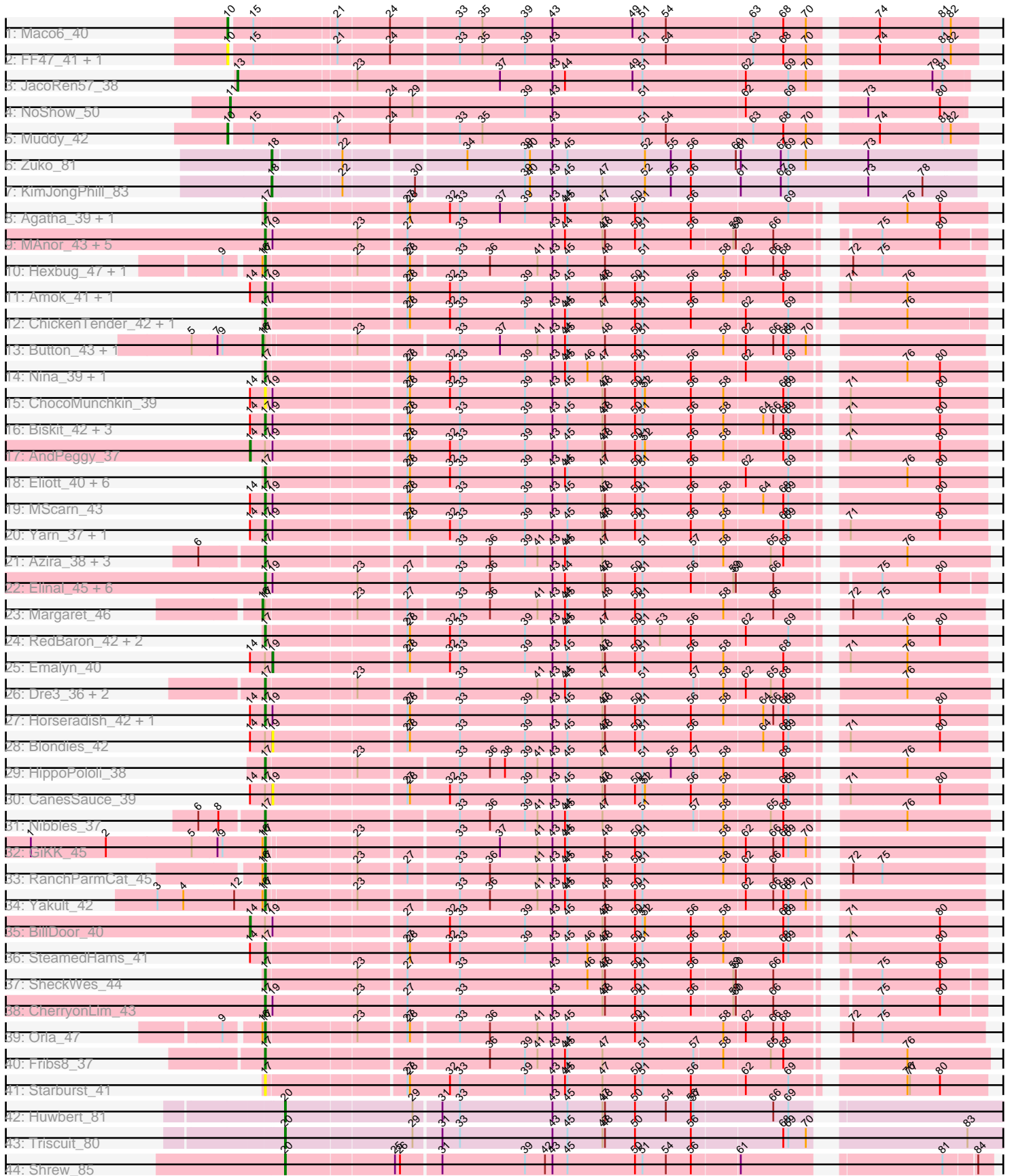


Pham 197928



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 197928 Report

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

Pham number 197928 has 80 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Maco6_40
- Track 2 : FF47_41, 8UZL_42
- Track 3 : JacoRen57_38
- Track 4 : NoShow_50
- Track 5 : Muddy_42
- Track 6 : Zuko_81
- Track 7 : KimJongPhill_83
- Track 8 : Agatha_39, Cozz_38
- Track 9 : MAnor_43, PotPie_42, Mayweather_45, Feastonyeet_41, BigChungus_41, SummitAcademy_41
- Track 10 : Hexbug_47, Nodigi_47
- Track 11 : Amok_41, AikoCarson_41
- Track 12 : ChickenTender_42, MunkgeeRoachy_38
- Track 13 : Button_43, Jamzy_45
- Track 14 : Nina_39, SweatNTears_41
- Track 15 : ChocoMunchkin_39
- Track 16 : Biskit_42, Buttrmilkdreams_42, Troje_42, SketchMex_40
- Track 17 : AndPeggy_37
- Track 18 : Elliott_40, GoldHunter_41, Quasar_40, Sopespian_39, Axym_39, PsychoKiller_39, Carsonalex_43
- Track 19 : MScarn_43
- Track 20 : Yarn_37, Tolls_41
- Track 21 : Azira_38, Zareef_40, MaVan_38, Survivors_38
- Track 22 : Elinal_45, KayGee_43, Vine_44, Yucky_45, Pons_43, Bavailard_41, Lauer_38
- Track 23 : Margaret_46
- Track 24 : RedBaron_42, Typhonomachy_39, Burnsey_39
- Track 25 : Emalyn_40
- Track 26 : Dre3_36, Cleo_36, Gibbous_36
- Track 27 : Horseradish_42, Yummy_42
- Track 28 : Blondies_42
- Track 29 : HippoPololi_38
- Track 30 : CanesSauce_39
- Track 31 : Nibbles_37
- Track 32 : GiKK_45
- Track 33 : RanchParmCat_45
- Track 34 : Yakult_42

- Track 35 : BillDoor_40
- Track 36 : SteamedHams_41
- Track 37 : SheckWes_44
- Track 38 : CherryonLim_43
- Track 39 : Orla_47
- Track 40 : Fribs8_37
- Track 41 : Starburst_41
- Track 42 : Huwbert_81
- Track 43 : Triscuit_80
- Track 44 : Shrew_85

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

The start number called the most often in the published annotations is 17, it was called in 48 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_39, AikoCarson_41, Amok_41, Axym_39, Azira_38, Bavidard_41, BigChungus_41, Biskit_42, Burnsey_39, Buttrmilkdreams_42, Carsonalex_43, CherryonLim_43, ChickenTender_42, ChocoMunchkin_39, Cleo_36, Cozz_38, Dre3_36, Elinal_45, Elliott_40, Feastonyeet_41, Fribs8_37, GiKK_45, Gibbous_36, GoldHunter_41, Hexbug_47, HippoPololi_38, Horseradish_42, KayGee_43, Lauer_38, MAnor_43, MScarn_43, MaVan_38, Mayweather_45, MunkgeeRoachy_38, Nibbles_37, Nina_39, Nodigi_47, Orla_47, Pons_43, PotPie_42, PsychoKiller_39, Quasar_40, RanchParmCat_45, RedBaron_42, SheckWes_44, SketchMex_40, Sopespian_39, Starburst_41, SteamedHams_41, SummitAcademy_41, Survivors_38, SweatNTears_41, Tolls_41, Troje_42, Typhonomachy_39, Vine_44, Yakult_42, Yarn_37, Yucky_45, Yummy_42, Zareef_40,

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

- AndPeggy_37, BillDoor_40, Blondies_42, Button_43, CanesSauce_39, Emalyn_40, Jamzy_45, Margaret_46,

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

- 8UZL_42, FF47_41, Huwbert_81, JacoRen57_38, KimJongPhill_83, Maco6_40, Muddy_42, NoShow_50, Shrew_85, Triscuit_80, Zuko_81,

Summary by start number:

Start 10:

- Found in 4 of 80 (5.0%) of genes in pham
- Manual Annotations of this start: 2 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 8UZL_42 (AB), FF47_41 (AB), Maco6_40 (AB), Muddy_42 (AB),

Start 11:

- Found in 1 of 80 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 100.0% of time when present

- Phage (with cluster) where this start called: NoShow_50 (AB),

Start 13:

- Found in 1 of 80 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JacoRen57_38 (AB),

Start 14:

- Found in 18 of 80 (22.5%) of genes in pham
- Manual Annotations of this start: 2 of 63
- Called 11.1% of time when present
- Phage (with cluster) where this start called: AndPeggy_37 (CT), BillDoor_40 (CT),

Start 16:

- Found in 9 of 80 (11.2%) of genes in pham
- Manual Annotations of this start: 3 of 63
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Button_43 (CT), Jamzy_45 (CT), Margaret_46 (CT),

Start 17:

- Found in 69 of 80 (86.2%) of genes in pham
- Manual Annotations of this start: 48 of 63
- Called 88.4% of time when present
- Phage (with cluster) where this start called: Agatha_39 (CT), AikoCarson_41 (CT), Amok_41 (CT), Axym_39 (CT), Azira_38 (CT), Bavailard_41 (CT), BigChungus_41 (CT), Biskit_42 (CT), Burnsey_39 (CT), Buttrmlkdreams_42 (CT), Carsonalex_43 (CT), CherryonLim_43 (CT), ChickenTender_42 (CT), ChocoMunchkin_39 (CT), Cleo_36 (CT), Cozz_38 (CT), Dre3_36 (CT), Elinal_45 (CT), Elliott_40 (CT), Feastonyeet_41 (CT), Fribs8_37 (CT), GiKK_45 (CT), Gibbous_36 (CT), GoldHunter_41 (CT), Hexbug_47 (CT), HippoPololi_38 (CT), Horseradish_42 (CT), KayGee_43 (CT), Lauer_38 (CT), MAnor_43 (CT), MScarn_43 (CT), MaVan_38 (CT), Mayweather_45 (CT), MunkgeeRoachy_38 (CT), Nibbles_37 (CT), Nina_39 (CT), Nodigi_47 (CT), Orla_47 (CT), Pons_43 (CT), PotPie_42 (CT), PsychoKiller_39 (CT), Quasar_40 (CT), RanchParmCat_45 (CT), RedBaron_42 (CT), SheckWes_44 (CT), SketchMex_40 (CT), Sopespian_39 (CT), Starburst_41 (CT), SteamedHams_41 (CT), SummitAcademy_41 (CT), Survivors_38 (CT), SweatNTears_41 (CT), Tolls_41 (CT), Troje_42 (CT), Typhonmarchy_39 (CT), Vine_44 (CT), Yakult_42 (CT), Yarn_37 (CT), Yucky_45 (CT), Yummy_42 (CT), Zareef_40 (CT),

Start 18:

- Found in 2 of 80 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KimJongPhill_83 (BR), Zuko_81 (BR),

Start 19:

- Found in 31 of 80 (38.8%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 9.7% of time when present
- Phage (with cluster) where this start called: Blondies_42 (CT), CanesSauce_39 (CT), Emalyn_40 (CT),

Start 20:

- Found in 3 of 80 (3.8%) of genes in pham
- Manual Annotations of this start: 3 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Huwbert_81 (GG), Shrew_85 (singleton), Triscuit_80 (GG),

Summary by clusters:

There are 5 clusters represented in this pham: GG, singleton, AB, BR, CT,

Info for manual annotations of cluster AB:

- Start number 10 was manually annotated 2 times for cluster AB.
- Start number 11 was manually annotated 1 time for cluster AB.
- Start number 13 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster BR:

- Start number 18 was manually annotated 2 times for cluster BR.

Info for manual annotations of cluster CT:

- Start number 14 was manually annotated 2 times for cluster CT.
- Start number 16 was manually annotated 3 times for cluster CT.
- Start number 17 was manually annotated 48 times for cluster CT.
- Start number 19 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster GG:

- Start number 20 was manually annotated 2 times for cluster GG.

Gene Information:

Gene: 8UZL_42 Start: 30925, Stop: 30080, Start Num: 10

Candidate Starts for 8UZL_42:

(Start: 10 @30925 has 2 MA's), (15, 30901), (21, 30808), (24, 30748), (33, 30670), (35, 30643), (39, 30592), (43, 30559), (51, 30451), (54, 30424), (63, 30322), (68, 30286), (70, 30259), (74, 30196), (81, 30121), (82, 30112),

Gene: Agatha_39 Start: 28608, Stop: 27790, Start Num: 17

Candidate Starts for Agatha_39:

(Start: 17 @28608 has 48 MA's), (27, 28452), (28, 28449), (32, 28401), (33, 28389), (37, 28341), (39, 28311), (43, 28278), (44, 28263), (45, 28260), (47, 28218), (50, 28179), (51, 28170), (56, 28113), (69, 27999), (76, 27885), (80, 27846),

Gene: AikoCarson_41 Start: 28965, Stop: 28147, Start Num: 17

Candidate Starts for AikoCarson_41:

(Start: 14 @28983 has 2 MA's), (Start: 17 @28965 has 48 MA's), (Start: 19 @28959 has 1 MA's), (27, 28809), (28, 28806), (32, 28758), (33, 28746), (39, 28668), (43, 28635), (45, 28617), (47, 28575), (48, 28572), (50, 28536), (51, 28527), (56, 28470), (58, 28431), (68, 28362), (71, 28308), (76, 28242),

Gene: Amok_41 Start: 28989, Stop: 28171, Start Num: 17

Candidate Starts for Amok_41:

(Start: 14 @29007 has 2 MA's), (Start: 17 @28989 has 48 MA's), (Start: 19 @28983 has 1 MA's), (27, 28833), (28, 28830), (32, 28782), (33, 28770), (39, 28692), (43, 28659), (45, 28641), (47, 28599), (48, 28596), (50, 28560), (51, 28551), (56, 28494), (58, 28455), (68, 28386), (71, 28332), (76, 28266),

Gene: AndPeggy_37 Start: 28407, Stop: 27571, Start Num: 14

Candidate Starts for AndPeggy_37:

(Start: 14 @28407 has 2 MA's), (Start: 17 @28389 has 48 MA's), (Start: 19 @28383 has 1 MA's), (27, 28233), (28, 28230), (32, 28182), (33, 28170), (39, 28092), (43, 28059), (45, 28041), (47, 27999), (48, 27996), (50, 27960), (51, 27951), (52, 27948), (56, 27894), (58, 27855), (68, 27786), (69, 27780), (71, 27732), (80, 27627),

Gene: Axym_39 Start: 28586, Stop: 27768, Start Num: 17

Candidate Starts for Axym_39:

(Start: 17 @28586 has 48 MA's), (27, 28430), (28, 28427), (32, 28379), (33, 28367), (39, 28289), (43, 28256), (44, 28241), (45, 28238), (47, 28196), (50, 28157), (51, 28148), (56, 28091), (62, 28028), (69, 27977), (76, 27863), (80, 27824),

Gene: Azira_38 Start: 28635, Stop: 27823, Start Num: 17

Candidate Starts for Azira_38:

(6, 28707), (Start: 17 @28635 has 48 MA's), (33, 28419), (36, 28383), (39, 28341), (41, 28326), (43, 28308), (44, 28293), (45, 28290), (47, 28248), (51, 28200), (57, 28140), (58, 28107), (65, 28053), (68, 28038), (76, 27921),

Gene: Bavilard_41 Start: 30011, Stop: 29205, Start Num: 17

Candidate Starts for Bavilard_41:

(Start: 17 @30011 has 48 MA's), (Start: 19 @30005 has 1 MA's), (23, 29903), (27, 29849), (33, 29786), (36, 29750), (43, 29675), (44, 29660), (47, 29615), (48, 29612), (50, 29576), (51, 29567), (56, 29510), (59, 29462), (60, 29459), (66, 29417), (75, 29324), (80, 29255),

Gene: BigChungus_41 Start: 30191, Stop: 29385, Start Num: 17

Candidate Starts for BigChungus_41:

(Start: 17 @30191 has 48 MA's), (Start: 19 @30185 has 1 MA's), (23, 30083), (27, 30029), (33, 29966), (43, 29855), (44, 29840), (47, 29795), (48, 29792), (50, 29756), (51, 29747), (56, 29690), (59, 29642), (60, 29639), (66, 29597), (75, 29504), (80, 29435),

Gene: BillDoor_40 Start: 28078, Stop: 27242, Start Num: 14

Candidate Starts for BillDoor_40:

(Start: 14 @28078 has 2 MA's), (Start: 17 @28060 has 48 MA's), (Start: 19 @28054 has 1 MA's), (27, 27904), (32, 27853), (33, 27841), (39, 27763), (43, 27730), (45, 27712), (47, 27670), (48, 27667), (50, 27631), (51, 27622), (52, 27619), (56, 27565), (58, 27526), (68, 27457), (69, 27451), (71, 27403), (80, 27298),

Gene: Biskit_42 Start: 28753, Stop: 27935, Start Num: 17

Candidate Starts for Biskit_42:

(Start: 14 @28771 has 2 MA's), (Start: 17 @28753 has 48 MA's), (Start: 19 @28747 has 1 MA's), (27, 28597), (28, 28594), (33, 28534), (39, 28456), (43, 28423), (45, 28405), (47, 28363), (48, 28360), (50, 28324), (51, 28315), (56, 28258), (58, 28219), (64, 28174), (66, 28162), (68, 28150), (69, 28144), (71, 28096), (80, 27991),

Gene: Blondies_42 Start: 29063, Stop: 28251, Start Num: 19

Candidate Starts for Blondies_42:

(Start: 14 @29087 has 2 MA's), (Start: 17 @29069 has 48 MA's), (Start: 19 @29063 has 1 MA's), (27, 28913), (28, 28910), (33, 28850), (39, 28772), (43, 28739), (45, 28721), (47, 28679), (48, 28676), (50,

28640), (51, 28631), (56, 28574), (64, 28490), (68, 28466), (69, 28460), (71, 28412), (80, 28307),

Gene: Burnsey_39 Start: 28599, Stop: 27781, Start Num: 17

Candidate Starts for Burnsey_39:

(Start: 17 @28599 has 48 MA's), (27, 28443), (28, 28440), (32, 28392), (33, 28380), (39, 28302), (43, 28269), (44, 28254), (45, 28251), (47, 28209), (50, 28170), (51, 28161), (53, 28140), (56, 28104), (62, 28041), (69, 27990), (76, 27876), (80, 27837),

Gene: Button_43 Start: 29230, Stop: 28424, Start Num: 16

Candidate Starts for Button_43:

(5, 29314), (7, 29284), (9, 29278), (Start: 16 @29230 has 3 MA's), (Start: 17 @29227 has 48 MA's), (23, 29128), (33, 29017), (37, 28969), (41, 28924), (43, 28906), (44, 28891), (45, 28888), (48, 28843), (50, 28807), (51, 28798), (58, 28702), (62, 28678), (66, 28645), (68, 28633), (69, 28627), (70, 28606),

Gene: Buttrmlkdreams_42 Start: 29086, Stop: 28268, Start Num: 17

Candidate Starts for Buttrmlkdreams_42:

(Start: 14 @29104 has 2 MA's), (Start: 17 @29086 has 48 MA's), (Start: 19 @29080 has 1 MA's), (27, 28930), (28, 28927), (33, 28867), (39, 28789), (43, 28756), (45, 28738), (47, 28696), (48, 28693), (50, 28657), (51, 28648), (56, 28591), (58, 28552), (64, 28507), (66, 28495), (68, 28483), (69, 28477), (71, 28429), (80, 28324),

Gene: CanesSauce_39 Start: 28556, Stop: 27744, Start Num: 19

Candidate Starts for CanesSauce_39:

(Start: 14 @28580 has 2 MA's), (Start: 17 @28562 has 48 MA's), (Start: 19 @28556 has 1 MA's), (27, 28406), (28, 28403), (32, 28355), (33, 28343), (39, 28265), (43, 28232), (45, 28214), (47, 28172), (48, 28169), (50, 28133), (51, 28124), (52, 28121), (56, 28067), (58, 28028), (68, 27959), (69, 27953), (71, 27905), (80, 27800),

Gene: Carsonalex_43 Start: 28636, Stop: 27818, Start Num: 17

Candidate Starts for Carsonalex_43:

(Start: 17 @28636 has 48 MA's), (27, 28480), (28, 28477), (32, 28429), (33, 28417), (39, 28339), (43, 28306), (44, 28291), (45, 28288), (47, 28246), (50, 28207), (51, 28198), (56, 28141), (62, 28078), (69, 28027), (76, 27913), (80, 27874),

Gene: CherryonLim_43 Start: 31329, Stop: 30523, Start Num: 17

Candidate Starts for CherryonLim_43:

(Start: 17 @31329 has 48 MA's), (Start: 19 @31323 has 1 MA's), (23, 31221), (27, 31167), (33, 31104), (43, 30993), (47, 30933), (48, 30930), (50, 30894), (51, 30885), (56, 30828), (59, 30780), (60, 30777), (66, 30735), (75, 30642), (80, 30573),

Gene: ChickenTender_42 Start: 28367, Stop: 27552, Start Num: 17

Candidate Starts for ChickenTender_42:

(Start: 17 @28367 has 48 MA's), (27, 28211), (28, 28208), (32, 28160), (33, 28148), (39, 28070), (43, 28037), (44, 28022), (45, 28019), (47, 27977), (50, 27938), (51, 27929), (56, 27872), (62, 27809), (69, 27758), (76, 27644),

Gene: ChocoMunchkin_39 Start: 28562, Stop: 27744, Start Num: 17

Candidate Starts for ChocoMunchkin_39:

(Start: 14 @28580 has 2 MA's), (Start: 17 @28562 has 48 MA's), (Start: 19 @28556 has 1 MA's), (27, 28406), (28, 28403), (32, 28355), (33, 28343), (39, 28265), (43, 28232), (45, 28214), (47, 28172), (48, 28169), (50, 28133), (51, 28124), (52, 28121), (56, 28067), (58, 28028), (68, 27959), (69, 27953), (71, 27905), (80, 27800),

Gene: Cleo_36 Start: 28180, Stop: 27371, Start Num: 17

Candidate Starts for Cleo_36:

(Start: 17 @28180 has 48 MA's), (23, 28078), (33, 27967), (41, 27874), (43, 27856), (44, 27841), (45, 27838), (47, 27796), (51, 27748), (57, 27688), (58, 27655), (62, 27631), (65, 27601), (68, 27586), (76, 27469),

Gene: Cozz_38 Start: 28196, Stop: 27378, Start Num: 17

Candidate Starts for Cozz_38:

(Start: 17 @28196 has 48 MA's), (27, 28040), (28, 28037), (32, 27989), (33, 27977), (37, 27929), (39, 27899), (43, 27866), (44, 27851), (45, 27848), (47, 27806), (50, 27767), (51, 27758), (56, 27701), (69, 27587), (76, 27473), (80, 27434),

Gene: Dre3_36 Start: 27923, Stop: 27114, Start Num: 17

Candidate Starts for Dre3_36:

(Start: 17 @27923 has 48 MA's), (23, 27821), (33, 27710), (41, 27617), (43, 27599), (44, 27584), (45, 27581), (47, 27539), (51, 27491), (57, 27431), (58, 27398), (62, 27374), (65, 27344), (68, 27329), (76, 27212),

Gene: Elinal_45 Start: 30579, Stop: 29773, Start Num: 17

Candidate Starts for Elinal_45:

(Start: 17 @30579 has 48 MA's), (Start: 19 @30573 has 1 MA's), (23, 30471), (27, 30417), (33, 30354), (36, 30318), (43, 30243), (44, 30228), (47, 30183), (48, 30180), (50, 30144), (51, 30135), (56, 30078), (59, 30030), (60, 30027), (66, 29985), (75, 29892), (80, 29823),

Gene: Elliott_40 Start: 28607, Stop: 27789, Start Num: 17

Candidate Starts for Elliott_40:

(Start: 17 @28607 has 48 MA's), (27, 28451), (28, 28448), (32, 28400), (33, 28388), (39, 28310), (43, 28277), (44, 28262), (45, 28259), (47, 28217), (50, 28178), (51, 28169), (56, 28112), (62, 28049), (69, 27998), (76, 27884), (80, 27845),

Gene: Emalyn_40 Start: 28151, Stop: 27339, Start Num: 19

Candidate Starts for Emalyn_40:

(Start: 14 @28175 has 2 MA's), (Start: 17 @28157 has 48 MA's), (Start: 19 @28151 has 1 MA's), (27, 28001), (28, 27998), (32, 27950), (33, 27938), (39, 27860), (43, 27827), (45, 27809), (47, 27767), (48, 27764), (50, 27728), (51, 27719), (56, 27662), (58, 27623), (68, 27554), (71, 27500), (76, 27434),

Gene: FF47_41 Start: 30836, Stop: 29991, Start Num: 10

Candidate Starts for FF47_41:

(Start: 10 @30836 has 2 MA's), (15, 30812), (21, 30719), (24, 30659), (33, 30581), (35, 30554), (39, 30503), (43, 30470), (51, 30362), (54, 30335), (63, 30233), (68, 30197), (70, 30170), (74, 30107), (81, 30032), (82, 30023),

Gene: Feastonyeet_41 Start: 30191, Stop: 29385, Start Num: 17

Candidate Starts for Feastonyeet_41:

(Start: 17 @30191 has 48 MA's), (Start: 19 @30185 has 1 MA's), (23, 30083), (27, 30029), (33, 29966), (43, 29855), (44, 29840), (47, 29795), (48, 29792), (50, 29756), (51, 29747), (56, 29690), (59, 29642), (60, 29639), (66, 29597), (75, 29504), (80, 29435),

Gene: Fribs8_37 Start: 28362, Stop: 27550, Start Num: 17

Candidate Starts for Fribs8_37:

(Start: 17 @28362 has 48 MA's), (36, 28110), (39, 28068), (41, 28053), (43, 28035), (44, 28020), (45, 28017), (47, 27975), (51, 27927), (57, 27867), (58, 27834), (65, 27780), (68, 27765), (76, 27648),

Gene: GiKK_45 Start: 29557, Stop: 28754, Start Num: 17

Candidate Starts for GiKK_45:

(1, 29836), (2, 29746), (5, 29644), (7, 29614), (9, 29608), (Start: 16 @29560 has 3 MA's), (Start: 17 @29557 has 48 MA's), (23, 29458), (33, 29347), (37, 29299), (41, 29254), (43, 29236), (44, 29221), (45, 29218), (48, 29173), (50, 29137), (51, 29128), (58, 29032), (62, 29008), (66, 28975), (68, 28963), (69, 28957), (70, 28936),

Gene: Gibbous_36 Start: 27923, Stop: 27114, Start Num: 17

Candidate Starts for Gibbous_36:

(Start: 17 @27923 has 48 MA's), (23, 27821), (33, 27710), (41, 27617), (43, 27599), (44, 27584), (45, 27581), (47, 27539), (51, 27491), (57, 27431), (58, 27398), (62, 27374), (65, 27344), (68, 27329), (76, 27212),

Gene: GoldHunter_41 Start: 28608, Stop: 27790, Start Num: 17

Candidate Starts for GoldHunter_41:

(Start: 17 @28608 has 48 MA's), (27, 28452), (28, 28449), (32, 28401), (33, 28389), (39, 28311), (43, 28278), (44, 28263), (45, 28260), (47, 28218), (50, 28179), (51, 28170), (56, 28113), (62, 28050), (69, 27999), (76, 27885), (80, 27846),

Gene: Hexbug_47 Start: 31341, Stop: 30535, Start Num: 17

Candidate Starts for Hexbug_47:

(9, 31383), (Start: 16 @31344 has 3 MA's), (Start: 17 @31341 has 48 MA's), (23, 31239), (27, 31185), (28, 31182), (33, 31128), (36, 31092), (41, 31035), (43, 31017), (45, 30999), (48, 30954), (51, 30909), (58, 30813), (62, 30789), (66, 30756), (68, 30744), (72, 30690), (75, 30657),

Gene: HippoPololi_38 Start: 28375, Stop: 27566, Start Num: 17

Candidate Starts for HippoPololi_38:

(Start: 17 @28375 has 48 MA's), (23, 28273), (33, 28162), (36, 28126), (38, 28108), (39, 28084), (41, 28069), (43, 28051), (45, 28033), (47, 27991), (51, 27943), (55, 27910), (57, 27883), (58, 27850), (68, 27781), (76, 27664),

Gene: Horseradish_42 Start: 28614, Stop: 27796, Start Num: 17

Candidate Starts for Horseradish_42:

(Start: 14 @28632 has 2 MA's), (Start: 17 @28614 has 48 MA's), (Start: 19 @28608 has 1 MA's), (27, 28458), (28, 28455), (33, 28395), (39, 28317), (43, 28284), (45, 28266), (47, 28224), (48, 28221), (50, 28185), (51, 28176), (56, 28119), (58, 28080), (64, 28035), (66, 28023), (68, 28011), (69, 28005), (80, 27852),

Gene: Huwbert_81 Start: 49790, Stop: 50599, Start Num: 20

Candidate Starts for Huwbert_81:

(Start: 20 @49790 has 3 MA's), (29, 49937), (31, 49967), (33, 49988), (43, 50099), (45, 50117), (47, 50159), (48, 50162), (50, 50198), (54, 50234), (56, 50264), (57, 50267), (66, 50360), (69, 50378),

Gene: JacoRen57_38 Start: 31703, Stop: 30873, Start Num: 13

Candidate Starts for JacoRen57_38:

(Start: 13 @31703 has 1 MA's), (23, 31568), (37, 31403), (43, 31340), (44, 31325), (49, 31244), (51, 31232), (62, 31112), (69, 31061), (70, 31040), (79, 30914), (81, 30902),

Gene: Jamzy_45 Start: 29543, Stop: 28737, Start Num: 16

Candidate Starts for Jamzy_45:

(5, 29627), (7, 29597), (9, 29591), (Start: 16 @29543 has 3 MA's), (Start: 17 @29540 has 48 MA's), (23, 29441), (33, 29330), (37, 29282), (41, 29237), (43, 29219), (44, 29204), (45, 29201), (48, 29156), (50, 29120), (51, 29111), (58, 29015), (62, 28991), (66, 28958), (68, 28946), (69, 28940), (70, 28919),

Gene: KayGee_43 Start: 30579, Stop: 29773, Start Num: 17

Candidate Starts for KayGee_43:

(Start: 17 @30579 has 48 MA's), (Start: 19 @30573 has 1 MA's), (23, 30471), (27, 30417), (33, 30354), (36, 30318), (43, 30243), (44, 30228), (47, 30183), (48, 30180), (50, 30144), (51, 30135), (56, 30078), (59, 30030), (60, 30027), (66, 29985), (75, 29892), (80, 29823),

Gene: KimJongPhill_83 Start: 61930, Stop: 62745, Start Num: 18

Candidate Starts for KimJongPhill_83:

(Start: 18 @61930 has 2 MA's), (22, 62008), (30, 62086), (39, 62212), (40, 62218), (43, 62245), (45, 62263), (47, 62305), (52, 62356), (55, 62386), (56, 62410), (61, 62467), (67, 62515), (69, 62524), (73, 62620), (78, 62683),

Gene: Lauer_38 Start: 31388, Stop: 30582, Start Num: 17

Candidate Starts for Lauer_38:

(Start: 17 @31388 has 48 MA's), (Start: 19 @31382 has 1 MA's), (23, 31280), (27, 31226), (33, 31163), (36, 31127), (43, 31052), (44, 31037), (47, 30992), (48, 30989), (50, 30953), (51, 30944), (56, 30887), (59, 30839), (60, 30836), (66, 30794), (75, 30701), (80, 30632),

Gene: MAnor_43 Start: 30921, Stop: 30115, Start Num: 17

Candidate Starts for MAnor_43:

(Start: 17 @30921 has 48 MA's), (Start: 19 @30915 has 1 MA's), (23, 30813), (27, 30759), (33, 30696), (43, 30585), (44, 30570), (47, 30525), (48, 30522), (50, 30486), (51, 30477), (56, 30420), (59, 30372), (60, 30369), (66, 30327), (75, 30234), (80, 30165),

Gene: MScarn_43 Start: 28754, Stop: 27936, Start Num: 17

Candidate Starts for MScarn_43:

(Start: 14 @28772 has 2 MA's), (Start: 17 @28754 has 48 MA's), (Start: 19 @28748 has 1 MA's), (27, 28598), (28, 28595), (33, 28535), (39, 28457), (43, 28424), (45, 28406), (47, 28364), (48, 28361), (50, 28325), (51, 28316), (56, 28259), (58, 28220), (64, 28175), (68, 28151), (69, 28145), (80, 27992),

Gene: MaVan_38 Start: 28664, Stop: 27852, Start Num: 17

Candidate Starts for MaVan_38:

(6, 28736), (Start: 17 @28664 has 48 MA's), (33, 28448), (36, 28412), (39, 28370), (41, 28355), (43, 28337), (44, 28322), (45, 28319), (47, 28277), (51, 28229), (57, 28169), (58, 28136), (65, 28082), (68, 28067), (76, 27950),

Gene: Maco6_40 Start: 30176, Stop: 29331, Start Num: 10

Candidate Starts for Maco6_40:

(Start: 10 @30176 has 2 MA's), (15, 30152), (21, 30059), (24, 29999), (33, 29921), (35, 29894), (39, 29843), (43, 29810), (49, 29714), (51, 29702), (54, 29675), (63, 29573), (68, 29537), (70, 29510), (74, 29447), (81, 29372), (82, 29363),

Gene: Margaret_46 Start: 30292, Stop: 29483, Start Num: 16

Candidate Starts for Margaret_46:

(Start: 16 @30292 has 3 MA's), (Start: 17 @30289 has 48 MA's), (23, 30187), (27, 30133), (33, 30076), (36, 30040), (41, 29983), (43, 29965), (44, 29950), (45, 29947), (48, 29902), (50, 29866), (51, 29857), (58, 29761), (66, 29704), (72, 29638), (75, 29605),

Gene: Mayweather_45 Start: 31200, Stop: 30394, Start Num: 17

Candidate Starts for Mayweather_45:

(Start: 17 @31200 has 48 MA's), (Start: 19 @31194 has 1 MA's), (23, 31092), (27, 31038), (33, 30975), (43, 30864), (44, 30849), (47, 30804), (48, 30801), (50, 30765), (51, 30756), (56, 30699), (59, 30651),

(60, 30648), (66, 30606), (75, 30513), (80, 30444),

Gene: Muddy_42 Start: 31408, Stop: 30563, Start Num: 10

Candidate Starts for Muddy_42:

(Start: 10 @31408 has 2 MA's), (15, 31384), (21, 31291), (24, 31231), (33, 31153), (35, 31126), (43, 31042), (51, 30934), (54, 30907), (63, 30805), (68, 30769), (70, 30742), (74, 30679), (81, 30604), (82, 30595),

Gene: MunkgeeRoachy_38 Start: 28070, Stop: 27252, Start Num: 17

Candidate Starts for MunkgeeRoachy_38:

(Start: 17 @28070 has 48 MA's), (27, 27914), (28, 27911), (32, 27863), (33, 27851), (39, 27773), (43, 27740), (44, 27725), (45, 27722), (47, 27680), (50, 27641), (51, 27632), (56, 27575), (62, 27512), (69, 27461), (76, 27347),

Gene: Nibbles_37 Start: 28351, Stop: 27539, Start Num: 17

Candidate Starts for Nibbles_37:

(6, 28423), (8, 28399), (Start: 17 @28351 has 48 MA's), (33, 28135), (36, 28099), (39, 28057), (41, 28042), (43, 28024), (44, 28009), (45, 28006), (47, 27964), (51, 27916), (57, 27856), (58, 27823), (65, 27769), (68, 27754), (76, 27637),

Gene: Nina_39 Start: 28732, Stop: 27914, Start Num: 17

Candidate Starts for Nina_39:

(Start: 17 @28732 has 48 MA's), (27, 28576), (28, 28573), (32, 28525), (33, 28513), (39, 28435), (43, 28402), (44, 28387), (45, 28384), (46, 28360), (47, 28342), (50, 28303), (51, 28294), (56, 28237), (62, 28174), (69, 28123), (76, 28009), (80, 27970),

Gene: NoShow_50 Start: 34311, Stop: 33472, Start Num: 11

Candidate Starts for NoShow_50:

(Start: 11 @34311 has 1 MA's), (24, 34125), (29, 34098), (39, 33969), (43, 33936), (51, 33828), (62, 33708), (69, 33657), (73, 33585), (80, 33501),

Gene: Nodigi_47 Start: 31327, Stop: 30521, Start Num: 17

Candidate Starts for Nodigi_47:

(9, 31369), (Start: 16 @31330 has 3 MA's), (Start: 17 @31327 has 48 MA's), (23, 31225), (27, 31171), (28, 31168), (33, 31114), (36, 31078), (41, 31021), (43, 31003), (45, 30985), (48, 30940), (51, 30895), (58, 30799), (62, 30775), (66, 30742), (68, 30730), (72, 30676), (75, 30643),

Gene: Orla_47 Start: 31300, Stop: 30494, Start Num: 17

Candidate Starts for Orla_47:

(9, 31342), (Start: 16 @31303 has 3 MA's), (Start: 17 @31300 has 48 MA's), (23, 31198), (27, 31144), (28, 31141), (33, 31087), (36, 31051), (41, 30994), (43, 30976), (45, 30958), (50, 30877), (51, 30868), (58, 30772), (62, 30748), (66, 30715), (68, 30703), (72, 30649), (75, 30616),

Gene: Pons_43 Start: 30551, Stop: 29745, Start Num: 17

Candidate Starts for Pons_43:

(Start: 17 @30551 has 48 MA's), (Start: 19 @30545 has 1 MA's), (23, 30443), (27, 30389), (33, 30326), (36, 30290), (43, 30215), (44, 30200), (47, 30155), (48, 30152), (50, 30116), (51, 30107), (56, 30050), (59, 30002), (60, 29999), (66, 29957), (75, 29864), (80, 29795),

Gene: PotPie_42 Start: 31482, Stop: 30676, Start Num: 17

Candidate Starts for PotPie_42:

(Start: 17 @31482 has 48 MA's), (Start: 19 @31476 has 1 MA's), (23, 31374), (27, 31320), (33, 31257), (43, 31146), (44, 31131), (47, 31086), (48, 31083), (50, 31047), (51, 31038), (56, 30981), (59, 30933),

(60, 30930), (66, 30888), (75, 30795), (80, 30726),

Gene: PsychoKiller_39 Start: 28608, Stop: 27790, Start Num: 17

Candidate Starts for PsychoKiller_39:

(Start: 17 @28608 has 48 MA's), (27, 28452), (28, 28449), (32, 28401), (33, 28389), (39, 28311), (43, 28278), (44, 28263), (45, 28260), (47, 28218), (50, 28179), (51, 28170), (56, 28113), (62, 28050), (69, 27999), (76, 27885), (80, 27846),

Gene: Quasar_40 Start: 29156, Stop: 28338, Start Num: 17

Candidate Starts for Quasar_40:

(Start: 17 @29156 has 48 MA's), (27, 29000), (28, 28997), (32, 28949), (33, 28937), (39, 28859), (43, 28826), (44, 28811), (45, 28808), (47, 28766), (50, 28727), (51, 28718), (56, 28661), (62, 28598), (69, 28547), (76, 28433), (80, 28394),

Gene: RanchParmCat_45 Start: 30427, Stop: 29621, Start Num: 17

Candidate Starts for RanchParmCat_45:

(Start: 16 @30430 has 3 MA's), (Start: 17 @30427 has 48 MA's), (23, 30325), (27, 30271), (33, 30214), (36, 30178), (41, 30121), (43, 30103), (44, 30088), (45, 30085), (48, 30040), (50, 30004), (51, 29995), (58, 29899), (62, 29875), (66, 29842), (72, 29776), (75, 29743),

Gene: RedBaron_42 Start: 28845, Stop: 28027, Start Num: 17

Candidate Starts for RedBaron_42:

(Start: 17 @28845 has 48 MA's), (27, 28689), (28, 28686), (32, 28638), (33, 28626), (39, 28548), (43, 28515), (44, 28500), (45, 28497), (47, 28455), (50, 28416), (51, 28407), (53, 28386), (56, 28350), (62, 28287), (69, 28236), (76, 28122), (80, 28083),

Gene: SheckWes_44 Start: 30075, Stop: 29269, Start Num: 17

Candidate Starts for SheckWes_44:

(Start: 17 @30075 has 48 MA's), (23, 29967), (27, 29913), (33, 29850), (43, 29739), (46, 29697), (47, 29679), (48, 29676), (50, 29640), (51, 29631), (56, 29574), (59, 29526), (60, 29523), (66, 29481), (75, 29388), (80, 29319),

Gene: Shrew_85 Start: 51163, Stop: 51948, Start Num: 20

Candidate Starts for Shrew_85:

(Start: 20 @51163 has 3 MA's), (25, 51289), (26, 51295), (31, 51340), (39, 51439), (42, 51463), (43, 51472), (45, 51490), (50, 51571), (51, 51580), (54, 51607), (56, 51637), (61, 51691), (81, 51895), (84, 51931),

Gene: SketchMex_40 Start: 28753, Stop: 27935, Start Num: 17

Candidate Starts for SketchMex_40:

(Start: 14 @28771 has 2 MA's), (Start: 17 @28753 has 48 MA's), (Start: 19 @28747 has 1 MA's), (27, 28597), (28, 28594), (33, 28534), (39, 28456), (43, 28423), (45, 28405), (47, 28363), (48, 28360), (50, 28324), (51, 28315), (56, 28258), (58, 28219), (64, 28174), (66, 28162), (68, 28150), (69, 28144), (71, 28096), (80, 27991),

Gene: Sopespian_39 Start: 28609, Stop: 27791, Start Num: 17

Candidate Starts for Sopespian_39:

(Start: 17 @28609 has 48 MA's), (27, 28453), (28, 28450), (32, 28402), (33, 28390), (39, 28312), (43, 28279), (44, 28264), (45, 28261), (47, 28219), (50, 28180), (51, 28171), (56, 28114), (62, 28051), (69, 28000), (76, 27886), (80, 27847),

Gene: Starburst_41 Start: 28602, Stop: 27784, Start Num: 17

Candidate Starts for Starburst_41:

(Start: 17 @28602 has 48 MA's), (27, 28446), (28, 28443), (32, 28395), (33, 28383), (39, 28305), (43, 28272), (44, 28257), (45, 28254), (47, 28212), (50, 28173), (51, 28164), (56, 28107), (62, 28044), (69, 27993), (76, 27879), (77, 27876), (80, 27840),

Gene: SteamedHams_41 Start: 28529, Stop: 27711, Start Num: 17

Candidate Starts for SteamedHams_41:

(Start: 14 @28547 has 2 MA's), (Start: 17 @28529 has 48 MA's), (27, 28373), (28, 28370), (32, 28322), (33, 28310), (39, 28232), (43, 28199), (45, 28181), (46, 28157), (47, 28139), (48, 28136), (50, 28100), (51, 28091), (56, 28034), (58, 27995), (68, 27926), (69, 27920), (71, 27872), (80, 27767),

Gene: SummitAcademy_41 Start: 30111, Stop: 29305, Start Num: 17

Candidate Starts for SummitAcademy_41:

(Start: 17 @30111 has 48 MA's), (Start: 19 @30105 has 1 MA's), (23, 30003), (27, 29949), (33, 29886), (43, 29775), (44, 29760), (47, 29715), (48, 29712), (50, 29676), (51, 29667), (56, 29610), (59, 29562), (60, 29559), (66, 29517), (75, 29424), (80, 29355),

Gene: Survivors_38 Start: 28560, Stop: 27748, Start Num: 17

Candidate Starts for Survivors_38:

(6, 28632), (Start: 17 @28560 has 48 MA's), (33, 28344), (36, 28308), (39, 28266), (41, 28251), (43, 28233), (44, 28218), (45, 28215), (47, 28173), (51, 28125), (57, 28065), (58, 28032), (65, 27978), (68, 27963), (76, 27846),

Gene: SweatNTears_41 Start: 28505, Stop: 27687, Start Num: 17

Candidate Starts for SweatNTears_41:

(Start: 17 @28505 has 48 MA's), (27, 28349), (28, 28346), (32, 28298), (33, 28286), (39, 28208), (43, 28175), (44, 28160), (45, 28157), (46, 28133), (47, 28115), (50, 28076), (51, 28067), (56, 28010), (62, 27947), (69, 27896), (76, 27782), (80, 27743),

Gene: Tolls_41 Start: 28634, Stop: 27816, Start Num: 17

Candidate Starts for Tolls_41:

(Start: 14 @28652 has 2 MA's), (Start: 17 @28634 has 48 MA's), (Start: 19 @28628 has 1 MA's), (27, 28478), (28, 28475), (32, 28427), (33, 28415), (39, 28337), (43, 28304), (45, 28286), (47, 28244), (48, 28241), (50, 28205), (51, 28196), (56, 28139), (58, 28100), (68, 28031), (69, 28025), (71, 27977), (80, 27872),

Gene: Triscuit_80 Start: 49756, Stop: 50565, Start Num: 20

Candidate Starts for Triscuit_80:

(Start: 20 @49756 has 3 MA's), (29, 49903), (31, 49933), (33, 49954), (43, 50065), (45, 50083), (47, 50125), (48, 50128), (50, 50164), (56, 50230), (68, 50335), (69, 50341), (70, 50362), (83, 50521),

Gene: Troje_42 Start: 29091, Stop: 28273, Start Num: 17

Candidate Starts for Troje_42:

(Start: 14 @29109 has 2 MA's), (Start: 17 @29091 has 48 MA's), (Start: 19 @29085 has 1 MA's), (27, 28935), (28, 28932), (33, 28872), (39, 28794), (43, 28761), (45, 28743), (47, 28701), (48, 28698), (50, 28662), (51, 28653), (56, 28596), (58, 28557), (64, 28512), (66, 28500), (68, 28488), (69, 28482), (71, 28434), (80, 28329),

Gene: Typhonomachy_39 Start: 28227, Stop: 27409, Start Num: 17

Candidate Starts for Typhonomachy_39:

(Start: 17 @28227 has 48 MA's), (27, 28071), (28, 28068), (32, 28020), (33, 28008), (39, 27930), (43, 27897), (44, 27882), (45, 27879), (47, 27837), (50, 27798), (51, 27789), (53, 27768), (56, 27732), (62, 27669), (69, 27618), (76, 27504), (80, 27465),

Gene: Vine_44 Start: 30838, Stop: 30032, Start Num: 17

Candidate Starts for Vine_44:

(Start: 17 @30838 has 48 MA's), (Start: 19 @30832 has 1 MA's), (23, 30730), (27, 30676), (33, 30613), (36, 30577), (43, 30502), (44, 30487), (47, 30442), (48, 30439), (50, 30403), (51, 30394), (56, 30337), (59, 30289), (60, 30286), (66, 30244), (75, 30151), (80, 30082),

Gene: Yakult_42 Start: 29373, Stop: 28570, Start Num: 17

Candidate Starts for Yakult_42:

(3, 29496), (4, 29466), (12, 29409), (Start: 16 @29376 has 3 MA's), (Start: 17 @29373 has 48 MA's), (23, 29274), (33, 29163), (36, 29127), (41, 29070), (43, 29052), (44, 29037), (45, 29034), (48, 28989), (50, 28953), (51, 28944), (62, 28824), (66, 28791), (68, 28779), (69, 28773), (70, 28752),

Gene: Yarn_37 Start: 28394, Stop: 27576, Start Num: 17

Candidate Starts for Yarn_37:

(Start: 14 @28412 has 2 MA's), (Start: 17 @28394 has 48 MA's), (Start: 19 @28388 has 1 MA's), (27, 28238), (28, 28235), (32, 28187), (33, 28175), (39, 28097), (43, 28064), (45, 28046), (47, 28004), (48, 28001), (50, 27965), (51, 27956), (56, 27899), (58, 27860), (68, 27791), (69, 27785), (71, 27737), (80, 27632),

Gene: Yucky_45 Start: 30778, Stop: 29972, Start Num: 17

Candidate Starts for Yucky_45:

(Start: 17 @30778 has 48 MA's), (Start: 19 @30772 has 1 MA's), (23, 30670), (27, 30616), (33, 30553), (36, 30517), (43, 30442), (44, 30427), (47, 30382), (48, 30379), (50, 30343), (51, 30334), (56, 30277), (59, 30229), (60, 30226), (66, 30184), (75, 30091), (80, 30022),

Gene: Yummy_42 Start: 28728, Stop: 27910, Start Num: 17

Candidate Starts for Yummy_42:

(Start: 14 @28746 has 2 MA's), (Start: 17 @28728 has 48 MA's), (Start: 19 @28722 has 1 MA's), (27, 28572), (28, 28569), (33, 28509), (39, 28431), (43, 28398), (45, 28380), (47, 28338), (48, 28335), (50, 28299), (51, 28290), (56, 28233), (58, 28194), (64, 28149), (66, 28137), (68, 28125), (69, 28119), (80, 27966),

Gene: Zareef_40 Start: 28654, Stop: 27842, Start Num: 17

Candidate Starts for Zareef_40:

(6, 28726), (Start: 17 @28654 has 48 MA's), (33, 28438), (36, 28402), (39, 28360), (41, 28345), (43, 28327), (44, 28312), (45, 28309), (47, 28267), (51, 28219), (57, 28159), (58, 28126), (65, 28072), (68, 28057), (76, 27940),

Gene: Zuko_81 Start: 61795, Stop: 62607, Start Num: 18

Candidate Starts for Zuko_81:

(Start: 18 @61795 has 2 MA's), (22, 61870), (34, 62005), (39, 62074), (40, 62080), (43, 62107), (45, 62125), (52, 62218), (55, 62248), (56, 62272), (60, 62326), (61, 62329), (67, 62377), (69, 62386), (70, 62407), (73, 62482),