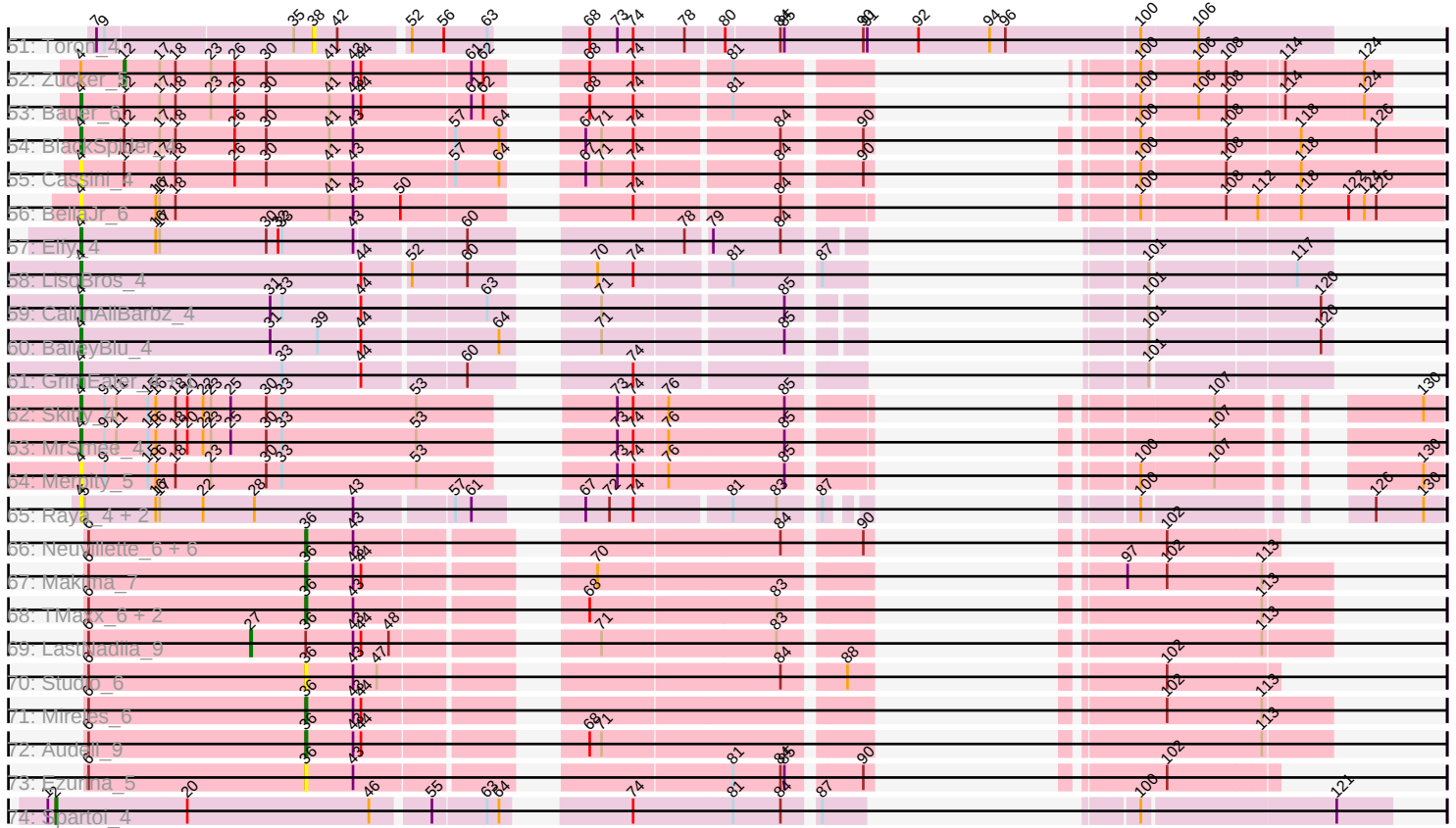


1. Raquel_5	15	23	33	53	65	70	73	76	86	100	107
2. Abby Daisy_5	12	21	30	53	58	67	74	75	84	90	100
3. G4_3	12	21	36	53	58	67	75	75	84	87	100
4. Doucette_5 + 1	12	21	36	53	58	67	75	75	84	87	100
5. E6_5	12	21	30	34	45	51	74	76	84	90	100
6. Steadfast_8	12	21	30	36	45	51	58	63	84	87	90
7. CocoaPudding_1	12	21	30	36	45	51	58	63	84	87	90
8. Tarragon_6 + 6	12	21	30	36	45	51	58	63	84	87	90
9. Survivor_8	12	21	30	34	45	51	58	63	84	87	90
10. Hoppers_5 + 4	12	21	30	36	45	51	58	63	84	87	90
11. Wagon_5	12	21	30	36	45	51	58	63	84	87	90
12. Fink_8	12	21	30	36	45	51	58	63	84	87	90
13. Laurel_5	12	21	30	36	45	51	58	63	84	87	90
14. Sopasplan_6	12	21	30	36	45	51	58	63	84	87	90
15. RADICAL_7 + 10	12	21	30	36	45	51	58	63	84	87	90
16. Emelyn_5	12	21	30	36	45	51	58	63	84	87	90
17. Big Chungus_5 + 1	12	21	30	36	45	51	58	63	84	87	90
18. Biographies_7 + 3	12	21	30	36	45	51	58	63	84	87	90
19. Ren Bar_5	12	21	30	36	45	51	58	63	84	87	90
20. Kayser_5 + 3	12	21	30	36	45	51	58	63	84	87	90
21. Glimmer_6 + 1	12	21	30	36	45	51	58	63	84	87	90
22. CardellLate_6 + 2	12	21	30	36	45	51	58	63	84	87	90
23. Anna_5	12	21	30	36	45	51	58	63	84	87	90
24. Yacht_12	12	21	30	36	45	51	58	63	84	87	90
25. Margaret_7 + 3	12	21	30	36	45	51	58	63	84	87	90
26. Glimmer_104	12	21	30	36	45	51	58	63	84	87	90
27. Martina_8 + 1	12	21	30	36	45	51	58	63	84	87	90
28. Bully_12	12	21	30	36	45	51	58	63	84	87	90
29. Margaret_5	12	21	30	36	45	51	58	63	84	87	90
30. McSpizzle_5	12	21	30	36	45	51	58	63	84	87	90
31. Androgyn_5 + 1	12	21	30	36	45	51	58	63	84	87	90
32. Vinyl_7	12	21	30	36	45	51	58	63	84	87	90
33. Quasar_5	12	21	30	36	45	51	58	63	84	87	90
34. Wagon_5	12	21	30	36	45	51	58	63	84	87	90
35. Azula_8 + 2	12	21	30	36	45	51	58	63	84	87	90
36. Jany_9	12	21	30	36	45	51	58	63	84	87	90
37. Cardinale_5 + 1	12	21	30	36	45	51	58	63	84	87	90
38. ChayonLim_7	12	21	30	36	45	51	58	63	84	87	90
39. Bungle_6	12	21	30	36	45	51	58	63	84	87	90
40. Elmer_5	12	21	30	36	45	51	58	63	84	87	90
41. Zazel_8	12	21	30	36	45	51	58	63	84	87	90
42. Lolo_8	12	21	30	36	45	51	58	63	84	87	90
43. Radin_5 + 1	12	21	30	36	45	51	58	63	84	87	90
44. Clea_6	12	21	30	36	45	51	58	63	84	87	90
45. Bill_10 + 6	12	21	30	36	45	51	58	63	84	87	90
46. Gink_9	12	21	30	36	45	51	58	63	84	87	90
47. Silver_10 + 5	12	21	30	36	45	51	58	63	84	87	90
48. TChol_4 + 1	12	21	30	36	45	51	58	63	84	87	90
49. Meta_100_4	12	21	30	36	45	51	58	63	84	87	90
50. Renald_18_4	12	21	30	36	45	51	58	63	84	87	90

Pham 330617



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 330617 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330617 has 125 members, 30 are drafts.

Phages represented in each track:

- Track 1 : Raqqa_5
- Track 2 : AbbyDaisy_5
- Track 3 : G4_5
- Track 4 : Doucette_5, B22_5
- Track 5 : E6_5
- Track 6 : SteamedHams_8
- Track 7 : CocoaPuff_5, Balloona_5
- Track 8 : Tarnish_6, SummitAcademy_5, PotPie_6
- Track 9 : Survivors_8
- Track 10 : Horseradish_7, SweatNTears_8, Biskit_7, SketchMex_5, Yummy_7
- Track 11 : Wallaby_9
- Track 12 : Fribs8_7
- Track 13 : Lauer_5
- Track 14 : Sopespian_6
- Track 15 : RADical_7, RSchmailzl_7, Starburst_7, Cozz_6, MunkgeeRoachy_6, ChickenTender_8, Agatha_6, Socotra_7, GoldHunter_6, Burnsey_6, Axym_6
- Track 16 : Emalyn_5, AikoCarson_5
- Track 17 : BigChungus_5, Feastonyet_5
- Track 18 : Blondies_7, MScarn_8, Troje_6, Buttrmlkdreams_6
- Track 19 : RedBaron_8
- Track 20 : KayGee_6, Elinal_7, Bavidard_6, Yucky_6
- Track 21 : Gibbous_6, Dre3_6
- Track 22 : CaramelLatte_6, CanesSauce_6, ChocoMunchkin_6
- Track 23 : Amok_5
- Track 24 : Yakult_7
- Track 25 : Mayweather_7, SheckWes_5, MAnor_6, Pons_6
- Track 26 : GTE2_04
- Track 27 : Malvina_8, HippoPololi_8
- Track 28 : Button_7
- Track 29 : Margaret_9
- Track 30 : McDazzle_5
- Track 31 : AndPeggy_5, Yarn_5
- Track 32 : Vine_7
- Track 33 : Quasar_6, Typhonmacy_6
- Track 34 : Wolfwood_8
- Track 35 : Azira_8, MaVan_8, Nibbles_8
- Track 36 : Jamzy_9

- Track 37 : Carsonalex_7, PsychoKiller_6, Elliott_6
- Track 38 : CherryonLim_7
- Track 39 : Bubble_6
- Track 40 : ElJefes_5
- Track 41 : Zareef_8
- Track 42 : Tolls_8
- Track 43 : RanchParmCat_9
- Track 44 : Cleo_6
- Track 45 : BillDoor_8
- Track 46 : GiKK_9
- Track 47 : SilverChicken_5
- Track 48 : TChen_4, LunaStella_4
- Track 49 : ThetaBob_4
- Track 50 : Renaud18_4
- Track 51 : Toron_4
- Track 52 : Zucker_5
- Track 53 : Bauer_6
- Track 54 : BlackSpider_4
- Track 55 : Cassini_4
- Track 56 : BellaJr_6
- Track 57 : Elfy_4
- Track 58 : LisoBros_4
- Track 59 : CallinAllBarbz_4
- Track 60 : BaileyBlu_4
- Track 61 : GrimEater_4, Jankie_4
- Track 62 : Skitty_4
- Track 63 : MrSmee_4
- Track 64 : Merpity_5
- Track 65 : Raya_4, Neroxid_4, Skyerus_4
- Track 66 : Neuville_6, Gerri43_6, AnnabelLee_6, ChamoyPickle_6, Roberts_6, CardboardBox_6, ChipsNGuac_6
- Track 67 : Makima_7
- Track 68 : TMaxx_6, TripleC_9, Agamotto_8
- Track 69 : LastNadiia_9
- Track 70 : Studio_6
- Track 71 : Mireles_6
- Track 72 : Audell_9
- Track 73 : Ezurina_5
- Track 74 : Spartoi_4

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

The start number called the most often in the published annotations is 21, it was called in 43 of the 95 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Agatha_6, AikoCarson_5, Amok_5, AndPeggy_5, Axym_6, Balloona_5, Bavilard_6, BillDoor_8, Biskit_7, Blondies_7, Bubble_6, Burnsey_6, Button_7, Buttrmlkdreams_6, CanesSauce_6, CaramelLatte_6, Carsonalex_7, ChickenTender_8, ChocoMunchkin_6, CocoaPuff_5, Cozz_6, Elinal_7, Elliott_6, Emalyn_5, GiKK_9,

GoldHunter_6, Horseradish_7, KayGee_6, MAnor_6, MScarn_8, Margaret_9, Mayweather_7, McDazzle_5, MunkgeeRoachy_6, Pons_6, PotPie_6, PsychoKiller_6, RADical_7, RSchmailzl_7, RanchParmCat_9, RedBaron_8, SheckWes_5, SketchMex_5, Socotra_7, Starburst_7, SteamedHams_8, SummitAcademy_5, SweatNTears_8, Tarnish_6, Tolls_8, Troje_6, Yakult_7, Yarn_5, Yucky_6, Yummy_7,

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

- BigChungus_5, CherryonLim_7, ElJefes_5, Feastonyeet_5, GTE2_04, Jamzy_9, Lauer_5, Quasar_6, SilverChicken_5, Sopespian_6, Typhonomachy_6, Vine_7,

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

- AbbyDaisy_5, Agamotto_8, AnnabelLee_6, Audell_9, Azira_8, B22_5, BaileyBlu_4, Bauer_6, BellaJr_6, BlackSpider_4, CallinAllBarbz_4, CardboardBox_6, Cassini_4, ChamoyPickle_6, ChipsNGuac_6, Cleo_6, Doucette_5, Dre3_6, E6_5, Elfy_4, Ezurina_5, Fribs8_7, G4_5, Gerri43_6, Gibbous_6, GrimEater_4, HippoPololi_8, Jankie_4, LastNadiia_9, LisoBros_4, LunaStella_4, MaVan_8, Makima_7, Malvina_8, Merpity_5, Mireles_6, MrSmee_4, Neroxid_4, Neuville_6, Nibbles_8, Raqqa_5, Raya_4, Renaud18_4, Roberts_6, Skitty_4, Skyerus_4, Spartoi_4, Studio_6, Survivors_8, TChen_4, TMaxx_6, ThetaBob_4, Toron_4, TripleC_9, Wallaby_9, Wolfwood_8, Zareef_8, Zucker_5,

Summary by start number:

Start 2:

- Found in 1 of 125 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Spartoi_4 (singleton),

Start 4:

- Found in 26 of 125 (20.8%) of genes in pham
- Manual Annotations of this start: 15 of 95
- Called 84.6% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_5 (AY), B22_5 (BW), BaileyBlu_4 (FP), Bauer_6 (FN), BellaJr_6 (FN), BlackSpider_4 (FN), CallinAllBarbz_4 (FP), Cassini_4 (FN), Doucette_5 (BW), E6_5 (BW), Elfy_4 (FP), G4_5 (BW), GrimEater_4 (FP), Jankie_4 (FP), LisoBros_4 (FP), Merpity_5 (FQ1), MrSmee_4 (FQ1), Neroxid_4 (FQ2), Raqqa_5 (AY), Raya_4 (FQ2), Skitty_4 (FQ1), Skyerus_4 (FQ2),

Start 5:

- Found in 77 of 125 (61.6%) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 2.6% of time when present
- Phage (with cluster) where this start called: GTE2_04 (CT), Sopespian_6 (CT),

Start 6:

- Found in 22 of 125 (17.6%) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Jamzy_9 (CT),

Start 12:

- Found in 27 of 125 (21.6%) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Zucker_5 (FN),

Start 15:

- Found in 37 of 125 (29.6%) of genes in pham
- Manual Annotations of this start: 3 of 95
- Called 8.1% of time when present
- Phage (with cluster) where this start called: Cleo_6 (CT), Survivors_8 (CT), Wolfwood_8 (CT),

Start 17:

- Found in 29 of 125 (23.2%) of genes in pham
- Manual Annotations of this start: 2 of 95
- Called 10.3% of time when present
- Phage (with cluster) where this start called: ElJefes_5 (CT), Lauer_5 (CT), Vine_7 (CT),

Start 19:

- Found in 1 of 125 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fribs8_7 (CT),

Start 21:

- Found in 67 of 125 (53.6%) of genes in pham
- Manual Annotations of this start: 43 of 95
- Called 82.1% of time when present
- Phage (with cluster) where this start called: Agatha_6 (CT), AikoCarson_5 (CT), Amok_5 (CT), AndPeggy_5 (CT), Axym_6 (CT), Balloona_5 (CT), Bavidard_6 (CT), BillDoor_8 (CT), Biskit_7 (CT), Blondies_7 (CT), Bubble_6 (CT), Burnsey_6 (CT), Button_7 (CT), Buttrmilkdreams_6 (CT), CanesSauce_6 (CT), CaramelLatte_6 (CT), Carsonalex_7 (CT), ChickenTender_8 (CT), ChocoMunchkin_6 (CT), CocoaPuff_5 (CT), Cozz_6 (CT), Elinal_7 (CT), Elliott_6 (CT), Emalyn_5 (CT), GiKK_9 (CT), GoldHunter_6 (CT), Horseradish_7 (CT), KayGee_6 (CT), MAnor_6 (CT), MScarn_8 (CT), Margaret_9 (CT), Mayweather_7 (CT), McDazzle_5 (CT), MunkgeeRoachy_6 (CT), Pons_6 (CT), PotPie_6 (CT), PsychoKiller_6 (CT), RADical_7 (CT), RSchmailz_7 (CT), RanchParmCat_9 (CT), RedBaron_8 (CT), SheckWes_5 (CT), SketchMex_5 (CT), Socotra_7 (CT), Starburst_7 (CT), SteamedHams_8 (CT), SummitAcademy_5 (CT), SweatNTears_8 (CT), Tarnish_6 (CT), Tolls_8 (CT), Troje_6 (CT), Yakult_7 (CT), Yarn_5 (CT), Yucky_6 (CT), Yummy_7 (CT),

Start 25:

- Found in 3 of 125 (2.4%) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 33.3% of time when present
- Phage (with cluster) where this start called: CherryonLim_7 (CT),

Start 27:

- Found in 6 of 125 (4.8%) of genes in pham
- Manual Annotations of this start: 1 of 95
- Called 16.7% of time when present

- Phage (with cluster) where this start called: LastNadiia_9 (FR),

Start 30:

- Found in 88 of 125 (70.4%) of genes in pham
- Manual Annotations of this start: 11 of 95
- Called 14.8% of time when present
- Phage (with cluster) where this start called: Azira_8 (CT), BigChungus_5 (CT), Dre3_6 (CT), Feastonyeet_5 (CT), Gibbous_6 (CT), HippoPololi_8 (CT), MaVan_8 (CT), Malvina_8 (CT), Nibbles_8 (CT), Quasar_6 (CT), Typhonmacy_6 (CT), Wallaby_9 (CT), Zareef_8 (CT),

Start 36:

- Found in 17 of 125 (13.6%) of genes in pham
- Manual Annotations of this start: 10 of 95
- Called 88.2% of time when present
- Phage (with cluster) where this start called: Agamotto_8 (FR), AnnabelleLee_6 (FR), Audell_9 (FR), CardboardBox_6 (FR), ChamoyPickle_6 (FR), ChipsNGuac_6 (FR), Ezurina_5 (FR), Gerri43_6 (FR), Makima_7 (FR), Mireles_6 (FR), Neuville_6 (FR), Roberts_6 (FR), Studio_6 (FR), TMaxx_6 (FR), TripleC_9 (FR),

Start 38:

- Found in 37 of 125 (29.6%) of genes in pham
- Manual Annotations of this start: 4 of 95
- Called 16.2% of time when present
- Phage (with cluster) where this start called: LunaStella_4 (F4), Renaud18_4 (F4), SilverChicken_5 (F2), TChen_4 (F4), ThetaBob_4 (F4), Toron_4 (F6),

Summary by clusters:

There are 12 clusters represented in this pham: FP, FR, F4, F6, singleton, F2, AY, BW, FQ2, FQ1, FN, CT,

Info for manual annotations of cluster AY:

- Start number 4 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BW:

- Start number 4 was manually annotated 4 times for cluster BW.

Info for manual annotations of cluster CT:

- Start number 5 was manually annotated 1 time for cluster CT.
- Start number 6 was manually annotated 1 time for cluster CT.
- Start number 15 was manually annotated 3 times for cluster CT.
- Start number 17 was manually annotated 2 times for cluster CT.
- Start number 19 was manually annotated 1 time for cluster CT.
- Start number 21 was manually annotated 43 times for cluster CT.
- Start number 25 was manually annotated 1 time for cluster CT.
- Start number 30 was manually annotated 11 times for cluster CT.

Info for manual annotations of cluster F4:

- Start number 38 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster FN:

- Start number 4 was manually annotated 2 times for cluster FN.
- Start number 12 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster FP:

- Start number 4 was manually annotated 6 times for cluster FP.

Info for manual annotations of cluster FQ1:

- Start number 4 was manually annotated 2 times for cluster FQ1.

Info for manual annotations of cluster FR:

- Start number 27 was manually annotated 1 time for cluster FR.
- Start number 36 was manually annotated 10 times for cluster FR.

Gene Information:

Gene: AbbyDaisy_5 Start: 3558, Stop: 4358, Start Num: 4

Candidate Starts for AbbyDaisy_5:

(Start: 4 @3558 has 15 MA's), (Start: 5 @3561 has 1 MA's), (Start: 12 @3591 has 1 MA's), (22, 3651), (Start: 30 @3699 has 11 MA's), (33, 3711), (40, 3741), (43, 3765), (64, 3867), (72, 3909), (74, 3927), (84, 4029), (90, 4080), (99, 4131), (100, 4134), (114, 4236), (118, 4248), (119, 4257), (122, 4284), (123, 4293), (126, 4305),

Gene: Agamotto_8 Start: 7462, Stop: 8025, Start Num: 36

Candidate Starts for Agamotto_8:

(Start: 6 @7297 has 1 MA's), (Start: 36 @7462 has 10 MA's), (43, 7498), (68, 7633), (83, 7771), (113, 7975),

Gene: Agatha_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Agatha_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: AikoCarson_5 Start: 3913, Stop: 4572, Start Num: 21

Candidate Starts for AikoCarson_5:

(3, 3826), (Start: 5 @3832 has 1 MA's), (Start: 21 @3913 has 43 MA's), (Start: 30 @3961 has 11 MA's), (34, 3976), (35, 3982), (37, 3994), (63, 4108), (73, 4156), (84, 4270), (87, 4291), (90, 4321), (110, 4516), (115, 4543),

Gene: Amok_5 Start: 3914, Stop: 4573, Start Num: 21

Candidate Starts for Amok_5:

(3, 3827), (Start: 5 @3833 has 1 MA's), (8, 3842), (Start: 21 @3914 has 43 MA's), (Start: 30 @3962 has 11 MA's), (34, 3977), (35, 3983), (37, 3995), (63, 4109), (73, 4157), (76, 4193), (84, 4271), (87, 4292), (90, 4322), (106, 4475), (110, 4517), (115, 4544),

Gene: AndPeggy_5 Start: 4225, Stop: 4881, Start Num: 21

Candidate Starts for AndPeggy_5:

(3, 4138), (Start: 5 @4144 has 1 MA's), (8, 4153), (Start: 21 @4225 has 43 MA's), (Start: 30 @4273 has 11 MA's), (34, 4288), (37, 4306), (45, 4348), (63, 4420), (74, 4480), (76, 4504), (84, 4582), (90,

4633), (109, 4810), (110, 4828),

Gene: AnnabelLee_6 Start: 4338, Stop: 4859, Start Num: 36

Candidate Starts for AnnabelLee_6:

(Start: 6 @4173 has 1 MA's), (Start: 36 @4338 has 10 MA's), (43, 4374), (84, 4650), (90, 4701), (102, 4779),

Gene: Audell_9 Start: 7732, Stop: 8295, Start Num: 36

Candidate Starts for Audell_9:

(Start: 6 @7567 has 1 MA's), (Start: 36 @7732 has 10 MA's), (43, 7768), (44, 7774), (68, 7903), (71, 7912), (113, 8245),

Gene: Axym_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Axym_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: Azira_8 Start: 5151, Stop: 5714, Start Num: 30

Candidate Starts for Azira_8:

(3, 5016), (Start: 5 @5022 has 1 MA's), (10, 5040), (Start: 15 @5064 has 3 MA's), (16, 5070), (Start: 30 @5151 has 11 MA's), (Start: 38 @5187 has 4 MA's), (40, 5193), (53, 5250), (63, 5304), (69, 5337), (71, 5340), (76, 5388), (84, 5466), (85, 5469), (87, 5487), (98, 5571), (100, 5577), (103, 5598), (116, 5688),

Gene: B22_5 Start: 3905, Stop: 4687, Start Num: 4

Candidate Starts for B22_5:

(Start: 4 @3905 has 15 MA's), (Start: 27 @4034 has 1 MA's), (53, 4157), (58, 4184), (67, 4229), (75, 4274), (84, 4373), (87, 4394), (100, 4460), (107, 4514), (112, 4547), (119, 4586), (125, 4631), (127, 4649), (129, 4667),

Gene: BaileyBlu_4 Start: 3397, Stop: 4089, Start Num: 4

Candidate Starts for BaileyBlu_4:

(Start: 4 @3397 has 15 MA's), (31, 3541), (39, 3577), (44, 3607), (64, 3703), (71, 3745), (85, 3874), (101, 3961), (120, 4081),

Gene: Balloona_5 Start: 3999, Stop: 4592, Start Num: 21

Candidate Starts for Balloona_5:

(3, 3909), (Start: 5 @3915 has 1 MA's), (Start: 12 @3942 has 1 MA's), (Start: 15 @3960 has 3 MA's), (Start: 17 @3969 has 2 MA's), (Start: 21 @3999 has 43 MA's), (Start: 30 @4047 has 11 MA's), (Start: 38 @4083 has 4 MA's), (45, 4122), (51, 4134), (57, 4170), (59, 4176), (63, 4194), (84, 4356), (87, 4377), (101, 4458), (103, 4473), (115, 4560),

Gene: Bauer_6 Start: 4443, Stop: 5192, Start Num: 4

Candidate Starts for Bauer_6:

(Start: 4 @4443 has 15 MA's), (Start: 12 @4476 has 1 MA's), (Start: 17 @4503 has 2 MA's), (18, 4515), (23, 4542), (26, 4560), (Start: 30 @4584 has 11 MA's), (41, 4632), (43, 4650), (44, 4656), (61, 4737), (62, 4746), (68, 4785), (74, 4818), (81, 4884), (100, 5016), (106, 5055), (108, 5076), (114, 5115), (124, 5172),

Gene: Bavilard_6 Start: 4775, Stop: 5368, Start Num: 21

Candidate Starts for Bavilard_6:

(3, 4685), (Start: 5 @4691 has 1 MA's), (Start: 12 @4718 has 1 MA's), (Start: 15 @4736 has 3 MA's), (Start: 17 @4745 has 2 MA's), (Start: 21 @4775 has 43 MA's), (Start: 30 @4823 has 11 MA's), (Start:

38 @4859 has 4 MA's), (45, 4898), (51, 4910), (57, 4946), (59, 4952), (63, 4970), (84, 5132), (101, 5234), (103, 5249), (115, 5336),

Gene: BellaJr_6 Start: 4447, Stop: 5247, Start Num: 4

Candidate Starts for BellaJr_6:

(Start: 4 @4447 has 15 MA's), (16, 4504), (Start: 17 @4507 has 2 MA's), (18, 4519), (41, 4636), (43, 4654), (50, 4690), (74, 4822), (84, 4924), (100, 5026), (108, 5086), (112, 5110), (118, 5140), (122, 5176), (124, 5188), (126, 5197),

Gene: BigChungus_5 Start: 4072, Stop: 4617, Start Num: 30

Candidate Starts for BigChungus_5:

(3, 3934), (Start: 5 @3940 has 1 MA's), (Start: 12 @3967 has 1 MA's), (Start: 15 @3985 has 3 MA's), (Start: 17 @3994 has 2 MA's), (Start: 21 @4024 has 43 MA's), (Start: 30 @4072 has 11 MA's), (Start: 38 @4108 has 4 MA's), (45, 4147), (51, 4159), (57, 4195), (59, 4201), (63, 4219), (84, 4381), (87, 4402), (101, 4483), (103, 4498), (115, 4585),

Gene: BillDoor_8 Start: 4220, Stop: 4846, Start Num: 21

Candidate Starts for BillDoor_8:

(3, 4133), (Start: 5 @4139 has 1 MA's), (8, 4148), (Start: 21 @4220 has 43 MA's), (Start: 30 @4268 has 11 MA's), (34, 4283), (37, 4301), (45, 4343), (63, 4415), (74, 4475), (76, 4499), (84, 4577), (87, 4598), (90, 4628), (109, 4775), (110, 4793),

Gene: Biskit_7 Start: 4215, Stop: 4838, Start Num: 21

Candidate Starts for Biskit_7:

(3, 4128), (Start: 5 @4134 has 1 MA's), (Start: 21 @4215 has 43 MA's), (Start: 30 @4263 has 11 MA's), (37, 4296), (45, 4338), (63, 4410), (74, 4470), (76, 4494), (84, 4572), (87, 4593), (90, 4623), (109, 4767), (110, 4785),

Gene: BlackSpider_4 Start: 3452, Stop: 4255, Start Num: 4

Candidate Starts for BlackSpider_4:

(Start: 4 @3452 has 15 MA's), (Start: 12 @3485 has 1 MA's), (Start: 17 @3512 has 2 MA's), (18, 3524), (26, 3569), (Start: 30 @3593 has 11 MA's), (41, 3641), (43, 3659), (57, 3734), (64, 3767), (67, 3791), (71, 3803), (74, 3827), (84, 3929), (90, 3980), (100, 4034), (108, 4094), (118, 4148), (126, 4205),

Gene: Blondies_7 Start: 4216, Stop: 4839, Start Num: 21

Candidate Starts for Blondies_7:

(3, 4129), (Start: 5 @4135 has 1 MA's), (Start: 21 @4216 has 43 MA's), (Start: 30 @4264 has 11 MA's), (34, 4279), (37, 4297), (45, 4339), (63, 4411), (74, 4471), (76, 4495), (84, 4573), (87, 4594), (90, 4624), (109, 4768), (110, 4786),

Gene: Bubble_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Bubble_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: Burnsey_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Burnsey_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: Button_7 Start: 4307, Stop: 4906, Start Num: 21

Candidate Starts for Button_7:

(3, 4214), (Start: 6 @4223 has 1 MA's), (Start: 21 @4307 has 43 MA's), (Start: 30 @4343 has 11 MA's), (34, 4358), (Start: 38 @4379 has 4 MA's), (49, 4439), (69, 4544), (76, 4595), (77, 4601), (84, 4673), (87, 4694), (100, 4766), (101, 4772), (110, 4850),

Gene: Buttrmlkdreams_6 Start: 4216, Stop: 4839, Start Num: 21

Candidate Starts for Buttrmlkdreams_6:

(3, 4129), (Start: 5 @4135 has 1 MA's), (Start: 21 @4216 has 43 MA's), (Start: 30 @4264 has 11 MA's), (34, 4279), (37, 4297), (45, 4339), (63, 4411), (74, 4471), (76, 4495), (84, 4573), (87, 4594), (90, 4624), (109, 4768), (110, 4786),

Gene: CallinAllBarbz_4 Start: 3399, Stop: 4091, Start Num: 4

Candidate Starts for CallinAllBarbz_4:

(Start: 4 @3399 has 15 MA's), (31, 3543), (33, 3552), (44, 3609), (63, 3696), (71, 3747), (85, 3876), (101, 3963), (120, 4083),

Gene: CanesSauce_6 Start: 4225, Stop: 4881, Start Num: 21

Candidate Starts for CanesSauce_6:

(3, 4138), (Start: 5 @4144 has 1 MA's), (8, 4153), (Start: 21 @4225 has 43 MA's), (Start: 30 @4273 has 11 MA's), (34, 4288), (37, 4306), (45, 4348), (63, 4420), (74, 4480), (76, 4504), (84, 4582), (90, 4633), (95, 4657), (109, 4810), (110, 4828),

Gene: CaramellLatte_6 Start: 4225, Stop: 4881, Start Num: 21

Candidate Starts for CaramellLatte_6:

(3, 4138), (Start: 5 @4144 has 1 MA's), (8, 4153), (Start: 21 @4225 has 43 MA's), (Start: 30 @4273 has 11 MA's), (34, 4288), (37, 4306), (45, 4348), (63, 4420), (74, 4480), (76, 4504), (84, 4582), (90, 4633), (95, 4657), (109, 4810), (110, 4828),

Gene: CardboardBox_6 Start: 4338, Stop: 4859, Start Num: 36

Candidate Starts for CardboardBox_6:

(Start: 6 @4173 has 1 MA's), (Start: 36 @4338 has 10 MA's), (43, 4374), (84, 4650), (90, 4701), (102, 4779),

Gene: Carsonalex_7 Start: 4278, Stop: 4901, Start Num: 21

Candidate Starts for Carsonalex_7:

(3, 4188), (Start: 5 @4194 has 1 MA's), (Start: 21 @4278 has 43 MA's), (Start: 30 @4326 has 11 MA's), (35, 4347), (37, 4359), (40, 4368), (45, 4401), (63, 4473), (74, 4533), (84, 4635), (90, 4686), (109, 4830), (110, 4848), (114, 4869),

Gene: Cassini_4 Start: 3417, Stop: 4220, Start Num: 4

Candidate Starts for Cassini_4:

(Start: 4 @3417 has 15 MA's), (Start: 12 @3450 has 1 MA's), (Start: 17 @3477 has 2 MA's), (18, 3489), (26, 3534), (Start: 30 @3558 has 11 MA's), (41, 3606), (43, 3624), (57, 3699), (64, 3732), (67, 3756), (71, 3768), (74, 3792), (84, 3894), (90, 3945), (100, 3999), (108, 4059), (118, 4113),

Gene: ChamoyPickle_6 Start: 4338, Stop: 4859, Start Num: 36

Candidate Starts for ChamoyPickle_6:

(Start: 6 @4173 has 1 MA's), (Start: 36 @4338 has 10 MA's), (43, 4374), (84, 4650), (90, 4701), (102, 4779),

Gene: CherryonLim_7 Start: 4771, Stop: 5343, Start Num: 25

Candidate Starts for CherryonLim_7:

(3, 4660), (Start: 5 @4666 has 1 MA's), (Start: 12 @4693 has 1 MA's), (Start: 15 @4711 has 3 MA's), (Start: 17 @4720 has 2 MA's), (Start: 21 @4750 has 43 MA's), (Start: 25 @4771 has 1 MA's), (Start: 30 @4798 has 11 MA's), (45, 4873), (51, 4885), (57, 4921), (59, 4927), (63, 4945), (84, 5107), (87, 5128), (100, 5203), (101, 5209), (103, 5224), (115, 5311),

Gene: ChickenTender_8 Start: 4269, Stop: 4892, Start Num: 21

Candidate Starts for ChickenTender_8:

(3, 4179), (Start: 5 @4185 has 1 MA's), (Start: 21 @4269 has 43 MA's), (Start: 30 @4317 has 11 MA's), (35, 4338), (37, 4350), (40, 4359), (45, 4392), (63, 4464), (74, 4524), (84, 4626), (90, 4677), (100, 4755), (109, 4821), (110, 4839), (114, 4860),

Gene: ChipsNGuac_6 Start: 4338, Stop: 4859, Start Num: 36

Candidate Starts for ChipsNGuac_6:

(Start: 6 @4173 has 1 MA's), (Start: 36 @4338 has 10 MA's), (43, 4374), (84, 4650), (90, 4701), (102, 4779),

Gene: ChocoMunchkin_6 Start: 4225, Stop: 4881, Start Num: 21

Candidate Starts for ChocoMunchkin_6:

(3, 4138), (Start: 5 @4144 has 1 MA's), (8, 4153), (Start: 21 @4225 has 43 MA's), (Start: 30 @4273 has 11 MA's), (34, 4288), (37, 4306), (45, 4348), (63, 4420), (74, 4480), (76, 4504), (84, 4582), (90, 4633), (95, 4657), (109, 4810), (110, 4828),

Gene: Cleo_6 Start: 4357, Stop: 5013, Start Num: 15

Candidate Starts for Cleo_6:

(3, 4306), (Start: 5 @4312 has 1 MA's), (10, 4333), (Start: 15 @4357 has 3 MA's), (Start: 30 @4444 has 11 MA's), (31, 4447), (34, 4459), (Start: 38 @4480 has 4 MA's), (40, 4486), (53, 4543), (63, 4597), (69, 4630), (84, 4759), (85, 4762), (87, 4780), (89, 4804), (98, 4870), (103, 4897),

Gene: CocoaPuff_5 Start: 3999, Stop: 4592, Start Num: 21

Candidate Starts for CocoaPuff_5:

(3, 3909), (Start: 5 @3915 has 1 MA's), (Start: 12 @3942 has 1 MA's), (Start: 15 @3960 has 3 MA's), (Start: 17 @3969 has 2 MA's), (Start: 21 @3999 has 43 MA's), (Start: 30 @4047 has 11 MA's), (Start: 38 @4083 has 4 MA's), (45, 4122), (51, 4134), (57, 4170), (59, 4176), (63, 4194), (84, 4356), (87, 4377), (101, 4458), (103, 4473), (115, 4560),

Gene: Cozz_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Cozz_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: Doucette_5 Start: 3905, Stop: 4690, Start Num: 4

Candidate Starts for Doucette_5:

(Start: 4 @3905 has 15 MA's), (Start: 27 @4034 has 1 MA's), (53, 4160), (58, 4187), (67, 4232), (75, 4277), (84, 4376), (87, 4397), (100, 4463), (107, 4517), (112, 4550), (119, 4589), (125, 4634), (127, 4652), (129, 4670),

Gene: Dre3_6 Start: 4388, Stop: 4960, Start Num: 30

Candidate Starts for Dre3_6:

(3, 4250), (Start: 5 @4256 has 1 MA's), (10, 4277), (Start: 15 @4301 has 3 MA's), (Start: 30 @4388 has 11 MA's), (31, 4391), (34, 4403), (Start: 38 @4424 has 4 MA's), (40, 4430), (53, 4490), (63, 4544), (69, 4577), (84, 4706), (85, 4709), (87, 4727), (89, 4751), (98, 4817), (103, 4844),

Gene: E6_5 Start: 3906, Stop: 4670, Start Num: 4

Candidate Starts for E6_5:

(Start: 4 @3906 has 15 MA's), (Start: 27 @4035 has 1 MA's), (53, 4161), (58, 4188), (67, 4233), (75, 4278), (84, 4377), (87, 4398), (100, 4464), (107, 4518), (112, 4551), (119, 4590), (125, 4635), (128, 4656),

Gene: ElJefes_5 Start: 4440, Stop: 5063, Start Num: 17

Candidate Starts for ElJefes_5:

(Start: 5 @4389 has 1 MA's), (Start: 15 @4431 has 3 MA's), (Start: 17 @4440 has 2 MA's), (Start: 21 @4470 has 43 MA's), (Start: 30 @4518 has 11 MA's), (45, 4593), (51, 4605), (57, 4641), (59, 4647), (63, 4665), (84, 4827), (87, 4848), (100, 4923), (101, 4929), (103, 4944), (115, 5031),

Gene: Elfy_4 Start: 3431, Stop: 4123, Start Num: 4

Candidate Starts for Elfy_4:

(Start: 4 @3431 has 15 MA's), (16, 3488), (Start: 17 @3491 has 2 MA's), (Start: 30 @3572 has 11 MA's), (32, 3581), (33, 3584), (43, 3638), (60, 3713), (78, 3839), (79, 3854), (84, 3905),

Gene: Elinal_7 Start: 4002, Stop: 4595, Start Num: 21

Candidate Starts for Elinal_7:

(3, 3912), (Start: 5 @3918 has 1 MA's), (Start: 12 @3945 has 1 MA's), (Start: 15 @3963 has 3 MA's), (Start: 17 @3972 has 2 MA's), (Start: 21 @4002 has 43 MA's), (Start: 30 @4050 has 11 MA's), (Start: 38 @4086 has 4 MA's), (45, 4125), (51, 4137), (57, 4173), (59, 4179), (63, 4197), (84, 4359), (101, 4461), (103, 4476), (115, 4563),

Gene: Elliott_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Elliott_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (109, 4773), (110, 4791), (114, 4812),

Gene: Emalyn_5 Start: 3913, Stop: 4572, Start Num: 21

Candidate Starts for Emalyn_5:

(3, 3826), (Start: 5 @3832 has 1 MA's), (Start: 21 @3913 has 43 MA's), (Start: 30 @3961 has 11 MA's), (34, 3976), (35, 3982), (37, 3994), (63, 4108), (73, 4156), (84, 4270), (87, 4291), (90, 4321), (110, 4516), (115, 4543),

Gene: Ezurina_5 Start: 3952, Stop: 4473, Start Num: 36

Candidate Starts for Ezurina_5:

(Start: 6 @3787 has 1 MA's), (Start: 36 @3952 has 10 MA's), (43, 3988), (81, 4228), (84, 4264), (85, 4267), (90, 4315), (102, 4393),

Gene: Feastonyeet_5 Start: 4072, Stop: 4617, Start Num: 30

Candidate Starts for Feastonyeet_5:

(3, 3934), (Start: 5 @3940 has 1 MA's), (Start: 12 @3967 has 1 MA's), (Start: 15 @3985 has 3 MA's), (Start: 17 @3994 has 2 MA's), (Start: 21 @4024 has 43 MA's), (Start: 30 @4072 has 11 MA's), (Start: 38 @4108 has 4 MA's), (45, 4147), (51, 4159), (57, 4195), (59, 4201), (63, 4219), (84, 4381), (87, 4402), (101, 4483), (103, 4498), (115, 4585),

Gene: Fribs8_7 Start: 4879, Stop: 5508, Start Num: 19

Candidate Starts for Fribs8_7:

(3, 4804), (Start: 5 @4810 has 1 MA's), (10, 4828), (Start: 15 @4852 has 3 MA's), (Start: 19 @4879 has 1 MA's), (Start: 30 @4939 has 11 MA's), (31, 4942), (Start: 38 @4975 has 4 MA's), (40, 4981), (53, 5038), (63, 5092), (69, 5125), (71, 5128), (84, 5254), (85, 5257), (87, 5275), (98, 5365), (103, 5392),

Gene: G4_5 Start: 3905, Stop: 4669, Start Num: 4

Candidate Starts for G4_5:

(Start: 4 @3905 has 15 MA's), (Start: 27 @4034 has 1 MA's), (Start: 36 @4076 has 10 MA's), (53, 4160), (58, 4187), (67, 4232), (75, 4277), (84, 4376), (87, 4397), (100, 4463), (107, 4517), (112, 4550), (119, 4589), (125, 4634),

Gene: GTE2_04 Start: 3827, Stop: 4531, Start Num: 5

Candidate Starts for GTE2_04:

(3, 3821), (Start: 5 @3827 has 1 MA's), (8, 3836), (Start: 21 @3908 has 43 MA's), (Start: 30 @3956 has 11 MA's), (34, 3971), (37, 3989), (45, 4031), (63, 4103), (74, 4163), (76, 4187), (84, 4265), (87, 4286), (90, 4316), (109, 4460), (110, 4478),

Gene: Gerri43_6 Start: 4338, Stop: 4859, Start Num: 36

Candidate Starts for Gerri43_6:

(Start: 6 @4173 has 1 MA's), (Start: 36 @4338 has 10 MA's), (43, 4374), (84, 4650), (90, 4701), (102, 4779),

Gene: GiKK_9 Start: 4616, Stop: 5209, Start Num: 21

Candidate Starts for GiKK_9:

(3, 4523), (Start: 6 @4532 has 1 MA's), (Start: 12 @4559 has 1 MA's), (Start: 21 @4616 has 43 MA's), (Start: 30 @4652 has 11 MA's), (34, 4667), (Start: 38 @4688 has 4 MA's), (69, 4847), (73, 4862), (76, 4898), (77, 4904), (84, 4976), (87, 4997), (101, 5075), (110, 5153),

Gene: Gibbous_6 Start: 4388, Stop: 4960, Start Num: 30

Candidate Starts for Gibbous_6:

(3, 4250), (Start: 5 @4256 has 1 MA's), (10, 4277), (Start: 15 @4301 has 3 MA's), (Start: 30 @4388 has 11 MA's), (31, 4391), (34, 4403), (Start: 38 @4424 has 4 MA's), (40, 4430), (53, 4490), (63, 4544), (69, 4577), (84, 4706), (85, 4709), (87, 4727), (89, 4751), (98, 4817), (103, 4844),

Gene: GoldHunter_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for GoldHunter_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: GrimEater_4 Start: 3409, Stop: 4107, Start Num: 4

Candidate Starts for GrimEater_4:

(Start: 4 @3409 has 15 MA's), (33, 3562), (44, 3619), (60, 3691), (74, 3781), (101, 3979),

Gene: HippoPololi_8 Start: 5028, Stop: 5600, Start Num: 30

Candidate Starts for HippoPololi_8:

(3, 4890), (Start: 4 @4893 has 15 MA's), (Start: 5 @4896 has 1 MA's), (Start: 15 @4941 has 3 MA's), (Start: 30 @5028 has 11 MA's), (31, 5031), (Start: 38 @5064 has 4 MA's), (40, 5070), (53, 5130), (63, 5184), (69, 5217), (71, 5220), (74, 5244), (76, 5268), (84, 5346), (85, 5349), (87, 5367), (98, 5457), (100, 5463), (103, 5484),

Gene: Horseradish_7 Start: 4122, Stop: 4745, Start Num: 21

Candidate Starts for Horseradish_7:

(3, 4035), (Start: 5 @4041 has 1 MA's), (Start: 21 @4122 has 43 MA's), (Start: 30 @4170 has 11 MA's), (37, 4203), (45, 4245), (63, 4317), (74, 4377), (76, 4401), (84, 4479), (87, 4500), (90, 4530), (109, 4674), (110, 4692),

Gene: Jamzy_9 Start: 4537, Stop: 5217, Start Num: 6

Candidate Starts for Jamzy_9:

(3, 4528), (Start: 6 @4537 has 1 MA's), (Start: 12 @4564 has 1 MA's), (Start: 21 @4621 has 43 MA's), (Start: 30 @4657 has 11 MA's), (Start: 38 @4693 has 4 MA's), (40, 4699), (51, 4759), (54, 4768), (69, 4852), (73, 4867), (76, 4903), (77, 4909), (82, 4948), (84, 4981), (87, 5002), (89, 5026), (101, 5083), (110, 5161),

Gene: Jankie_4 Start: 3408, Stop: 4106, Start Num: 4

Candidate Starts for Jankie_4:

(Start: 4 @3408 has 15 MA's), (33, 3561), (44, 3618), (60, 3690), (74, 3780), (101, 3978),

Gene: KayGee_6 Start: 4002, Stop: 4595, Start Num: 21

Candidate Starts for KayGee_6:

(3, 3912), (Start: 5 @3918 has 1 MA's), (Start: 12 @3945 has 1 MA's), (Start: 15 @3963 has 3 MA's), (Start: 17 @3972 has 2 MA's), (Start: 21 @4002 has 43 MA's), (Start: 30 @4050 has 11 MA's), (Start: 38 @4086 has 4 MA's), (45, 4125), (51, 4137), (57, 4173), (59, 4179), (63, 4197), (84, 4359), (101, 4461), (103, 4476), (115, 4563),

Gene: LastNadiia_9 Start: 6642, Stop: 7247, Start Num: 27

Candidate Starts for LastNadiia_9:

(Start: 6 @6519 has 1 MA's), (Start: 27 @6642 has 1 MA's), (Start: 36 @6684 has 10 MA's), (43, 6720), (44, 6726), (48, 6747), (71, 6864), (83, 6993), (113, 7197),

Gene: Lauer_5 Start: 4024, Stop: 4647, Start Num: 17

Candidate Starts for Lauer_5:

(3, 3964), (Start: 5 @3970 has 1 MA's), (Start: 12 @3997 has 1 MA's), (Start: 15 @4015 has 3 MA's), (Start: 17 @4024 has 2 MA's), (Start: 21 @4054 has 43 MA's), (Start: 30 @4102 has 11 MA's), (Start: 38 @4138 has 4 MA's), (45, 4177), (51, 4189), (57, 4225), (59, 4231), (63, 4249), (84, 4411), (100, 4507), (101, 4513), (103, 4528), (115, 4615),

Gene: LisoBros_4 Start: 3605, Stop: 4303, Start Num: 4

Candidate Starts for LisoBros_4:

(Start: 4 @3605 has 15 MA's), (44, 3815), (52, 3848), (60, 3887), (70, 3950), (74, 3977), (81, 4043), (87, 4100), (101, 4175), (117, 4277),

Gene: LunaStella_4 Start: 3803, Stop: 4498, Start Num: 38

Candidate Starts for LunaStella_4:

(7, 3644), (9, 3650), (Start: 38 @3803 has 4 MA's), (42, 3821), (52, 3869), (56, 3893), (63, 3926), (68, 3950), (73, 3971), (74, 3983), (78, 4019), (80, 4046), (84, 4085), (85, 4088), (91, 4151), (92, 4190), (93, 4226), (94, 4244), (96, 4256), (100, 4355), (106, 4397),

Gene: MAnor_6 Start: 3999, Stop: 4592, Start Num: 21

Candidate Starts for MAnor_6:

(3, 3909), (Start: 5 @3915 has 1 MA's), (Start: 12 @3942 has 1 MA's), (Start: 15 @3960 has 3 MA's), (Start: 17 @3969 has 2 MA's), (Start: 21 @3999 has 43 MA's), (Start: 30 @4047 has 11 MA's), (45, 4122), (51, 4134), (57, 4170), (59, 4176), (63, 4194), (84, 4356), (87, 4377), (100, 4452), (101, 4458), (103, 4473), (115, 4560),

Gene: MScarn_8 Start: 4216, Stop: 4839, Start Num: 21

Candidate Starts for MScarn_8:

(3, 4129), (Start: 5 @4135 has 1 MA's), (Start: 21 @4216 has 43 MA's), (Start: 30 @4264 has 11 MA's), (34, 4279), (37, 4297), (45, 4339), (63, 4411), (74, 4471), (76, 4495), (84, 4573), (87, 4594), (90, 4624), (109, 4768), (110, 4786),

Gene: MaVan_8 Start: 5151, Stop: 5714, Start Num: 30

Candidate Starts for MaVan_8:

(3, 5016), (Start: 5 @5022 has 1 MA's), (10, 5040), (Start: 15 @5064 has 3 MA's), (16, 5070), (Start: 30 @5151 has 11 MA's), (Start: 38 @5187 has 4 MA's), (40, 5193), (53, 5250), (63, 5304), (69, 5337), (71, 5340), (76, 5388), (84, 5466), (85, 5469), (87, 5487), (98, 5571), (100, 5577), (103, 5598), (116, 5688),

Gene: Makima_7 Start: 5797, Stop: 6360, Start Num: 36

Candidate Starts for Makima_7:

(Start: 6 @5632 has 1 MA's), (Start: 36 @5797 has 10 MA's), (43, 5833), (44, 5839), (70, 5974), (97, 6208), (102, 6238), (113, 6310),

Gene: Malvina_8 Start: 5031, Stop: 5603, Start Num: 30

Candidate Starts for Malvina_8:

(3, 4893), (Start: 4 @4896 has 15 MA's), (Start: 5 @4899 has 1 MA's), (Start: 15 @4944 has 3 MA's), (Start: 30 @5031 has 11 MA's), (31, 5034), (Start: 38 @5067 has 4 MA's), (40, 5073), (53, 5133), (63, 5187), (69, 5220), (71, 5223), (74, 5247), (76, 5271), (84, 5349), (85, 5352), (87, 5370), (98, 5460), (100, 5466), (103, 5487),

Gene: Margaret_9 Start: 4991, Stop: 5593, Start Num: 21

Candidate Starts for Margaret_9:

(3, 4898), (Start: 6 @4907 has 1 MA's), (Start: 12 @4934 has 1 MA's), (Start: 21 @4991 has 43 MA's), (Start: 30 @5027 has 11 MA's), (Start: 38 @5063 has 4 MA's), (40, 5069), (69, 5228), (73, 5243), (76, 5279), (77, 5285), (82, 5324), (84, 5357), (87, 5378), (89, 5402), (101, 5459), (110, 5537),

Gene: Mayweather_7 Start: 4620, Stop: 5213, Start Num: 21

Candidate Starts for Mayweather_7:

(3, 4530), (Start: 5 @4536 has 1 MA's), (Start: 12 @4563 has 1 MA's), (Start: 15 @4581 has 3 MA's), (Start: 17 @4590 has 2 MA's), (Start: 21 @4620 has 43 MA's), (Start: 30 @4668 has 11 MA's), (45, 4743), (51, 4755), (57, 4791), (59, 4797), (63, 4815), (84, 4977), (87, 4998), (100, 5073), (101, 5079), (103, 5094), (115, 5181),

Gene: McDazzle_5 Start: 4464, Stop: 5057, Start Num: 21

Candidate Starts for McDazzle_5:

(Start: 5 @4383 has 1 MA's), (Start: 15 @4425 has 3 MA's), (Start: 17 @4434 has 2 MA's), (Start: 21 @4464 has 43 MA's), (Start: 30 @4512 has 11 MA's), (45, 4587), (51, 4599), (57, 4635), (59, 4641), (63, 4659), (84, 4821), (87, 4842), (100, 4917), (101, 4923), (103, 4938), (115, 5025),

Gene: Merpity_5 Start: 3158, Stop: 3907, Start Num: 4

Candidate Starts for Merpity_5:

(Start: 4 @3158 has 15 MA's), (9, 3176), (Start: 15 @3209 has 3 MA's), (16, 3215), (18, 3230), (23, 3257), (Start: 30 @3299 has 11 MA's), (33, 3311), (53, 3413), (73, 3512), (74, 3524), (76, 3548), (85, 3635), (100, 3734), (107, 3788), (130, 3893),

Gene: Mireles_6 Start: 4203, Stop: 4766, Start Num: 36

Candidate Starts for Mireles_6:

(Start: 6 @4038 has 1 MA's), (Start: 36 @4203 has 10 MA's), (43, 4239), (44, 4245), (102, 4644), (113, 4716),

Gene: MrSmee_4 Start: 3158, Stop: 3907, Start Num: 4

Candidate Starts for MrSmee_4:

(Start: 4 @3158 has 15 MA's), (9, 3176), (11, 3185), (Start: 15 @3209 has 3 MA's), (16, 3215), (18, 3230), (20, 3239), (22, 3251), (23, 3257), (Start: 25 @3272 has 1 MA's), (Start: 30 @3299 has 11

MA's), (33, 3311), (53, 3413), (73, 3512), (74, 3524), (76, 3548), (85, 3635), (107, 3788),

Gene: MunkgeeRoachy_6 Start: 4269, Stop: 4892, Start Num: 21

Candidate Starts for MunkgeeRoachy_6:

(3, 4179), (Start: 5 @4185 has 1 MA's), (Start: 21 @4269 has 43 MA's), (Start: 30 @4317 has 11 MA's), (35, 4338), (37, 4350), (40, 4359), (45, 4392), (63, 4464), (74, 4524), (84, 4626), (90, 4677), (100, 4755), (109, 4821), (110, 4839), (114, 4860),

Gene: Neroxid_4 Start: 3191, Stop: 3922, Start Num: 4

Candidate Starts for Neroxid_4:

(Start: 4 @3191 has 15 MA's), (Start: 5 @3194 has 1 MA's), (16, 3248), (Start: 17 @3251 has 2 MA's), (22, 3284), (28, 3323), (43, 3398), (57, 3467), (61, 3479), (67, 3524), (72, 3542), (74, 3560), (81, 3626), (83, 3659), (87, 3683), (100, 3752), (126, 3872), (130, 3908),

Gene: Neuville_6 Start: 4338, Stop: 4859, Start Num: 36

Candidate Starts for Neuville_6:

(Start: 6 @4173 has 1 MA's), (Start: 36 @4338 has 10 MA's), (43, 4374), (84, 4650), (90, 4701), (102, 4779),

Gene: Nibbles_8 Start: 5151, Stop: 5714, Start Num: 30

Candidate Starts for Nibbles_8:

(3, 5016), (Start: 5 @5022 has 1 MA's), (10, 5040), (Start: 15 @5064 has 3 MA's), (16, 5070), (Start: 30 @5151 has 11 MA's), (Start: 38 @5187 has 4 MA's), (40, 5193), (53, 5250), (63, 5304), (69, 5337), (71, 5340), (76, 5388), (84, 5466), (85, 5469), (87, 5487), (98, 5571), (100, 5577), (103, 5598), (116, 5688),

Gene: Pons_6 Start: 3999, Stop: 4592, Start Num: 21

Candidate Starts for Pons_6:

(3, 3909), (Start: 5 @3915 has 1 MA's), (Start: 12 @3942 has 1 MA's), (Start: 15 @3960 has 3 MA's), (Start: 17 @3969 has 2 MA's), (Start: 21 @3999 has 43 MA's), (Start: 30 @4047 has 11 MA's), (45, 4122), (51, 4134), (57, 4170), (59, 4176), (63, 4194), (84, 4356), (87, 4377), (100, 4452), (101, 4458), (103, 4473), (115, 4560),

Gene: PotPie_6 Start: 4858, Stop: 5451, Start Num: 21

Candidate Starts for PotPie_6:

(3, 4768), (Start: 5 @4774 has 1 MA's), (Start: 12 @4801 has 1 MA's), (Start: 15 @4819 has 3 MA's), (Start: 17 @4828 has 2 MA's), (Start: 21 @4858 has 43 MA's), (Start: 30 @4906 has 11 MA's), (Start: 38 @4942 has 4 MA's), (45, 4981), (51, 4993), (57, 5029), (59, 5035), (63, 5053), (84, 5215), (87, 5236), (100, 5311), (101, 5317), (103, 5332), (115, 5419),

Gene: PsychoKiller_6 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for PsychoKiller_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (109, 4773), (110, 4791), (114, 4812),

Gene: Quasar_6 Start: 4890, Stop: 5465, Start Num: 30

Candidate Starts for Quasar_6:

(3, 4752), (Start: 5 @4758 has 1 MA's), (Start: 21 @4842 has 43 MA's), (Start: 30 @4890 has 11 MA's), (35, 4911), (37, 4923), (40, 4932), (45, 4965), (63, 5037), (74, 5097), (84, 5199), (90, 5250), (100, 5328), (109, 5394), (110, 5412), (114, 5433),

Gene: RADical_7 Start: 4222, Stop: 4845, Start Num: 21

Candidate Starts for RADical_7:

(3, 4132), (Start: 5 @4138 has 1 MA's), (Start: 21 @4222 has 43 MA's), (Start: 30 @4270 has 11 MA's), (35, 4291), (37, 4303), (40, 4312), (45, 4345), (63, 4417), (74, 4477), (84, 4579), (90, 4630), (100, 4708), (109, 4774), (110, 4792), (114, 4813),

Gene: RSchmailzl_7 Start: 4362, Stop: 4985, Start Num: 21

Candidate Starts for RSchmailzl_7:

(3, 4272), (Start: 5 @4278 has 1 MA's), (Start: 21 @4362 has 43 MA's), (Start: 30 @4410 has 11 MA's), (35, 4431), (37, 4443), (40, 4452), (45, 4485), (63, 4557), (74, 4617), (84, 4719), (90, 4770), (100, 4848), (109, 4914), (110, 4932), (114, 4953),

Gene: RanchParmCat_9 Start: 4991, Stop: 5593, Start Num: 21

Candidate Starts for RanchParmCat_9:

(3, 4898), (Start: 6 @4907 has 1 MA's), (Start: 12 @4934 has 1 MA's), (Start: 21 @4991 has 43 MA's), (Start: 30 @5027 has 11 MA's), (Start: 38 @5063 has 4 MA's), (69, 5228), (73, 5243), (76, 5279), (77, 5285), (82, 5324), (84, 5357), (87, 5378), (89, 5402), (101, 5459), (110, 5537),

Gene: Raqqa_5 Start: 3858, Stop: 4661, Start Num: 4

Candidate Starts for Raqqa_5:

(Start: 4 @3858 has 15 MA's), (Start: 15 @3909 has 3 MA's), (23, 3957), (33, 4011), (53, 4113), (65, 4212), (70, 4251), (73, 4266), (76, 4302), (84, 4386), (85, 4389), (100, 4488), (107, 4542),

Gene: Raya_4 Start: 3191, Stop: 3922, Start Num: 4

Candidate Starts for Raya_4:

(Start: 4 @3191 has 15 MA's), (Start: 5 @3194 has 1 MA's), (16, 3248), (Start: 17 @3251 has 2 MA's), (22, 3284), (28, 3323), (43, 3398), (57, 3467), (61, 3479), (67, 3524), (72, 3542), (74, 3560), (81, 3626), (83, 3659), (87, 3683), (100, 3752), (126, 3872), (130, 3908),

Gene: RedBaron_8 Start: 4266, Stop: 4889, Start Num: 21

Candidate Starts for RedBaron_8:

(3, 4176), (Start: 5 @4182 has 1 MA's), (Start: 21 @4266 has 43 MA's), (Start: 30 @4314 has 11 MA's), (35, 4335), (37, 4347), (40, 4356), (45, 4389), (63, 4461), (74, 4521), (84, 4623), (90, 4674), (100, 4752), (109, 4818), (114, 4857),

Gene: Renaud18_4 Start: 3803, Stop: 4378, Start Num: 38

Candidate Starts for Renaud18_4:

(7, 3644), (9, 3650), (Start: 38 @3803 has 4 MA's), (42, 3821), (51, 3866), (52, 3869), (56, 3893), (63, 3926), (68, 3950), (73, 3971), (74, 3983), (78, 4019), (80, 4046), (84, 4085), (85, 4088), (86, 4115), (100, 4235), (106, 4277),

Gene: Roberts_6 Start: 4338, Stop: 4859, Start Num: 36

Candidate Starts for Roberts_6:

(Start: 6 @4173 has 1 MA's), (Start: 36 @4338 has 10 MA's), (43, 4374), (84, 4650), (90, 4701), (102, 4779),

Gene: SheckWes_5 Start: 3999, Stop: 4592, Start Num: 21

Candidate Starts for SheckWes_5:

(3, 3909), (Start: 5 @3915 has 1 MA's), (Start: 12 @3942 has 1 MA's), (Start: 15 @3960 has 3 MA's), (Start: 17 @3969 has 2 MA's), (Start: 21 @3999 has 43 MA's), (Start: 30 @4047 has 11 MA's), (45, 4122), (51, 4134), (57, 4170), (59, 4176), (63, 4194), (84, 4356), (87, 4377), (100, 4452), (101, 4458), (103, 4473), (115, 4560),

Gene: SilverChicken_5 Start: 3735, Stop: 4229, Start Num: 38

Candidate Starts for SilverChicken_5:

(Start: 4 @3570 has 15 MA's), (8, 3585), (14, 3618), (Start: 21 @3660 has 43 MA's), (24, 3675), (Start: 27 @3687 has 1 MA's), (29, 3696), (33, 3711), (Start: 38 @3735 has 4 MA's), (47, 3783), (64, 3864), (66, 3885), (71, 3906), (80, 3996), (84, 4035), (87, 4056), (104, 4137), (105, 4143), (111, 4197),

Gene: SketchMex_5 Start: 4215, Stop: 4838, Start Num: 21

Candidate Starts for SketchMex_5:

(3, 4128), (Start: 5 @4134 has 1 MA's), (Start: 21 @4215 has 43 MA's), (Start: 30 @4263 has 11 MA's), (37, 4296), (45, 4338), (63, 4410), (74, 4470), (76, 4494), (84, 4572), (87, 4593), (90, 4623), (109, 4767), (110, 4785),

Gene: Skitty_4 Start: 3158, Stop: 3907, Start Num: 4

Candidate Starts for Skitty_4:

(Start: 4 @3158 has 15 MA's), (9, 3176), (11, 3185), (Start: 15 @3209 has 3 MA's), (16, 3215), (18, 3230), (20, 3239), (22, 3251), (23, 3257), (Start: 25 @3272 has 1 MA's), (Start: 30 @3299 has 11 MA's), (33, 3311), (53, 3413), (73, 3512), (74, 3524), (76, 3548), (85, 3635), (107, 3788), (130, 3893),

Gene: Skyerus_4 Start: 3191, Stop: 3922, Start Num: 4

Candidate Starts for Skyerus_4:

(Start: 4 @3191 has 15 MA's), (Start: 5 @3194 has 1 MA's), (16, 3248), (Start: 17 @3251 has 2 MA's), (22, 3284), (28, 3323), (43, 3398), (57, 3467), (61, 3479), (67, 3524), (72, 3542), (74, 3560), (81, 3626), (83, 3659), (87, 3683), (100, 3752), (126, 3872), (130, 3908),

Gene: Socotra_7 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Socotra_7:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: Sopespian_6 Start: 4137, Stop: 4844, Start Num: 5

Candidate Starts for Sopespian_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (109, 4773), (110, 4791), (114, 4812),

Gene: Spartoi_4 Start: 3328, Stop: 4098, Start Num: 2

Candidate Starts for Spartoi_4:

(1, 3322), (Start: 2 @3328 has 1 MA's), (20, 3427), (46, 3565), (55, 3604), (63, 3643), (64, 3652), (74, 3715), (81, 3790), (84, 3826), (87, 3847), (100, 3916), (121, 4057),

Gene: Starburst_7 Start: 4221, Stop: 4844, Start Num: 21

Candidate Starts for Starburst_7:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: SteamedHams_8 Start: 4225, Stop: 4881, Start Num: 21

Candidate Starts for SteamedHams_8:

(3, 4138), (Start: 5 @4144 has 1 MA's), (8, 4153), (Start: 21 @4225 has 43 MA's), (Start: 30 @4273 has 11 MA's), (34, 4288), (37, 4306), (45, 4348), (63, 4420), (74, 4480), (76, 4504), (84, 4582), (90, 4633), (106, 4786), (110, 4828),

Gene: Studio_6 Start: 4142, Stop: 4663, Start Num: 36

Candidate Starts for Studio_6:

(Start: 6 @3977 has 1 MA's), (Start: 36 @4142 has 10 MA's), (43, 4178), (47, 4196), (84, 4454), (88, 4493), (102, 4583),

Gene: SummitAcademy_5 Start: 4073, Stop: 4666, Start Num: 21

Candidate Starts for SummitAcademy_5:

(3, 3983), (Start: 5 @3989 has 1 MA's), (Start: 12 @4016 has 1 MA's), (Start: 15 @4034 has 3 MA's), (Start: 17 @4043 has 2 MA's), (Start: 21 @4073 has 43 MA's), (Start: 30 @4121 has 11 MA's), (Start: 38 @4157 has 4 MA's), (45, 4196), (51, 4208), (57, 4244), (59, 4250), (63, 4268), (84, 4430), (87, 4451), (100, 4526), (101, 4532), (103, 4547), (115, 4634),

Gene: Survivors_8 Start: 4918, Stop: 5568, Start Num: 15

Candidate Starts for Survivors_8:

(3, 4870), (Start: 5 @4876 has 1 MA's), (10, 4894), (Start: 15 @4918 has 3 MA's), (16, 4924), (Start: 30 @5005 has 11 MA's), (Start: 38 @5041 has 4 MA's), (40, 5047), (53, 5104), (63, 5158), (69, 5191), (71, 5194), (84, 5320), (85, 5323), (87, 5341), (98, 5425), (100, 5431), (103, 5452), (116, 5542),

Gene: SweatNTears_8 Start: 4742, Stop: 5365, Start Num: 21

Candidate Starts for SweatNTears_8:

(3, 4655), (Start: 5 @4661 has 1 MA's), (Start: 21 @4742 has 43 MA's), (Start: 30 @4790 has 11 MA's), (37, 4823), (45, 4865), (63, 4937), (74, 4997), (76, 5021), (84, 5099), (87, 5120), (90, 5150), (109, 5294), (110, 5312),

Gene: TChen_4 Start: 3803, Stop: 4498, Start Num: 38

Candidate Starts for TChen_4:

(7, 3644), (9, 3650), (Start: 38 @3803 has 4 MA's), (42, 3821), (52, 3869), (56, 3893), (63, 3926), (68, 3950), (73, 3971), (74, 3983), (78, 4019), (80, 4046), (84, 4085), (85, 4088), (91, 4151), (92, 4190), (93, 4226), (94, 4244), (96, 4256), (100, 4355), (106, 4397),

Gene: TMaxx_6 Start: 4276, Stop: 4839, Start Num: 36

Candidate Starts for TMaxx_6:

(Start: 6 @4111 has 1 MA's), (Start: 36 @4276 has 10 MA's), (43, 4312), (68, 4447), (83, 4585), (113, 4789),

Gene: Tarnish_6 Start: 4372, Stop: 4965, Start Num: 21

Candidate Starts for Tarnish_6:

(3, 4282), (Start: 5 @4288 has 1 MA's), (Start: 12 @4315 has 1 MA's), (Start: 15 @4333 has 3 MA's), (Start: 17 @4342 has 2 MA's), (Start: 21 @4372 has 43 MA's), (Start: 30 @4420 has 11 MA's), (Start: 38 @4456 has 4 MA's), (45, 4495), (51, 4507), (57, 4543), (59, 4549), (63, 4567), (84, 4729), (87, 4750), (100, 4825), (101, 4831), (103, 4846), (115, 4933),

Gene: ThetaBob_4 Start: 3803, Stop: 4378, Start Num: 38

Candidate Starts for ThetaBob_4:

(7, 3644), (9, 3650), (Start: 38 @3803 has 4 MA's), (42, 3821), (52, 3869), (56, 3893), (63, 3926), (68, 3950), (73, 3971), (74, 3983), (78, 4019), (80, 4046), (84, 4085), (85, 4088), (86, 4115), (100, 4235), (106, 4277),

Gene: Tolls_8 Start: 4226, Stop: 4885, Start Num: 21

Candidate Starts for Tolls_8:

(3, 4139), (Start: 5 @4145 has 1 MA's), (Start: 21 @4226 has 43 MA's), (Start: 30 @4274 has 11 MA's), (34, 4289), (37, 4307), (45, 4349), (63, 4421), (74, 4481), (76, 4505), (84, 4583), (90, 4634), (106, 4787), (110, 4829), (115, 4856),

Gene: Toron_4 Start: 3803, Stop: 4498, Start Num: 38

Candidate Starts for Toron_4:

(7, 3644), (9, 3650), (35, 3788), (Start: 38 @3803 has 4 MA's), (42, 3821), (52, 3869), (56, 3893), (63, 3926), (68, 3950), (73, 3971), (74, 3983), (78, 4019), (80, 4046), (84, 4085), (85, 4088), (90, 4148), (91, 4151), (92, 4190), (94, 4244), (96, 4256), (100, 4355), (106, 4397),

Gene: TripleC_9 Start: 7743, Stop: 8306, Start Num: 36

Candidate Starts for TripleC_9:

(Start: 6 @7578 has 1 MA's), (Start: 36 @7743 has 10 MA's), (43, 7779), (68, 7914), (83, 8052), (113, 8256),

Gene: Troje_6 Start: 4216, Stop: 4839, Start Num: 21

Candidate Starts for Troje_6:

(3, 4129), (Start: 5 @4135 has 1 MA's), (Start: 21 @4216 has 43 MA's), (Start: 30 @4264 has 11 MA's), (34, 4279), (37, 4297), (45, 4339), (63, 4411), (74, 4471), (76, 4495), (84, 4573), (87, 4594), (90, 4624), (109, 4768), (110, 4786),

Gene: Typhonomachy_6 Start: 4269, Stop: 4844, Start Num: 30

Candidate Starts for Typhonomachy_6:

(3, 4131), (Start: 5 @4137 has 1 MA's), (Start: 21 @4221 has 43 MA's), (Start: 30 @4269 has 11 MA's), (35, 4290), (37, 4302), (40, 4311), (45, 4344), (63, 4416), (74, 4476), (84, 4578), (90, 4629), (100, 4707), (109, 4773), (110, 4791), (114, 4812),

Gene: Vine_7 Start: 4967, Stop: 5590, Start Num: 17

Candidate Starts for Vine_7:

(3, 4907), (Start: 5 @4913 has 1 MA's), (Start: 12 @4940 has 1 MA's), (Start: 15 @4958 has 3 MA's), (Start: 17 @4967 has 2 MA's), (Start: 21 @4997 has 43 MA's), (Start: 30 @5045 has 11 MA's), (Start: 38 @5081 has 4 MA's), (45, 5120), (51, 5132), (57, 5168), (59, 5174), (63, 5192), (84, 5354), (101, 5456), (103, 5471), (115, 5558),

Gene: Wallaby_9 Start: 5150, Stop: 5713, Start Num: 30

Candidate Starts for Wallaby_9:

(3, 5015), (Start: 5 @5021 has 1 MA's), (10, 5039), (Start: 15 @5063 has 3 MA's), (16, 5069), (Start: 30 @5150 has 11 MA's), (Start: 38 @5186 has 4 MA's), (40, 5192), (53, 5249), (63, 5303), (69, 5336), (71, 5339), (84, 5465), (85, 5468), (87, 5486), (98, 5570), (100, 5576), (103, 5597), (116, 5687),

Gene: Wolfwood_8 Start: 5063, Stop: 5713, Start Num: 15

Candidate Starts for Wolfwood_8:

(3, 5015), (Start: 5 @5021 has 1 MA's), (10, 5039), (Start: 15 @5063 has 3 MA's), (16, 5069), (Start: 30 @5150 has 11 MA's), (Start: 38 @5186 has 4 MA's), (40, 5192), (53, 5249), (63, 5303), (69, 5336), (71, 5339), (76, 5387), (84, 5465), (85, 5468), (87, 5486), (98, 5570), (100, 5576), (103, 5597), (116, 5687),

Gene: Yakult_7 Start: 4190, Stop: 4777, Start Num: 21

Candidate Starts for Yakult_7:

(3, 4097), (Start: 6 @4106 has 1 MA's), (13, 4145), (16, 4157), (Start: 21 @4190 has 43 MA's), (Start: 30 @4226 has 11 MA's), (34, 4241), (69, 4412), (77, 4469), (84, 4541), (87, 4562), (89, 4586), (101, 4643), (110, 4721),

Gene: Yarn_5 Start: 4219, Stop: 4875, Start Num: 21

Candidate Starts for Yarn_5:

(3, 4132), (Start: 5 @4138 has 1 MA's), (8, 4147), (Start: 21 @4219 has 43 MA's), (Start: 30 @4267 has 11 MA's), (34, 4282), (37, 4300), (45, 4342), (63, 4414), (74, 4474), (76, 4498), (84, 4576), (90, 4627), (109, 4804), (110, 4822),

Gene: Yucky_6 Start: 4858, Stop: 5451, Start Num: 21

Candidate Starts for Yucky_6:

(3, 4768), (Start: 5 @4774 has 1 MA's), (Start: 12 @4801 has 1 MA's), (Start: 15 @4819 has 3 MA's), (Start: 17 @4828 has 2 MA's), (Start: 21 @4858 has 43 MA's), (Start: 30 @4906 has 11 MA's), (Start: 38 @4942 has 4 MA's), (45, 4981), (51, 4993), (57, 5029), (59, 5035), (63, 5053), (84, 5215), (101, 5317), (103, 5332), (115, 5419),

Gene: Yummy_7 Start: 4122, Stop: 4745, Start Num: 21

Candidate Starts for Yummy_7:

(3, 4035), (Start: 5 @4041 has 1 MA's), (Start: 21 @4122 has 43 MA's), (Start: 30 @4170 has 11 MA's), (37, 4203), (45, 4245), (63, 4317), (74, 4377), (76, 4401), (84, 4479), (87, 4500), (90, 4530), (109, 4674), (110, 4692),

Gene: Zareef_8 Start: 5152, Stop: 5715, Start Num: 30

Candidate Starts for Zareef_8:

(3, 5017), (Start: 5 @5023 has 1 MA's), (10, 5041), (Start: 15 @5065 has 3 MA's), (16, 5071), (Start: 30 @5152 has 11 MA's), (Start: 38 @5188 has 4 MA's), (40, 5194), (53, 5251), (63, 5305), (69, 5338), (71, 5341), (76, 5389), (84, 5467), (85, 5470), (87, 5488), (98, 5572), (103, 5599), (116, 5689),

Gene: Zucker_5 Start: 3788, Stop: 4504, Start Num: 12

Candidate Starts for Zucker_5:

(Start: 4 @3755 has 15 MA's), (Start: 12 @3788 has 1 MA's), (Start: 17 @3815 has 2 MA's), (18, 3827), (23, 3854), (26, 3872), (Start: 30 @3896 has 11 MA's), (41, 3944), (43, 3962), (44, 3968), (61, 4049), (62, 4058), (68, 4097), (74, 4130), (81, 4196), (100, 4328), (106, 4367), (108, 4388), (114, 4427), (124, 4484),