33, CaramelLatte_33, Yarn_32, SteamedHams_35, CanesSauce_33, Tolls_35
• Track 9 : SketchMex_32
• Track 10 : SummitAcademy_35
• Track 11 : GTE2_28
• Track 12 : Margaret_41
• Track 13 : Yakult_37
• Track 14 : AikoCarson_35
• Track 15 : Typhonomachy_31
• Track 16 : Horseradish_33, Yummy_33, MScarn_34
• Track 17 : Button_36, Jamzy_38, GiKK_38
• Track 18 : Lauer_33
• Track 19 : Buttrmlkdreams_33
• Track 20 : Emalyn_34
• Track 21 : BillDoor_34
• Track 22 : RanchParmCat_40
• Track 23 : Troje_33
• Track 24 : Amok_35
• Track 25 : Blondies_34
• Track 26 : AndPeggy_32
• Track 27 : Orla_42
• Track 28 : Triscuit_54, Huwbert_55
• Track 29 : Shrew_67

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

The start number called the most often in the published annotations is 26, it was called in 45 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agatha_31, AikoCarson_35, Amok_35, Axym_31, Balloona_34, Bavilard_35, BigChungus_35, BillDoor_34, Biskit_34, Blondies_34, Bubble_31, Button_36, Buttrmlkdreams_33, CanesSauce_33, CaramelLatte_33, Carsonalex_36, CherryonLim_38, ChickenTender_35, ChocoMunchkin_33, CocoaPuff_36, Cozz_31, ElJefes_36, Elinal_39, Eliott_31, Emalyn_34, Feastonyeet_35, GiKK_38, GoldHunter_32, Hexbug_42, Horseradish_33, Jamzy_38, KayGee_37, Lauer_33, MAnor_37, MScarn_34, Mayweather_39, McDazzle_36, MunkgeeRoachy_31, Nodigi_42, Orla_42, Pons_37, PotPie_36, PsychoKiller_31, RADical_32, RSchmailzl_32, RanchParmCat_40, RedBaron_34, SheckWes_38, Socotra_32, Sopespian_31, Starburst_32, SteamedHams_35, SummitAcademy_35, SweatNTears_33, Tarnish_36, Tolls_35, Troje_33, Typhonomachy_31, Vine_38, Yarn_32, Yucky_38, Yummy_33,

Genes that have the "Most Annotated" start but do not call it:
• AndPeggy_32, Burnsey_31, GTE2_28, Margaret_41, Nina_31, Quasar_31, SketchMex_32, Yakult_37,

Genes that do not have the "Most Annotated" start:
• Huwbert_55, Shrew_67, Triscuit_54,

Summary by start number:

Start 16:
• Found in 10 of 73 (13.7%) of genes in pham
• Manual Annotations of this start: 1 of 55
• Called 10.0% of time when present
• Phage (with cluster) where this start called: SketchMex_32 (CT),

Start 17:
• Found in 1 of 73 (1.4%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GTE2_28 (CT),

Start 20:
• Found in 1 of 73 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 55
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Shrew_67 (singleton),

Start 22:
• Found in 2 of 73 (2.7%) of genes in pham
• Manual Annotations of this start: 2 of 55
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Huwbert_55 (GG), Triscuit_54 (GG),

Start 25:
• Found in 50 of 73 (68.5%) of genes in pham
• Manual Annotations of this start: 6 of 55
• Called 12.0% of time when present
• Phage (with cluster) where this start called: AndPeggy_32 (CT), Burnsey_31 (CT), Margaret_41 (CT), Nina_31 (CT), Quasar_31 (CT), Yakult_37 (CT),

Start 26:
• Found in 70 of 73 (95.9%) of genes in pham
• Manual Annotations of this start: 45 of 55
• Called 88.6% of time when present
• Phage (with cluster) where this start called: Agatha_31 (CT), AikoCarson_35 (CT), Amok_35 (CT), Axym_31 (CT), Balloona_34 (CT), Bavilard_35 (CT), BigChungus_35 (CT), BillDoor_34 (CT), Biskit_34 (CT), Blondies_34 (CT), Bubble_31 (CT), Button_36 (CT), Buttrmlkdreams_33 (CT), CanesSauce_33 (CT), CaramelLatte_33 (CT), Carsonalex_36 (CT), CherryonLim_38 (CT), ChickenTender_35 (CT), ChocoMunchkin_33 (CT), CocoaPuff_36 (CT), Cozz_31 (CT), ElJefes_36 (CT), Elinal_39 (CT), Eliott_31 (CT), Emalyn_34 (CT), Feastonyeet_35 (CT), GiKK_38 (CT), GoldHunter_32 (CT), Hexbug_42 (CT), Horseradish_33 (CT), Jamzy_38 (CT), KayGee_37 (CT), Lauer_33 (CT), MAnor_37 (CT), MScarn_34 (CT), Mayweather_39 (CT), McDazzle_36 (CT), MunkgeeRoachy_31 (CT), Nodigi_42 (CT), Orla_42 (CT), Pons_37 (CT), PotPie_36 (CT), PsychoKiller_31 (CT), RADical_32 (CT), RSchmailzl_32 (CT), RanchParmCat_40 (CT), RedBaron_34 (CT), SheckWes_38 (CT), Socotra_32 (CT), Sopespian_31 (CT), Starburst_32 (CT), SteamedHams_35 (CT), SummitAcademy_35 (CT), SweatNTears_33 (CT), Tarnish_36 (CT), Tolls_35 (CT), Troje_33 (CT), Typhonomachy_31 (CT), Vine_38 (CT), Yarn_32 (CT), Yucky_38 (CT), Yummy_33 (CT),

Summary by clusters:

There are 3 clusters represented in this pham: GG, singleton, CT,

Info for manual annotations of cluster CT:
•Start number 16 was manually annotated 1 time for cluster CT.
•Start number 25 was manually annotated 6 times for cluster CT.
•Start number 26 was manually annotated 45 times for cluster CT.

Info for manual annotations of cluster GG:
•Start number 22 was manually annotated 2 times for cluster GG.

Gene Information:

Gene: Agatha_31 Start: 25290, Stop: 24916, Start Num: 26
Candidate Starts for Agatha_31:
(Start: 25 @25299 has 6 MA's), (Start: 26 @25290 has 45 MA's), (30, 25107), (34, 24948),

Gene: AikoCarson_35 Start: 26407, Stop: 26042, Start Num: 26
Candidate Starts for AikoCarson_35:
(1, 26791), (3, 26620), (5, 26608), (10, 26587), (14, 26545), (Start: 16 @26497 has 1 MA's), (21, 26470), (Start: 25 @26416 has 6 MA's), (Start: 26 @26407 has 45 MA's), (34, 26074),

Gene: Amok_35 Start: 26431, Stop: 26066, Start Num: 26
Candidate Starts for Amok_35:
(1, 26815), (3, 26644), (5, 26632), (10, 26611), (14, 26569), (Start: 16 @26521 has 1 MA's), (21, 26494), (Start: 25 @26440 has 6 MA's), (Start: 26 @26431 has 45 MA's), (31, 26242), (34, 26098),

Gene: AndPeggy_32 Start: 25848, Stop: 25477, Start Num: 25
Candidate Starts for AndPeggy_32:
(Start: 25 @25848 has 6 MA's), (Start: 26 @25839 has 45 MA's), (31, 25650), (34, 25509),

Gene: Axym_31 Start: 25269, Stop: 24895, Start Num: 26
Candidate Starts for Axym_31:
(Start: 25 @25278 has 6 MA's), (Start: 26 @25269 has 45 MA's), (30, 25086), (34, 24927),

Gene: Balloona_34 Start: 27206, Stop: 26844, Start Num: 26
Candidate Starts for Balloona_34:
(Start: 26 @27206 has 45 MA's), (31, 27017),

Gene: Bavilard_35 Start: 27418, Stop: 27050, Start Num: 26
Candidate Starts for Bavilard_35:
(Start: 26 @27418 has 45 MA's), (31, 27229), (35, 27064),

Gene: BigChungus_35 Start: 27608, Stop: 27240, Start Num: 26
Candidate Starts for BigChungus_35:
(Start: 26 @27608 has 45 MA's), (31, 27419),

Gene: BillDoor_34 Start: 25517, Stop: 25155, Start Num: 26
Candidate Starts for BillDoor_34:
(3, 25727), (4, 25724), (10, 25694), (18, 25592), (Start: 25 @25526 has 6 MA's), (Start: 26 @25517 has 45 MA's), (31, 25328), (34, 25187),

Gene: Biskit_34 Start: 25615, Stop: 25259, Start Num: 26
Candidate Starts for Biskit_34:
(11, 25780), (12, 25777), (Start: 16 @25705 has 1 MA's), (Start: 25 @25624 has 6 MA's), (Start: 26 @25615 has 45 MA's), (34, 25291),

Gene: Blondies_34 Start: 25597, Stop: 25241, Start Num: 26
Candidate Starts for Blondies_34:
(3, 25792), (6, 25780), (9, 25768), (11, 25756), (12, 25753), (Start: 16 @25681 has 1 MA's), (Start: 25 @25606 has 6 MA's), (Start: 26 @25597 has 45 MA's), (34, 25273),

Gene: Bubble_31 Start: 25270, Stop: 24896, Start Num: 26
Candidate Starts for Bubble_31:
(21, 25336), (Start: 25 @25279 has 6 MA's), (Start: 26 @25270 has 45 MA's), (30, 25087), (34, 24928),

Gene: Burnsey_31 Start: 25291, Stop: 24908, Start Num: 25
Candidate Starts for Burnsey_31:
(Start: 25 @25291 has 6 MA's), (Start: 26 @25282 has 45 MA's), (30, 25099), (34, 24940),

Gene: Button_36 Start: 26534, Stop: 26151, Start Num: 26
Candidate Starts for Button_36:
(19, 26606), (24, 26588), (Start: 25 @26543 has 6 MA's), (Start: 26 @26534 has 45 MA's), (28, 26441), (31, 26342),

Gene: Buttrmlkdreams_33 Start: 25596, Stop: 25240, Start Num: 26
Candidate Starts for Buttrmlkdreams_33:
(13, 25734), (18, 25674), (Start: 25 @25605 has 6 MA's), (Start: 26 @25596 has 45 MA's), (34, 25272),

Gene: CanesSauce_33 Start: 26012, Stop: 25650, Start Num: 26
Candidate Starts for CanesSauce_33:
(Start: 25 @26021 has 6 MA's), (Start: 26 @26012 has 45 MA's), (31, 25823), (34, 25682),

Gene: CaramelLatte_33 Start: 26012, Stop: 25650, Start Num: 26
Candidate Starts for CaramelLatte_33:
(Start: 25 @26021 has 6 MA's), (Start: 26 @26012 has 45 MA's), (31, 25823), (34, 25682),

Gene: Carsonalex_36 Start: 24592, Stop: 24966, Start Num: 26
Candidate Starts for Carsonalex_36:
(Start: 25 @24583 has 6 MA's), (Start: 26 @24592 has 45 MA's), (30, 24775), (34, 24934),

Gene: CherryonLim_38 Start: 28748, Stop: 28377, Start Num: 26
Candidate Starts for CherryonLim_38:
(Start: 26 @28748 has 45 MA's), (31, 28559),

Gene: ChickenTender_35 Start: 25824, Stop: 25450, Start Num: 26
Candidate Starts for ChickenTender_35:
(Start: 25 @25833 has 6 MA's), (Start: 26 @25824 has 45 MA's), (30, 25641), (34, 25482),

Gene: ChocoMunchkin_33 Start: 26012, Stop: 25650, Start Num: 26
Candidate Starts for ChocoMunchkin_33:
(Start: 25 @26021 has 6 MA's), (Start: 26 @26012 has 45 MA's), (31, 25823), (34, 25682),

Gene: CocoaPuff_36 Start: 27622, Stop: 27260, Start Num: 26
Candidate Starts for CocoaPuff_36:
(Start: 26 @27622 has 45 MA's), (31, 27433),

Gene: Cozz_31 Start: 25271, Stop: 24897, Start Num: 26
Candidate Starts for Cozz_31:
(21, 25337), (Start: 25 @25280 has 6 MA's), (Start: 26 @25271 has 45 MA's), (30, 25088), (34, 24929),

Gene: ElJefes_36 Start: 27940, Stop: 27572, Start Num: 26
Candidate Starts for ElJefes_36:
(Start: 26 @27940 has 45 MA's), (31, 27751),

Gene: Elinal_39 Start: 27986, Stop: 27618, Start Num: 26
Candidate Starts for Elinal_39:
(Start: 26 @27986 has 45 MA's), (31, 27797), (35, 27632),

Gene: Eliott_31 Start: 25290, Stop: 24916, Start Num: 26
Candidate Starts for Eliott_31:
(Start: 25 @25299 has 6 MA's), (Start: 26 @25290 has 45 MA's), (30, 25107), (34, 24948),

Gene: Emalyn_34 Start: 25600, Stop: 25235, Start Num: 26
Candidate Starts for Emalyn_34:
(Start: 25 @25609 has 6 MA's), (Start: 26 @25600 has 45 MA's), (31, 25411), (34, 25267),

Gene: Feastonyeet_35 Start: 27608, Stop: 27240, Start Num: 26

Candidate Starts for Feastonyeet_35:
(Start: 26 @27608 has 45 MA's), (31, 27419),

Gene: GTE2_28 Start: 25921, Stop: 25481, Start Num: 17
Candidate Starts for GTE2_28:
(17, 25921), (Start: 25 @25852 has 6 MA's), (Start: 26 @25843 has 45 MA's), (31, 25654), (34, 25513),

Gene: GiKK_38 Start: 26864, Stop: 26481, Start Num: 26
Candidate Starts for GiKK_38:
(19, 26936), (24, 26918), (Start: 25 @26873 has 6 MA's), (Start: 26 @26864 has 45 MA's), (28, 26771), (31, 26672),

Gene: GoldHunter_32 Start: 25291, Stop: 24917, Start Num: 26
Candidate Starts for GoldHunter_32:
(Start: 25 @25300 has 6 MA's), (Start: 26 @25291 has 45 MA's), (30, 25108), (34, 24949),

Gene: Hexbug_42 Start: 28965, Stop: 28591, Start Num: 26
Candidate Starts for Hexbug_42:
(Start: 25 @28974 has 6 MA's), (Start: 26 @28965 has 45 MA's), (31, 28776), (33, 28635), (34, 28623),

Gene: Horseradish_33 Start: 25125, Stop: 24769, Start Num: 26
Candidate Starts for Horseradish_33:
(3, 25326), (6, 25314), (9, 25302), (11, 25290), (12, 25287), (Start: 16 @25215 has 1 MA's), (Start: 25 @25134 has 6 MA's), (Start: 26 @25125 has 45 MA's), (34, 24801),

Gene: Huwbert_55 Start: 35637, Stop: 35212, Start Num: 22
Candidate Starts for Huwbert_55:
(Start: 22 @35637 has 2 MA's), (29, 35457),

Gene: Jamzy_38 Start: 26847, Stop: 26464, Start Num: 26
Candidate Starts for Jamzy_38:
(19, 26919), (24, 26901), (Start: 25 @26856 has 6 MA's), (Start: 26 @26847 has 45 MA's), (28, 26754), (31, 26655),

Gene: KayGee_37 Start: 27986, Stop: 27618, Start Num: 26
Candidate Starts for KayGee_37:
(Start: 26 @27986 has 45 MA's), (31, 27797), (35, 27632),

Gene: Lauer_33 Start: 28814, Stop: 28440, Start Num: 26
Candidate Starts for Lauer_33:
(15, 28946), (23, 28871), (Start: 26 @28814 has 45 MA's), (27, 28751), (31, 28625),

Gene: MAnor_37 Start: 28382, Stop: 28011, Start Num: 26
Candidate Starts for MAnor_37:
(Start: 26 @28382 has 45 MA's), (31, 28193),

Gene: MScarn_34 Start: 25265, Stop: 24909, Start Num: 26
Candidate Starts for MScarn_34:
(3, 25466), (6, 25454), (9, 25442), (11, 25430), (12, 25427), (Start: 16 @25355 has 1 MA's), (Start: 25 @25274 has 6 MA's), (Start: 26 @25265 has 45 MA's), (34, 24941),

Gene: Margaret_41 Start: 27905, Stop: 27516, Start Num: 25
Candidate Starts for Margaret_41:

(Start: 25 @27905 has 6 MA's), (Start: 26 @27896 has 45 MA's), (31, 27698), (34, 27548),

Gene: Mayweather_39 Start: 28607, Stop: 28236, Start Num: 26
Candidate Starts for Mayweather_39:
(Start: 26 @28607 has 45 MA's), (31, 28418),

Gene: McDazzle_36 Start: 27934, Stop: 27566, Start Num: 26
Candidate Starts for McDazzle_36:
(Start: 26 @27934 has 45 MA's), (31, 27745),

Gene: MunkgeeRoachy_31 Start: 25145, Stop: 24774, Start Num: 26
Candidate Starts for MunkgeeRoachy_31:
(Start: 25 @25154 has 6 MA's), (Start: 26 @25145 has 45 MA's), (30, 24965), (34, 24806),

Gene: Nina_31 Start: 25816, Stop: 25433, Start Num: 25
Candidate Starts for Nina_31:
(Start: 25 @25816 has 6 MA's), (Start: 26 @25807 has 45 MA's), (30, 25624), (34, 25465),

Gene: Nodigi_42 Start: 28954, Stop: 28577, Start Num: 26
Candidate Starts for Nodigi_42:
(Start: 25 @28963 has 6 MA's), (Start: 26 @28954 has 45 MA's), (31, 28765), (33, 28621), (34, 28609),

Gene: Orla_42 Start: 28927, Stop: 28556, Start Num: 26
Candidate Starts for Orla_42:
(Start: 25 @28936 has 6 MA's), (Start: 26 @28927 has 45 MA's), (31, 28738), (33, 28600),

Gene: Pons_37 Start: 27958, Stop: 27587, Start Num: 26
Candidate Starts for Pons_37:
(Start: 26 @27958 has 45 MA's), (31, 27769),

Gene: PotPie_36 Start: 28899, Stop: 28531, Start Num: 26
Candidate Starts for PotPie_36:
(Start: 26 @28899 has 45 MA's), (31, 28710),

Gene: PsychoKiller_31 Start: 25290, Stop: 24916, Start Num: 26
Candidate Starts for PsychoKiller_31:
(Start: 25 @25299 has 6 MA's), (Start: 26 @25290 has 45 MA's), (30, 25107), (34, 24948),

Gene: Quasar_31 Start: 25902, Stop: 25519, Start Num: 25
Candidate Starts for Quasar_31:
(Start: 25 @25902 has 6 MA's), (Start: 26 @25893 has 45 MA's), (30, 25710), (34, 25551),

Gene: RADical_32 Start: 25285, Stop: 24911, Start Num: 26
Candidate Starts for RADical_32:
(Start: 25 @25294 has 6 MA's), (Start: 26 @25285 has 45 MA's), (30, 25102), (34, 24943),

Gene: RSchmailzl_32 Start: 25328, Stop: 24954, Start Num: 26
Candidate Starts for RSchmailzl_32:
(Start: 25 @25337 has 6 MA's), (Start: 26 @25328 has 45 MA's), (30, 25145), (34, 24986),

Gene: RanchParmCat_40 Start: 28046, Stop: 27660, Start Num: 26
Candidate Starts for RanchParmCat_40:
(Start: 25 @28055 has 6 MA's), (Start: 26 @28046 has 45 MA's), (31, 27848), (34, 27692),

Gene: RedBaron_34 Start: 25526, Stop: 25152, Start Num: 26
Candidate Starts for RedBaron_34:
(Start: 25 @25535 has 6 MA's), (Start: 26 @25526 has 45 MA's), (30, 25343), (34, 25184),

Gene: SheckWes_38 Start: 27479, Stop: 27111, Start Num: 26
Candidate Starts for SheckWes_38:
(Start: 26 @27479 has 45 MA's), (31, 27290),

Gene: Shrew_67 Start: 39750, Stop: 39307, Start Num: 20
Candidate Starts for Shrew_67:
(15, 39810), (Start: 20 @39750 has 1 MA's), (29, 39555),

Gene: SketchMex_32 Start: 25705, Stop: 25259, Start Num: 16
Candidate Starts for SketchMex_32:
(11, 25780), (12, 25777), (Start: 16 @25705 has 1 MA's), (Start: 25 @25624 has 6 MA's), (Start: 26 @25615 has 45 MA's), (34, 25291),

Gene: Socotra_32 Start: 25290, Stop: 24916, Start Num: 26
Candidate Starts for Socotra_32:
(Start: 25 @25299 has 6 MA's), (Start: 26 @25290 has 45 MA's), (30, 25107), (34, 24948),

Gene: Sopespian_31 Start: 25291, Stop: 24917, Start Num: 26
Candidate Starts for Sopespian_31:
(Start: 25 @25300 has 6 MA's), (Start: 26 @25291 has 45 MA's), (30, 25108), (34, 24949),

Gene: Starburst_32 Start: 25285, Stop: 24911, Start Num: 26
Candidate Starts for Starburst_32:
(Start: 25 @25294 has 6 MA's), (Start: 26 @25285 has 45 MA's), (30, 25102), (34, 24943),

Gene: SteamedHams_35 Start: 25985, Stop: 25623, Start Num: 26
Candidate Starts for SteamedHams_35:
(Start: 25 @25994 has 6 MA's), (Start: 26 @25985 has 45 MA's), (31, 25796), (34, 25655),

Gene: SummitAcademy_35 Start: 27528, Stop: 27160, Start Num: 26
Candidate Starts for SummitAcademy_35:
(Start: 26 @27528 has 45 MA's), (27, 27465), (31, 27339),

Gene: SweatNTears_33 Start: 25188, Stop: 24814, Start Num: 26
Candidate Starts for SweatNTears_33:
(Start: 25 @25197 has 6 MA's), (Start: 26 @25188 has 45 MA's), (30, 25005), (34, 24846),

Gene: Tarnish_36 Start: 28028, Stop: 27657, Start Num: 26
Candidate Starts for Tarnish_36:
(Start: 26 @28028 has 45 MA's), (31, 27839), (35, 27671),

Gene: Tolls_35 Start: 26084, Stop: 25722, Start Num: 26
Candidate Starts for Tolls_35:
(Start: 25 @26093 has 6 MA's), (Start: 26 @26084 has 45 MA's), (31, 25895), (34, 25754),

Gene: Triscuit_54 Start: 35559, Stop: 35128, Start Num: 22
Candidate Starts for Triscuit_54:
(Start: 22 @35559 has 2 MA's), (29, 35376),

Gene: Troje_33 Start: 25622, Stop: 25266, Start Num: 26
Candidate Starts for Troje_33:
(2, 25826), (3, 25823), (6, 25811), (9, 25799), (11, 25787), (12, 25784), (Start: 16 @25712 has 1 MA's), (Start: 25 @25631 has 6 MA's), (Start: 26 @25622 has 45 MA's), (34, 25298),

Gene: Typhonomachy_31 Start: 25302, Stop: 24928, Start Num: 26
Candidate Starts for Typhonomachy_31:
(3, 25518), (4, 25515), (7, 25503), (8, 25494), (10, 25485), (Start: 16 @25395 has 1 MA's), (Start: 25 @25311 has 6 MA's), (Start: 26 @25302 has 45 MA's), (30, 25119), (34, 24960),

Gene: Vine_38 Start: 28260, Stop: 27898, Start Num: 26
Candidate Starts for Vine_38:
(Start: 26 @28260 has 45 MA's), (31, 28071), (35, 27912),

Gene: Yakult_37 Start: 27033, Stop: 26644, Start Num: 25
Candidate Starts for Yakult_37:
(19, 27096), (24, 27078), (Start: 25 @27033 has 6 MA's), (Start: 26 @27024 has 45 MA's), (28, 26931), (31, 26832), (32, 26820), (34, 26676),

Gene: Yarn_32 Start: 25844, Stop: 25482, Start Num: 26
Candidate Starts for Yarn_32:
(Start: 25 @25853 has 6 MA's), (Start: 26 @25844 has 45 MA's), (31, 25655), (34, 25514),

Gene: Yucky_38 Start: 28200, Stop: 27829, Start Num: 26
Candidate Starts for Yucky_38:
(Start: 26 @28200 has 45 MA's), (31, 28011), (35, 27843),

Gene: Yummy_33 Start: 25239, Stop: 24883, Start Num: 26
Candidate Starts for Yummy_33:
(3, 25440), (6, 25428), (9, 25416), (11, 25404), (12, 25401), (Start: 16 @25329 has 1 MA's), (Start: 25 @25248 has 6 MA's), (Start: 26 @25239 has 45 MA's), (34, 24915),