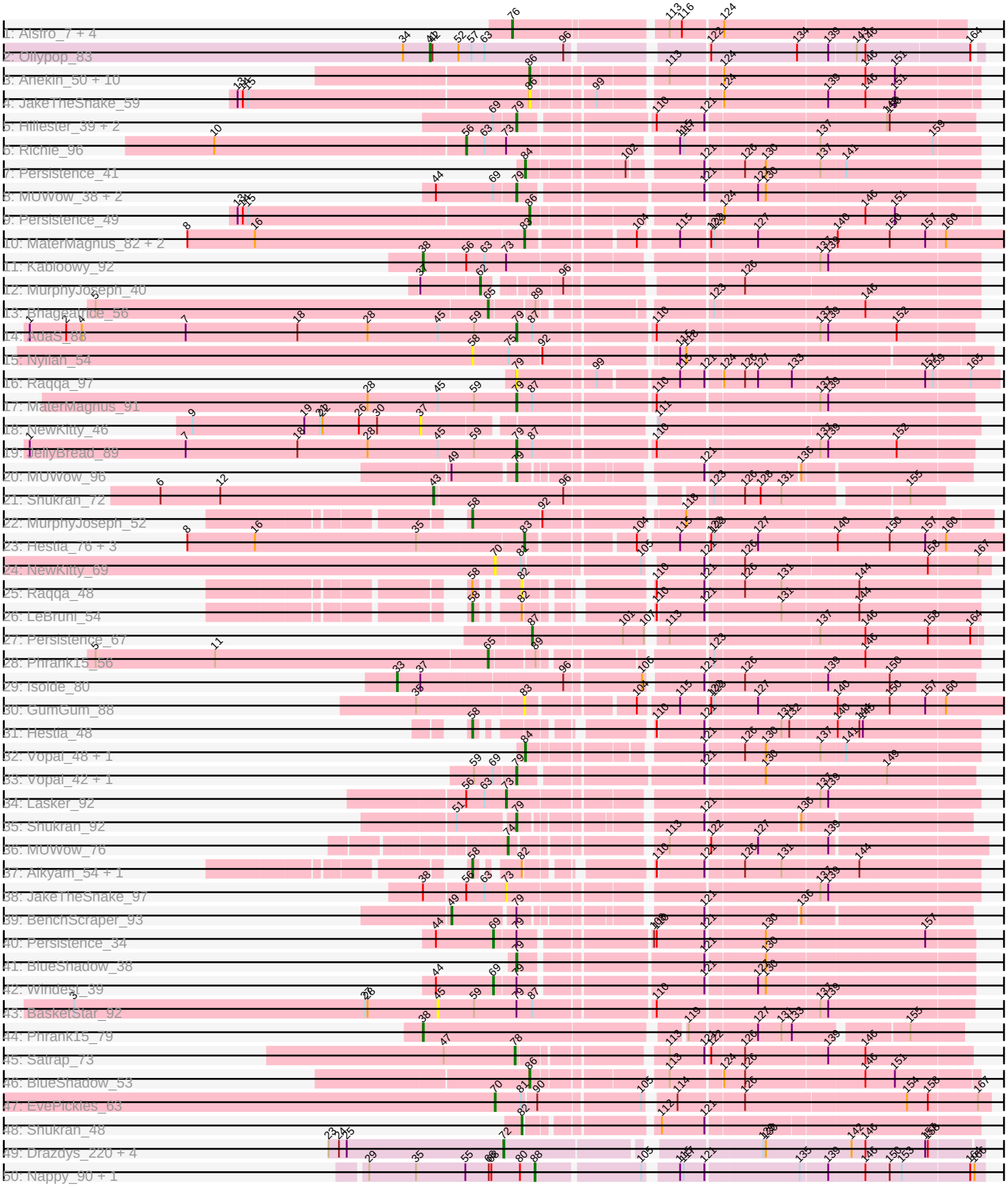
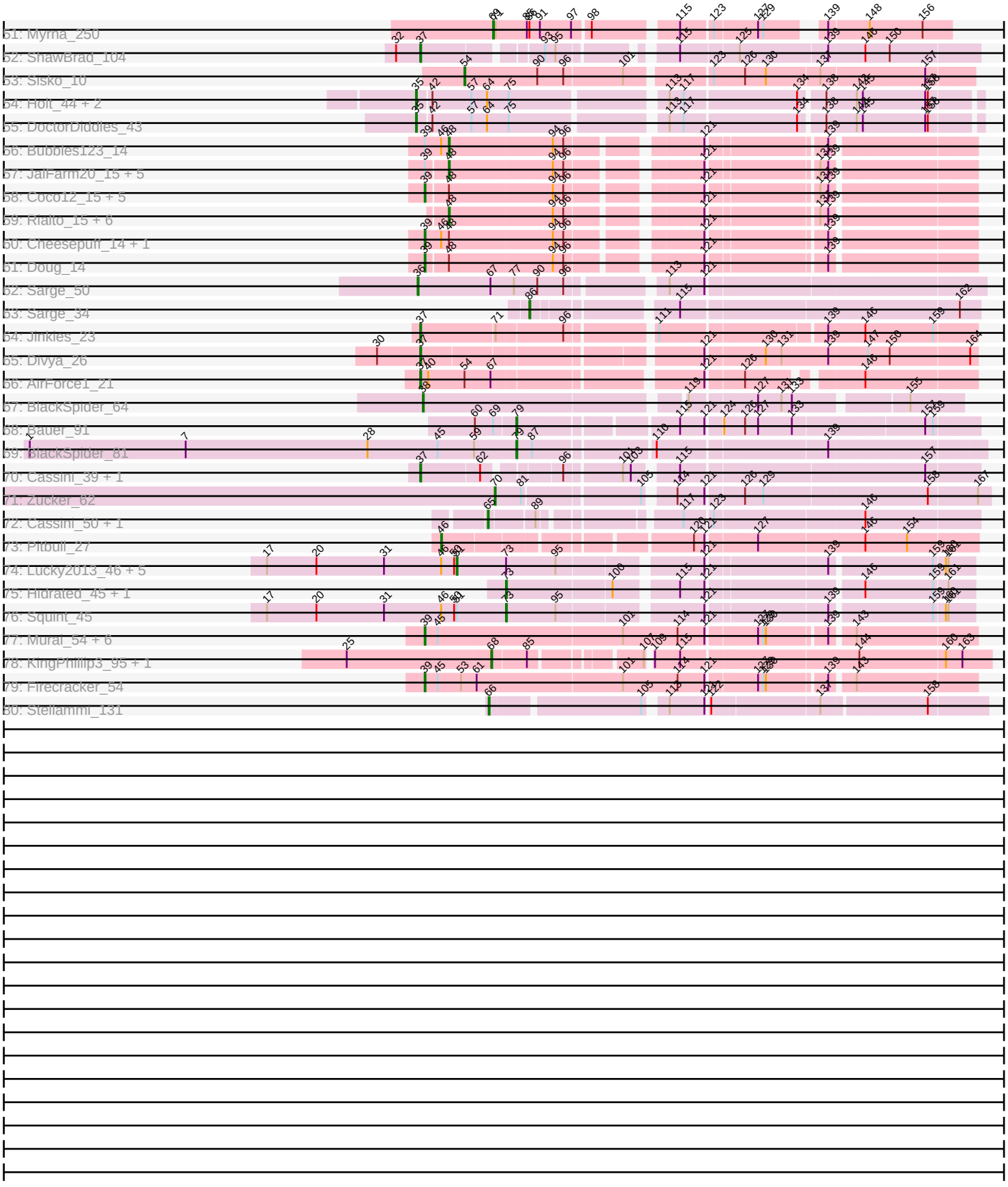
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1: Alsfro_7 + 4
2: Ollypop_83
3: Anekin_50 + 10
4: JakeTheSnake_59
5: Hillester_39 + 2
6: Richie_96
7: Persistence_41
8: MOWow_38 + 2
9: Persistence_49
10: MaterMagnus_82 + 2
11: Kabloowy_92
12: MurphyJoseph_40
13: Shaggadude_56
14: Koas_88
15: Nyliah_54
16: Raqqa_97
17: MaterMagnus_91
18: NewKitty_46
19: JellyBread_89
20: MOWow_96
21: Shukran_72
22: MurphyJoseph_52
23: Hestia_76 + 3
24: NewKitty_69
25: Raqqa_48
26: LeBrunt_54
27: Persistence_67
28: Phrank15_56
29: Isolde_80
30: GumGum_88
31: Hestia_48
32: Vopal_48 + 1
33: Vopal_42 + 1
34: Lasker_92
35: Shukran_92
36: MOWow_76
37: Alkyam_54 + 1
38: JakeTheSnake_97
39: BenchScraper_93
40: Persistence_34
41: BlueShadow_38
42: Windest_39
43: BasketStar_92
44: Phrank15_79
45: Satrap_73
46: BlueShadow_53
47: EvePickles_63
48: Shukran_48
49: Drazdys_220 + 4
50: Nappy_90 + 1

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51: Myrna_250
52: ShawBrad_104
53: Sisko_10
54: Holt_44 + 2
55: DoctorDiddles_43
56: Bubbles123_14
57: JailFarm20_15 + 5
58: Coco12_15 + 5
59: Rialto_15 + 6
60: Cheesepuff_14 + 1
61: Doug_14
62: Sarge_50
63: Sarge_34
64: Jinkies_23
65: Divya_26
66: AirForce1_21
67: BlackSpider_64
68: Bauer_91
69: BlackSpider_81
70: Cassini_39 + 1
71: Zucker_62
72: Cassini_50 + 1
73: Pitbull_27
74: Lucky2013_46 + 5
75: Hidrated_45 + 1
76: Squint_45
77: Murat_54 + 6
78: KingPhilip3_95 + 1
79: Firecracker_54
80: Stellamm_131

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 347357 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347357 has 145 members, 17 are drafts.

Phages represented in each track:
- Track 1 : Alsfro_7, Watermelon_6, Trouble_4, Tripl3t_5, Peterson_6
- Track 2 : Ollypop_83
- Track 3 : Anekin_50, Faja_54, RadFad_57, BenchScraper_52, BillyTP_55, Raqqa_45, Vopal_56, Crescenzo_53, Hillester_57, BasketStar_55, MidnightRain_57
- Track 4 : JakeTheSnake_59
- Track 5 : Hillester_39, RadFad_39, Cassini_30
- Track 6 : Richie_96
- Track 7 : Persistence_41
- Track 8 : MUWow_38, Phrank15_38, SonDevVon_39
- Track 9 : Persistence_49
- Track 10 : MaterMagnus_82, BlueShadow_80, Aikyam_81
- Track 11 : Kabloowy_92
- Track 12 : MurphyJoseph_40
- Track 13 : Bhageatrice_56
- Track 14 : AdaS_88
- Track 15 : Nyilah_54
- Track 16 : Raqqa_97
- Track 17 : MaterMagnus_91
- Track 18 : NewKitty_46
- Track 19 : JellyBread_89
- Track 20 : MUWow_96
- Track 21 : Shukran_72
- Track 22 : MurphyJoseph_52
- Track 23 : Hestia_76, BillyTP_83, Lawnathon_84, MurphyJoseph_81
- Track 24 : NewKitty_69
- Track 25 : Raqqa_48
- Track 26 : LeBruni_54
- Track 27 : Persistence_67
- Track 28 : Phrank15_56
- Track 29 : Isolde_80
- Track 30 : GumGum_88
- Track 31 : Hestia_48
- Track 32 : Vopal_48, Tiff81_42
- Track 33 : Vopal_42, BillyTP_41
- Track 34 : Lasker_92
- Track 35 : Shukran_92
- Track 36 : MUWow_76

• Track 37 : Aikyam_54, MaterMagnus_56
• Track 38 : JakeTheSnake_97
• Track 39 : BenchScraper_93
• Track 40 : Persistence_34
• Track 41 : BlueShadow_38
• Track 42 : Windest_39
• Track 43 : BasketStar_92
• Track 44 : Phrank15_79
• Track 45 : Satrap_73
• Track 46 : BlueShadow_53
• Track 47 : EvePickles_63
• Track 48 : Shukran_48
• Track 49 : Drazdys_220, ShiaLabeouf_219, Nappy_223, Ading_223, Jemmno_221
• Track 50 : Nappy_90, Cane17_77
• Track 51 : Myrna_250
• Track 52 : ShawBrad_104
• Track 53 : Sisko_10
• Track 54 : Holt_44, Sunshine924_65, Flabslab_17
• Track 55 : DoctorDiddles_43
• Track 56 : Bubbles123_14
• Track 57 : JalFarm20_15, Alexphander_15, Polka14_14, DaWorst_15, OwlsT2W_15, Phasih_14
• Track 58 : Coco12_15, Job42_15, Minnie_14, BuzzLyseyear_15, SuperGrey_14, Violac_14
• Track 59 : Rialto_15, Bobi_15, Wee_14, Sandalphon_14, Phatniss_14, Firehouse51_14, Moonbeam_14
• Track 60 : Cheesepuff_14, Latretium_14
• Track 61 : Doug_14
• Track 62 : Sarge_50
• Track 63 : Sarge_34
• Track 64 : Jinkies_23
• Track 65 : Divya_26
• Track 66 : AirForce1_21
• Track 67 : BlackSpider_64
• Track 68 : Bauer_91
• Track 69 : BlackSpider_81
• Track 70 : Cassini_39, MidnightRain_47
• Track 71 : Zucker_62
• Track 72 : Cassini_50, SpicyFrank_59
• Track 73 : Pitbull_27
• Track 74 : Lucky2013_46, Courthouse_46, MiaZeal_46, Ariel_46, Porcelain_45, Superphikiman_46
• Track 75 : Hidrated_45, Bobby_46
• Track 76 : Squint_45
• Track 77 : Murai_54, Corndog_56, Smooch_56, YungJamal_57, Ashwin_55, Vorrps_53, Mori_53
• Track 78 : KingPhillip3_95, Bora_94
• Track 79 : Firecracker_54
• Track 80 : Stellammi_131

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

The start number called the most often in the published annotations is 39, it was called in 17 of the 128 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ashwin_55, BuzzLyseyear_15, Cheesepuff_14, Coco12_15, Corndog_56, Doug_14, Firecracker_54, Job42_15, Latretium_14, Minnie_14, Mori_53, Murai_54, Smooch_56, SuperGrey_14, Violac_14, Vorrps_53, YungJamal_57,

Genes that have the "Most Annotated" start but do not call it:
• Alexphander_15, Bubbles123_14, DaWorst_15, JalFarm20_15, OwlsT2W_15, Phasih_14, Polka14_14,

Genes that do not have the "Most Annotated" start:
• AdaS_88, Ading_223, Aikyam_54, Aikyam_81, AirForce1_21, Alsfro_7, Anekin_50, Ariel_46, BasketStar_55, BasketStar_92, Bauer_91, BenchScraper_52, BenchScraper_93, Bhageatrice_56, BillyTP_41, BillyTP_55, BillyTP_83, BlackSpider_64, BlackSpider_81, BlueShadow_38, BlueShadow_53, BlueShadow_80, Bobby_46, Bobi_15, Bora_94, Cane17_77, Cassini_30, Cassini_39, Cassini_50, Courthouse_46, Crescenzo_53, Divya_26, DoctorDiddles_43, Drazdys_220, EvePickles_63, Faja_54, Firehouse51_14, Flabslab_17, GumGum_88, Hestia_48, Hestia_76, Hidrated_45, Hillester_39, Hillester_57, Holt_44, Isolde_80, JakeTheSnake_59, JakeTheSnake_97, JellyBread_89, Jemmno_221, Jinkies_23, Kabloowy_92, KingPhillip3_95, Lasker_92, Lawnathon_84, LeBruni_54, Lucky2013_46, MUWow_38, MUWow_76, MUWow_96, MaterMagnus_56, MaterMagnus_82, MaterMagnus_91, MiaZeal_46, MidnightRain_47, MidnightRain_57, Moonbeam_14, MurphyJoseph_40, MurphyJoseph_52, MurphyJoseph_81, Myrna_250, Nappy_223, Nappy_90, NewKitty_46, NewKitty_69, Nyilah_54, Ollypop_83, Persistence_34, Persistence_41, Persistence_49, Persistence_67, Peterson_6, Phatniss_14, Phrank15_38, Phrank15_56, Phrank15_79, Pitbull_27, Porcelain_45, RadFad_39, RadFad_57, Raqqa_45, Raqqa_48, Raqqa_97, Rialto_15, Richie_96, Sandalphon_14, Sarge_34, Sarge_50, Satrap_73, ShawBrad_104, ShiaLabeouf_219, Shukran_48, Shukran_72, Shukran_92, Sisko_10, SonDevVon_39, SpicyFrank_59, Squint_45, Stellammi_131, Sunshine924_65, Superphikiman_46, Tiff81_42, Tripl3t_5, Trouble_4, Vopal_42, Vopal_48, Vopal_56, Watermelon_6, Wee_14, Windest_39, Zucker_62,

Summary by start number:

Start 33:
• Found in 1 of 145 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Isolde_80 (AY),

Start 35:
• Found in 11 of 145 (7.6%) of genes in pham
• Manual Annotations of this start: 4 of 128
• Called 36.4% of time when present
• Phage (with cluster) where this start called: DoctorDiddles_43 (E), Flabslab_17 (C1), Holt_44 (E), Sunshine924_65 (A1),

Start 36:

• Found in 1 of 145 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sarge_50 (FB),

Start 37:
• Found in 9 of 145 (6.2%) of genes in pham
• Manual Annotations of this start: 6 of 128
• Called 77.8% of time when present
• Phage (with cluster) where this start called: AirForce1_21 (FL), Cassini_39 (FN), Divya_26 (FL), Jinkies_23 (FL), MidnightRain_47 (AY), NewKitty_46 (AY), ShawBrad_104 (DN1),

Start 38:
• Found in 4 of 145 (2.8%) of genes in pham
• Manual Annotations of this start: 3 of 128
• Called 75.0% of time when present
• Phage (with cluster) where this start called: BlackSpider_64 (FN), Kabloowy_92 (AY), Phrank15_79 (AY),

Start 39:
• Found in 24 of 145 (16.6%) of genes in pham
• Manual Annotations of this start: 17 of 128
• Called 70.8% of time when present
• Phage (with cluster) where this start called: Ashwin_55 (O), BuzzLyseyear_15 (F1), Cheesepuff_14 (F1), Coco12_15 (F1), Corndog_56 (O), Doug_14 (F1), Firecracker_54 (O), Job42_15 (F1), Latretium_14 (F1), Minnie_14 (F1), Mori_53 (O), Murai_54 (O), Smooch_56 (O), SuperGrey_14 (F1), Violac_14 (F1), Vorrps_53 (O), YungJamal_57 (O),

Start 41:
• Found in 1 of 145 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ollypop_83 (AP2),

Start 43:
• Found in 1 of 145 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Shukran_72 (AY),

Start 45:
• Found in 13 of 145 (9.0%) of genes in pham
• No Manual Annotations of this start.
• Called 7.7% of time when present
• Phage (with cluster) where this start called: BasketStar_92 (AY),

Start 46:
• Found in 11 of 145 (7.6%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 9.1% of time when present
• Phage (with cluster) where this start called: Pitbull_27 (FQ1),

Start 48:
• Found in 23 of 145 (15.9%) of genes in pham
• Manual Annotations of this start: 14 of 128
• Called 60.9% of time when present
• Phage (with cluster) where this start called: Alexphander_15 (F1), Bobi_15 (F1), Bubbles123_14 (F1), DaWorst_15 (F1), Firehouse51_14 (F1), JalFarm20_15 (F1), Moonbeam_14 (F1), OwlsT2W_15 (F1), Phasih_14 (F1), Phatniss_14 (F1), Polka14_14 (F1), Rialto_15 (F1), Sandalphon_14 (F1), Wee_14 (F1),

Start 49:
• Found in 2 of 145 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 50.0% of time when present
• Phage (with cluster) where this start called: BenchScraper_93 (AY),

Start 51:
• Found in 8 of 145 (5.5%) of genes in pham
• Manual Annotations of this start: 6 of 128
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Ariel_46 (J), Courthouse_46 (J), Lucky2013_46 (J), MiaZeal_46 (J), Porcelain_45 (J), Superphikiman_46 (J),

Start 54:
• Found in 2 of 145 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Sisko_10 (DR),

Start 56:
• Found in 4 of 145 (2.8%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Richie_96 (AY),

Start 58:
• Found in 7 of 145 (4.8%) of genes in pham
• Manual Annotations of this start: 4 of 128
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Aikyam_54 (AY), Hestia_48 (AY), LeBruni_54 (AY), MaterMagnus_56 (AY), MurphyJoseph_52 (AY), Nyilah_54 (AY),

Start 62:
• Found in 3 of 145 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 33.3% of time when present
• Phage (with cluster) where this start called: MurphyJoseph_40 (AY),

Start 65:
• Found in 4 of 145 (2.8%) of genes in pham
• Manual Annotations of this start: 4 of 128
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Bhageatrice_56 (AY), Cassini_50 (FN), Phrank15_56 (AY), SpicyFrank_59 (AY),

Start 66:
• Found in 3 of 145 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Stellammi_131 (UNK),

Start 68:
• Found in 4 of 145 (2.8%) of genes in pham
• Manual Annotations of this start: 2 of 128
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Bora_94 (O), KingPhillip3_95 (O),

Start 69:
• Found in 12 of 145 (8.3%) of genes in pham
• Manual Annotations of this start: 3 of 128
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Myrna_250 (C2), Persistence_34 (AY), Windest_39 (AY),

Start 70:
• Found in 3 of 145 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EvePickles_63 (AY), NewKitty_69 (AY), Zucker_62 (FN),

Start 72:
• Found in 5 of 145 (3.4%) of genes in pham
• Manual Annotations of this start: 5 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ading_223 (C1), Drazdys_220 (C1), Jemmno_221 (C1), Nappy_223 (C1), ShiaLabeouf_219 (C1),

Start 73:
• Found in 13 of 145 (9.0%) of genes in pham
• Manual Annotations of this start: 4 of 128
• Called 38.5% of time when present
• Phage (with cluster) where this start called: Bobby_46 (J), Hidrated_45 (J), JakeTheSnake_97 (AY), Lasker_92 (AY), Squint_45 (J),

Start 74:
• Found in 1 of 145 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MUWow_76 (AY),

Start 76:
• Found in 5 of 145 (3.4%) of genes in pham
• Manual Annotations of this start: 5 of 128
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Alsfro_7 (A1), Peterson_6 (A1), Tripl3t_5 (A1), Trouble_4 (A1), Watermelon_6 (A1),

Start 78:
• Found in 1 of 145 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Satrap_73 (AY),

Start 79:
• Found in 21 of 145 (14.5%) of genes in pham
• Manual Annotations of this start: 14 of 128
• Called 81.0% of time when present
• Phage (with cluster) where this start called: AdaS_88 (AY), Bauer_91 (FN), BillyTP_41 (AY), BlackSpider_81 (FN), BlueShadow_38 (AY), Cassini_30 (FN), Hillester_39 (AY), JellyBread_89 (AY), MUWow_38 (AY), MUWow_96 (AY), MaterMagnus_91 (AY), Phrank15_38 (AY), RadFad_39 (AY), Raqqa_97 (AY), Shukran_92 (AY), SonDevVon_39 (AY), Vopal_42 (AY),

Start 82:
• Found in 5 of 145 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 128
• Called 40.0% of time when present
• Phage (with cluster) where this start called: Raqqa_48 (AY), Shukran_48 (AY),

Start 83:
• Found in 8 of 145 (5.5%) of genes in pham
• Manual Annotations of this start: 6 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aikyam_81 (AY), BillyTP_83 (AY), BlueShadow_80 (AY), GumGum_88 (AY), Hestia_76 (AY), Lawnathon_84 (AY), MaterMagnus_82 (AY), MurphyJoseph_81 (AY),

Start 84:
• Found in 3 of 145 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Persistence_41 (AY), Tiff81_42 (AY), Vopal_48 (AY),

Start 86:
• Found in 16 of 145 (11.0%) of genes in pham
• Manual Annotations of this start: 11 of 128
• Called 93.8% of time when present
• Phage (with cluster) where this start called: Anekin_50 (AY), BasketStar_55 (AY), BenchScraper_52 (AY), BillyTP_55 (AY), BlueShadow_53 (AY), Crescenzo_53 (AY), Faja_54 (AY), Hillester_57 (AY), JakeTheSnake_59 (AY), MidnightRain_57 (AY), Persistence_49 (AY), RadFad_57 (AY), Raqqa_45 (AY), Sarge_34 (FB), Vopal_56 (AY),

Start 87:
• Found in 6 of 145 (4.1%) of genes in pham
• Manual Annotations of this start: 1 of 128

• Called 16.7% of time when present
• Phage (with cluster) where this start called: Persistence_67 (AY),

Start 88:
• Found in 2 of 145 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 128
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cane17_77 (C1), Nappy_90 (C1),

Summary by clusters:

There are 16 clusters represented in this pham: F1, UNK, E, AP2, DR, J, O, A1, FB, DN1, AY, C2, C1, FQ1, FL, FN,

Info for manual annotations of cluster A1:
•Start number 35 was manually annotated 1 time for cluster A1.
•Start number 76 was manually annotated 5 times for cluster A1.

Info for manual annotations of cluster AP2:
•Start number 41 was manually annotated 1 time for cluster AP2.

Info for manual annotations of cluster AY:
•Start number 33 was manually annotated 1 time for cluster AY.
•Start number 37 was manually annotated 1 time for cluster AY.
•Start number 38 was manually annotated 2 times for cluster AY.
•Start number 43 was manually annotated 1 time for cluster AY.
•Start number 49 was manually annotated 1 time for cluster AY.
•Start number 56 was manually annotated 1 time for cluster AY.
•Start number 58 was manually annotated 4 times for cluster AY.
•Start number 62 was manually annotated 1 time for cluster AY.
•Start number 65 was manually annotated 3 times for cluster AY.
•Start number 69 was manually annotated 2 times for cluster AY.
•Start number 70 was manually annotated 1 time for cluster AY.
•Start number 73 was manually annotated 1 time for cluster AY.
•Start number 74 was manually annotated 1 time for cluster AY.
•Start number 78 was manually annotated 1 time for cluster AY.
•Start number 79 was manually annotated 11 times for cluster AY.
•Start number 82 was manually annotated 1 time for cluster AY.
•Start number 83 was manually annotated 6 times for cluster AY.
•Start number 84 was manually annotated 2 times for cluster AY.
•Start number 86 was manually annotated 10 times for cluster AY.
•Start number 87 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster C1:
•Start number 35 was manually annotated 1 time for cluster C1.
•Start number 72 was manually annotated 5 times for cluster C1.
•Start number 88 was manually annotated 2 times for cluster C1.

Info for manual annotations of cluster C2:
•Start number 69 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster DN1:
•Start number 37 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DR:
•Start number 54 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster E:
•Start number 35 was manually annotated 2 times for cluster E.

Info for manual annotations of cluster F1:
•Start number 39 was manually annotated 9 times for cluster F1.
•Start number 48 was manually annotated 14 times for cluster F1.

Info for manual annotations of cluster FB:
•Start number 36 was manually annotated 1 time for cluster FB.
•Start number 86 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FL:
•Start number 37 was manually annotated 3 times for cluster FL.

Info for manual annotations of cluster FN:
•Start number 37 was manually annotated 1 time for cluster FN.
•Start number 38 was manually annotated 1 time for cluster FN.
•Start number 65 was manually annotated 1 time for cluster FN.
•Start number 70 was manually annotated 1 time for cluster FN.
•Start number 79 was manually annotated 3 times for cluster FN.

Info for manual annotations of cluster FQ1:
•Start number 46 was manually annotated 1 time for cluster FQ1.

Info for manual annotations of cluster J:
•Start number 51 was manually annotated 6 times for cluster J.
•Start number 73 was manually annotated 3 times for cluster J.

Info for manual annotations of cluster O:
•Start number 39 was manually annotated 8 times for cluster O.
•Start number 68 was manually annotated 2 times for cluster O.

Info for manual annotations of cluster UNK:
•Start number 66 was manually annotated 1 time for cluster UNK.

Gene Information:

Gene: AdaS_88 Start: 48513, Stop: 48998, Start Num: 79
Candidate Starts for AdaS_88:
(1, 47952), (2, 47994), (4, 48012), (7, 48132), (18, 48261), (28, 48342), (45, 48423), (59, 48465), (Start: 79 @48513 has 14 MA's), (Start: 87 @48531 has 1 MA's), (110, 48660), (137, 48834), (139, 48843), (152, 48915),

Gene: Ading_223 Start: 126625, Stop: 127119, Start Num: 72
Candidate Starts for Ading_223:
(23, 126424), (24, 126436), (25, 126445), (Start: 72 @126625 has 5 MA's), (129, 126883), (130, 126886), (142, 126979), (146, 126994), (157, 127060), (158, 127063),

Gene: Aikyam_54 Start: 31109, Stop: 31600, Start Num: 58
Candidate Starts for Aikyam_54:
(Start: 58 @31109 has 4 MA's), (Start: 82 @31145 has 1 MA's), (110, 31256), (121, 31307), (126, 31343), (131, 31385), (144, 31469),

Gene: Aikyam_81 Start: 44887, Stop: 45402, Start Num: 83
Candidate Starts for Aikyam_81:
(8, 44503), (16, 44581), (Start: 83 @44887 has 6 MA's), (104, 44995), (115, 45037), (122, 45067), (123, 45070), (127, 45115), (140, 45202), (150, 45259), (157, 45298), (160, 45319),

Gene: AirForce1_21 Start: 17126, Stop: 16560, Start Num: 37
Candidate Starts for AirForce1_21:
(Start: 37 @17126 has 6 MA's), (40, 17117), (Start: 54 @17075 has 1 MA's), (67, 17045), (121, 16829), (126, 16793), (146, 16682),

Gene: Alexphander_15 Start: 9340, Stop: 9879, Start Num: 48
Candidate Starts for Alexphander_15:
(Start: 39 @9319 has 17 MA's), (Start: 48 @9340 has 14 MA's), (94, 9457), (96, 9469), (121, 9601), (137, 9715), (139, 9724),

Gene: Alsfro_7 Start: 2250, Stop: 2729, Start Num: 76
Candidate Starts for Alsfro_7:
(Start: 76 @2250 has 5 MA's), (113, 2409), (116, 2421), (124, 2463),

Gene: Anekin_50 Start: 31927, Stop: 32388, Start Num: 86
Candidate Starts for Anekin_50:
(Start: 86 @31927 has 11 MA's), (113, 32059), (124, 32113), (146, 32266), (151, 32299),

Gene: Ariel_46 Start: 36674, Stop: 37219, Start Num: 51
Candidate Starts for Ariel_46:
(17, 36455), (20, 36512), (31, 36590), (Start: 46 @36656 has 1 MA's), (50, 36671), (Start: 51 @36674 has 6 MA's), (Start: 73 @36731 has 4 MA's), (95, 36788), (121, 36938), (139, 37067), (159, 37175), (160, 37187), (161, 37190),

Gene: Ashwin_55 Start: 26608, Stop: 27207, Start Num: 39
Candidate Starts for Ashwin_55:
(Start: 39 @26608 has 17 MA's), (45, 26623), (101, 26833), (114, 26896), (121, 26926), (127, 26980), (129, 26986), (130, 26989), (139, 27052), (143, 27076),

Gene: BasketStar_92 Start: 50831, Stop: 51406, Start Num: 45
Candidate Starts for BasketStar_92:
(3, 50411), (27, 50747), (28, 50750), (45, 50831), (59, 50873), (Start: 79 @50921 has 14 MA's), (Start: 87 @50939 has 1 MA's), (110, 51068), (137, 51242), (139, 51251),

Gene: BasketStar_55 Start: 32988, Stop: 33449, Start Num: 86
Candidate Starts for BasketStar_55:
(Start: 86 @32988 has 11 MA's), (113, 33120), (124, 33174), (146, 33327), (151, 33360),

Gene: Bauer_91 Start: 48793, Stop: 49275, Start Num: 79
Candidate Starts for Bauer_91:
(60, 48748), (Start: 69 @48769 has 3 MA's), (Start: 79 @48793 has 14 MA's), (115, 48958), (121, 48985), (124, 49000), (126, 49021), (127, 49036), (133, 49075), (157, 49216), (159, 49225),

Gene: BenchScraper_52 Start: 31813, Stop: 32274, Start Num: 86
Candidate Starts for BenchScraper_52:
(Start: 86 @31813 has 11 MA's), (113, 31945), (124, 31999), (146, 32152), (151, 32185),

Gene: BenchScraper_93 Start: 49693, Stop: 50208, Start Num: 49
Candidate Starts for BenchScraper_93:
(Start: 49 @49693 has 1 MA's), (Start: 79 @49759 has 14 MA's), (121, 49933), (136, 50029),

Gene: Bhageatrice_56 Start: 34427, Stop: 34927, Start Num: 65
Candidate Starts for Bhageatrice_56:
(5, 33977), (Start: 65 @34427 has 4 MA's), (89, 34475), (123, 34640), (146, 34802),

Gene: BillyTP_83 Start: 47477, Stop: 47989, Start Num: 83
Candidate Starts for BillyTP_83:
(8, 47093), (16, 47171), (Start: 35 @47357 has 4 MA's), (Start: 83 @47477 has 6 MA's), (104, 47585), (115, 47627), (122, 47657), (123, 47660), (127, 47705), (140, 47792), (150, 47849), (157, 47888), (160, 47909),

Gene: BillyTP_55 Start: 33684, Stop: 34145, Start Num: 86
Candidate Starts for BillyTP_55:
(Start: 86 @33684 has 11 MA's), (113, 33816), (124, 33870), (146, 34023), (151, 34056),

Gene: BillyTP_41 Start: 27467, Stop: 27946, Start Num: 79
Candidate Starts for BillyTP_41:
(59, 27422), (Start: 69 @27443 has 3 MA's), (Start: 79 @27467 has 14 MA's), (121, 27659), (130, 27719), (149, 27851),

Gene: BlackSpider_64 Start: 38978, Stop: 39544, Start Num: 38
Candidate Starts for BlackSpider_64:
(Start: 38 @38978 has 3 MA's), (119, 39260), (127, 39329), (131, 39356), (133, 39368), (155, 39485),

Gene: BlackSpider_81 Start: 48788, Stop: 49288, Start Num: 79
Candidate Starts for BlackSpider_81:
(1, 48227), (7, 48407), (28, 48617), (45, 48698), (59, 48740), (Start: 79 @48788 has 14 MA's), (Start: 87 @48806 has 1 MA's), (110, 48935), (139, 49118),

Gene: BlueShadow_80 Start: 46732, Stop: 47244, Start Num: 83
Candidate Starts for BlueShadow_80:
(8, 46348), (16, 46426), (Start: 83 @46732 has 6 MA's), (104, 46840), (115, 46882), (122, 46912), (123, 46915), (127, 46960), (140, 47047), (150, 47104), (157, 47143), (160, 47164),

Gene: BlueShadow_38 Start: 26032, Stop: 26511, Start Num: 79
Candidate Starts for BlueShadow_38:
(Start: 79 @26032 has 14 MA's), (121, 26224), (130, 26284),

Gene: BlueShadow_53 Start: 32474, Stop: 32935, Start Num: 86
Candidate Starts for BlueShadow_53:
(Start: 86 @32474 has 11 MA's), (113, 32606), (124, 32660), (126, 32681), (146, 32813), (151, 32846),

Gene: Bobby_46 Start: 39072, Stop: 39560, Start Num: 73
Candidate Starts for Bobby_46:

(Start: 73 @39072 has 4 MA's), (100, 39189), (115, 39252), (121, 39279), (146, 39441), (159, 39516), (161, 39531),

Gene: Bobi_15 Start: 9361, Stop: 9900, Start Num: 48
Candidate Starts for Bobi_15:
(Start: 48 @9361 has 14 MA's), (94, 9478), (96, 9490), (121, 9622), (137, 9736), (139, 9745),

Gene: Bora_94 Start: 59313, Stop: 58804, Start Num: 68
Candidate Starts for Bora_94:
(25, 59475), (Start: 68 @59313 has 2 MA's), (85, 59277), (107, 59169), (109, 59166), (115, 59139), (144, 58947), (160, 58854), (163, 58836),

Gene: Bubbles123_14 Start: 9517, Stop: 10056, Start Num: 48
Candidate Starts for Bubbles123_14:
(Start: 39 @9490 has 17 MA's), (Start: 46 @9508 has 1 MA's), (Start: 48 @9517 has 14 MA's), (94, 9634), (96, 9646), (121, 9778), (139, 9901),

Gene: BuzzLyseyear_15 Start: 9319, Stop: 9879, Start Num: 39
Candidate Starts for BuzzLyseyear_15:
(Start: 39 @9319 has 17 MA's), (Start: 48 @9340 has 14 MA's), (94, 9457), (96, 9469), (121, 9601), (137, 9715), (139, 9724),

Gene: Cane17_77 Start: 32003, Stop: 32473, Start Num: 88
Candidate Starts for Cane17_77:
(29, 31814), (Start: 35 @31868 has 4 MA's), (55, 31925), (Start: 66 @31952 has 1 MA's), (Start: 68 @31955 has 2 MA's), (80, 31988), (Start: 88 @32003 has 2 MA's), (105, 32117), (115, 32147), (117, 32150), (121, 32174), (135, 32276), (139, 32306), (146, 32345), (150, 32372), (153, 32384), (164, 32459), (166, 32462),

Gene: Cassini_30 Start: 23657, Stop: 24136, Start Num: 79
Candidate Starts for Cassini_30:
(Start: 69 @23633 has 3 MA's), (Start: 79 @23657 has 14 MA's), (110, 23795), (121, 23849), (149, 24041), (150, 24044),

Gene: Cassini_39 Start: 27297, Stop: 26728, Start Num: 37
Candidate Starts for Cassini_39:
(Start: 37 @27297 has 6 MA's), (Start: 62 @27231 has 1 MA's), (96, 27159), (101, 27099), (103, 27090), (115, 27048), (157, 26787),

Gene: Cassini_50 Start: 31783, Stop: 32283, Start Num: 65
Candidate Starts for Cassini_50:
(Start: 65 @31783 has 4 MA's), (89, 31831), (117, 31966), (123, 31996), (146, 32158),

Gene: Cheesepuff_14 Start: 9481, Stop: 10047, Start Num: 39
Candidate Starts for Cheesepuff_14:
(Start: 39 @9481 has 17 MA's), (Start: 46 @9499 has 1 MA's), (Start: 48 @9508 has 14 MA's), (94, 9625), (96, 9637), (121, 9769), (139, 9892),

Gene: Coco12_15 Start: 9318, Stop: 9878, Start Num: 39
Candidate Starts for Coco12_15:
(Start: 39 @9318 has 17 MA's), (Start: 48 @9339 has 14 MA's), (94, 9456), (96, 9468), (121, 9600), (137, 9714), (139, 9723),

Gene: Corndog_56 Start: 27158, Stop: 27757, Start Num: 39
Candidate Starts for Corndog_56:
(Start: 39 @27158 has 17 MA's), (45, 27173), (101, 27383), (114, 27446), (121, 27476), (127, 27530), (129, 27536), (130, 27539), (139, 27602), (143, 27626),

Gene: Courthouse_46 Start: 37078, Stop: 37623, Start Num: 51
Candidate Starts for Courthouse_46:
(17, 36859), (20, 36916), (31, 36994), (Start: 46 @37060 has 1 MA's), (50, 37075), (Start: 51 @37078 has 6 MA's), (Start: 73 @37135 has 4 MA's), (95, 37192), (121, 37342), (139, 37471), (159, 37579), (160, 37591), (161, 37594),

Gene: Crescenzo_53 Start: 32978, Stop: 33439, Start Num: 86
Candidate Starts for Crescenzo_53:
(Start: 86 @32978 has 11 MA's), (113, 33110), (124, 33164), (146, 33317), (151, 33350),

Gene: DaWorst_15 Start: 9345, Stop: 9884, Start Num: 48
Candidate Starts for DaWorst_15:
(Start: 39 @9324 has 17 MA's), (Start: 48 @9345 has 14 MA's), (94, 9462), (96, 9474), (121, 9606), (137, 9720), (139, 9729),

Gene: Divya_26 Start: 21127, Stop: 20543, Start Num: 37
Candidate Starts for Divya_26:
(30, 21172), (Start: 37 @21127 has 6 MA's), (121, 20836), (130, 20776), (131, 20758), (139, 20704), (147, 20662), (150, 20638), (164, 20551),

Gene: DoctorDiddles_43 Start: 34776, Stop: 34189, Start Num: 35
Candidate Starts for DoctorDiddles_43:
(Start: 35 @34776 has 4 MA's), (42, 34761), (57, 34716), (64, 34698), (75, 34674), (113, 34515), (117, 34500), (134, 34377), (138, 34353), (143, 34320), (145, 34314), (157, 34245), (158, 34242),

Gene: Doug_14 Start: 9472, Stop: 10032, Start Num: 39
Candidate Starts for Doug_14:
(Start: 39 @9472 has 17 MA's), (Start: 48 @9493 has 14 MA's), (94, 9610), (96, 9622), (121, 9754), (139, 9877),

Gene: Drazdys_220 Start: 125724, Stop: 126218, Start Num: 72
Candidate Starts for Drazdys_220:
(23, 125523), (24, 125535), (25, 125544), (Start: 72 @125724 has 5 MA's), (129, 125982), (130, 125985), (142, 126078), (146, 126093), (157, 126159), (158, 126162),

Gene: EvePickles_63 Start: 35612, Stop: 36130, Start Num: 70
Candidate Starts for EvePickles_63:
(Start: 70 @35612 has 2 MA's), (81, 35642), (90, 35657), (105, 35768), (114, 35795), (126, 35861), (154, 36038), (158, 36062), (167, 36116),

Gene: Faja_54 Start: 33652, Stop: 34113, Start Num: 86
Candidate Starts for Faja_54:
(Start: 86 @33652 has 11 MA's), (113, 33784), (124, 33838), (146, 33991), (151, 34024),

Gene: Firecracker_54 Start: 26311, Stop: 26910, Start Num: 39
Candidate Starts for Firecracker_54:
(Start: 39 @26311 has 17 MA's), (45, 26326), (53, 26353), (61, 26371), (101, 26536), (114, 26599), (121, 26629), (127, 26683), (129, 26689), (130, 26692), (139, 26755), (143, 26779),

Gene: Firehouse51_14 Start: 9532, Stop: 10071, Start Num: 48
Candidate Starts for Firehouse51_14:
(Start: 48 @9532 has 14 MA's), (94, 9649), (96, 9661), (121, 9793), (137, 9907), (139, 9916),

Gene: Flabslab_17 Start: 5449, Stop: 6036, Start Num: 35
Candidate Starts for Flabslab_17:
(Start: 35 @5449 has 4 MA's), (42, 5464), (57, 5509), (64, 5527), (75, 5551), (113, 5710), (117, 5725), (134, 5848), (138, 5872), (143, 5905), (145, 5911), (157, 5980), (158, 5983),

Gene: GumGum_88 Start: 47517, Stop: 48029, Start Num: 83
Candidate Starts for GumGum_88:
(Start: 35 @47397 has 4 MA's), (Start: 83 @47517 has 6 MA's), (104, 47625), (115, 47667), (122, 47697), (123, 47700), (127, 47745), (140, 47832), (150, 47889), (157, 47928), (160, 47949),

Gene: Hestia_76 Start: 44223, Stop: 44738, Start Num: 83
Candidate Starts for Hestia_76:
(8, 43839), (16, 43917), (Start: 35 @44103 has 4 MA's), (Start: 83 @44223 has 6 MA's), (104, 44331), (115, 44373), (122, 44403), (123, 44406), (127, 44451), (140, 44538), (150, 44595), (157, 44634), (160, 44655),

Gene: Hestia_48 Start: 30332, Stop: 30823, Start Num: 58
Candidate Starts for Hestia_48:
(Start: 58 @30332 has 4 MA's), (110, 30479), (121, 30530), (131, 30608), (132, 30617), (140, 30668), (144, 30692), (145, 30695),

Gene: Hidrated_45 Start: 40264, Stop: 40752, Start Num: 73
Candidate Starts for Hidrated_45:
(Start: 73 @40264 has 4 MA's), (100, 40381), (115, 40444), (121, 40471), (146, 40633), (159, 40708), (161, 40723),

Gene: Hillester_39 Start: 26218, Stop: 26697, Start Num: 79
Candidate Starts for Hillester_39:
(Start: 69 @26194 has 3 MA's), (Start: 79 @26218 has 14 MA's), (110, 26356), (121, 26410), (149, 26602), (150, 26605),

Gene: Hillester_57 Start: 33410, Stop: 33871, Start Num: 86
Candidate Starts for Hillester_57:
(Start: 86 @33410 has 11 MA's), (113, 33542), (124, 33596), (146, 33749), (151, 33782),

Gene: Holt_44 Start: 34891, Stop: 34304, Start Num: 35
Candidate Starts for Holt_44:
(Start: 35 @34891 has 4 MA's), (42, 34876), (57, 34831), (64, 34813), (75, 34789), (113, 34630), (117, 34615), (134, 34492), (138, 34468), (143, 34435), (145, 34429), (157, 34360), (158, 34357),

Gene: Isolde_80 Start: 46237, Stop: 46845, Start Num: 33
Candidate Starts for Isolde_80:
(Start: 33 @46237 has 1 MA's), (Start: 37 @46264 has 6 MA's), (96, 46420), (106, 46501), (121, 46558), (126, 46594), (139, 46687), (150, 46753),

Gene: JakeTheSnake_59 Start: 34511, Stop: 34972, Start Num: 86
Candidate Starts for JakeTheSnake_59:

(13, 34181), (14, 34187), (15, 34193), (Start: 86 @34511 has 11 MA's), (99, 34574), (124, 34697), (139, 34811), (146, 34850), (151, 34883),

Gene: JakeTheSnake_97 Start: 53567, Stop: 54058, Start Num: 73
Candidate Starts for JakeTheSnake_97:
(Start: 38 @53477 has 3 MA's), (Start: 56 @53522 has 1 MA's), (63, 53543), (Start: 73 @53567 has 4 MA's), (137, 53885), (139, 53894),

Gene: JalFarm20_15 Start: 9339, Stop: 9878, Start Num: 48
Candidate Starts for JalFarm20_15:
(Start: 39 @9318 has 17 MA's), (Start: 48 @9339 has 14 MA's), (94, 9456), (96, 9468), (121, 9600), (137, 9714), (139, 9723),

Gene: JellyBread_89 Start: 51228, Stop: 51713, Start Num: 79
Candidate Starts for JellyBread_89:
(1, 50667), (7, 50847), (18, 50976), (28, 51057), (45, 51138), (59, 51180), (Start: 79 @51228 has 14 MA's), (Start: 87 @51246 has 1 MA's), (110, 51375), (137, 51549), (139, 51558), (152, 51630),

Gene: Jemmno_221 Start: 124633, Stop: 125127, Start Num: 72
Candidate Starts for Jemmno_221:
(23, 124432), (24, 124444), (25, 124453), (Start: 72 @124633 has 5 MA's), (129, 124891), (130, 124894), (142, 124987), (146, 125002), (157, 125068), (158, 125071),

Gene: Jinkies_23 Start: 19784, Stop: 19203, Start Num: 37
Candidate Starts for Jinkies_23:
(Start: 37 @19784 has 6 MA's), (71, 19700), (96, 19628), (111, 19538), (139, 19364), (146, 19325), (159, 19250),

Gene: Job42_15 Start: 9341, Stop: 9901, Start Num: 39
Candidate Starts for Job42_15:
(Start: 39 @9341 has 17 MA's), (Start: 48 @9362 has 14 MA's), (94, 9479), (96, 9491), (121, 9623), (137, 9737), (139, 9746),

Gene: Kabloowy_92 Start: 51624, Stop: 52205, Start Num: 38
Candidate Starts for Kabloowy_92:
(Start: 38 @51624 has 3 MA's), (Start: 56 @51669 has 1 MA's), (63, 51690), (Start: 73 @51714 has 4 MA's), (137, 52032), (139, 52041),

Gene: KingPhillip3_95 Start: 59234, Stop: 58725, Start Num: 68
Candidate Starts for KingPhillip3_95:
(25, 59396), (Start: 68 @59234 has 2 MA's), (85, 59198), (107, 59090), (109, 59087), (115, 59060), (144, 58868), (160, 58775), (163, 58757),

Gene: Lasker_92 Start: 52381, Stop: 52872, Start Num: 73
Candidate Starts for Lasker_92:
(Start: 56 @52336 has 1 MA's), (63, 52357), (Start: 73 @52381 has 4 MA's), (137, 52699), (139, 52708),

Gene: Latretium_14 Start: 9454, Stop: 10020, Start Num: 39
Candidate Starts for Latretium_14:
(Start: 39 @9454 has 17 MA's), (Start: 46 @9472 has 1 MA's), (Start: 48 @9481 has 14 MA's), (94, 9598), (96, 9610), (121, 9742), (139, 9865),

Gene: Lawnathon_84 Start: 46589, Stop: 47101, Start Num: 83
Candidate Starts for Lawnathon_84:
(8, 46205), (16, 46283), (Start: 35 @46469 has 4 MA's), (Start: 83 @46589 has 6 MA's), (104, 46697), (115, 46739), (122, 46769), (123, 46772), (127, 46817), (140, 46904), (150, 46961), (157, 47000), (160, 47021),

Gene: LeBruni_54 Start: 32055, Stop: 32546, Start Num: 58
Candidate Starts for LeBruni_54:
(Start: 58 @32055 has 4 MA's), (Start: 82 @32091 has 1 MA's), (110, 32202), (121, 32253), (131, 32331), (144, 32415),

Gene: Lucky2013_46 Start: 37214, Stop: 37759, Start Num: 51
Candidate Starts for Lucky2013_46:
(17, 36995), (20, 37052), (31, 37130), (Start: 46 @37196 has 1 MA's), (50, 37211), (Start: 51 @37214 has 6 MA's), (Start: 73 @37271 has 4 MA's), (95, 37328), (121, 37478), (139, 37607), (159, 37715), (160, 37727), (161, 37730),

Gene: MUWow_38 Start: 26240, Stop: 26719, Start Num: 79
Candidate Starts for MUWow_38:
(44, 26150), (Start: 69 @26216 has 3 MA's), (Start: 79 @26240 has 14 MA's), (121, 26432), (127, 26483), (130, 26492),

Gene: MUWow_96 Start: 53176, Stop: 53625, Start Num: 79
Candidate Starts for MUWow_96:
(Start: 49 @53110 has 1 MA's), (Start: 79 @53176 has 14 MA's), (121, 53350), (136, 53446),

Gene: MUWow_76 Start: 40648, Stop: 41133, Start Num: 74
Candidate Starts for MUWow_76:
(Start: 74 @40648 has 1 MA's), (113, 40795), (122, 40837), (127, 40885), (139, 40963),

Gene: MaterMagnus_82 Start: 47059, Stop: 47574, Start Num: 83
Candidate Starts for MaterMagnus_82:
(8, 46675), (16, 46753), (Start: 83 @47059 has 6 MA's), (104, 47167), (115, 47209), (122, 47239), (123, 47242), (127, 47287), (140, 47374), (150, 47431), (157, 47470), (160, 47491),

Gene: MaterMagnus_91 Start: 51277, Stop: 51762, Start Num: 79
Candidate Starts for MaterMagnus_91:
(28, 51106), (45, 51187), (59, 51229), (Start: 79 @51277 has 14 MA's), (Start: 87 @51295 has 1 MA's), (110, 51424), (137, 51598), (139, 51607),

Gene: MaterMagnus_56 Start: 33281, Stop: 33772, Start Num: 58
Candidate Starts for MaterMagnus_56:
(Start: 58 @33281 has 4 MA's), (Start: 82 @33317 has 1 MA's), (110, 33428), (121, 33479), (126, 33515), (131, 33557), (144, 33641),

Gene: MiaZeal_46 Start: 36889, Stop: 37434, Start Num: 51
Candidate Starts for MiaZeal_46:
(17, 36670), (20, 36727), (31, 36805), (Start: 46 @36871 has 1 MA's), (50, 36886), (Start: 51 @36889 has 6 MA's), (Start: 73 @36946 has 4 MA's), (95, 37003), (121, 37153), (139, 37282), (159, 37390), (160, 37402), (161, 37405),

Gene: MidnightRain_47 Start: 30287, Stop: 29718, Start Num: 37
Candidate Starts for MidnightRain_47:

(Start: 37 @30287 has 6 MA's), (Start: 62 @30221 has 1 MA's), (96, 30149), (101, 30089), (103, 30080), (115, 30038), (157, 29777),

Gene: MidnightRain_57 Start: 33591, Stop: 34052, Start Num: 86
Candidate Starts for MidnightRain_57:
(Start: 86 @33591 has 11 MA's), (113, 33723), (124, 33777), (146, 33930), (151, 33963),

Gene: Minnie_14 Start: 9482, Stop: 10042, Start Num: 39
Candidate Starts for Minnie_14:
(Start: 39 @9482 has 17 MA's), (Start: 48 @9503 has 14 MA's), (94, 9620), (96, 9632), (121, 9764), (137, 9878), (139, 9887),

Gene: Moonbeam_14 Start: 9494, Stop: 10033, Start Num: 48
Candidate Starts for Moonbeam_14:
(Start: 48 @9494 has 14 MA's), (94, 9611), (96, 9623), (121, 9755), (137, 9869), (139, 9878),

Gene: Mori_53 Start: 26286, Stop: 26885, Start Num: 39
Candidate Starts for Mori_53:
(Start: 39 @26286 has 17 MA's), (45, 26301), (101, 26511), (114, 26574), (121, 26604), (127, 26658), (129, 26664), (130, 26667), (139, 26730), (143, 26754),

Gene: Murai_54 Start: 26476, Stop: 27075, Start Num: 39
Candidate Starts for Murai_54:
(Start: 39 @26476 has 17 MA's), (45, 26491), (101, 26701), (114, 26764), (121, 26794), (127, 26848), (129, 26854), (130, 26857), (139, 26920), (143, 26944),

Gene: MurphyJoseph_40 Start: 27665, Stop: 27162, Start Num: 62
Candidate Starts for MurphyJoseph_40:
(Start: 37 @27731 has 6 MA's), (Start: 62 @27665 has 1 MA's), (96, 27593), (126, 27419),

Gene: MurphyJoseph_52 Start: 31584, Stop: 32126, Start Num: 58
Candidate Starts for MurphyJoseph_52:
(Start: 58 @31584 has 4 MA's), (92, 31662), (118, 31803),

Gene: MurphyJoseph_81 Start: 45441, Stop: 45953, Start Num: 83
Candidate Starts for MurphyJoseph_81:
(8, 45057), (16, 45135), (Start: 35 @45321 has 4 MA's), (Start: 83 @45441 has 6 MA's), (104, 45549), (115, 45591), (122, 45621), (123, 45624), (127, 45669), (140, 45756), (150, 45813), (157, 45852), (160, 45873),

Gene: Myrna_250 Start: 152417, Stop: 152881, Start Num: 69
Candidate Starts for Myrna_250:
(Start: 69 @152417 has 3 MA's), (71, 152420), (85, 152456), (Start: 86 @152459 has 11 MA's), (91, 152471), (97, 152507), (98, 152525), (115, 152612), (123, 152645), (127, 152690), (129, 152696), (139, 152747), (148, 152792), (156, 152849),

Gene: Nappy_90 Start: 35968, Stop: 36438, Start Num: 88
Candidate Starts for Nappy_90:
(29, 35779), (Start: 35 @35833 has 4 MA's), (55, 35890), (Start: 66 @35917 has 1 MA's), (Start: 68 @35920 has 2 MA's), (80, 35953), (Start: 88 @35968 has 2 MA's), (105, 36082), (115, 36112), (117, 36115), (121, 36139), (135, 36241), (139, 36271), (146, 36310), (150, 36337), (153, 36349), (164, 36424), (166, 36427),

Gene: Nappy_223 Start: 126433, Stop: 126927, Start Num: 72
Candidate Starts for Nappy_223:
(23, 126232), (24, 126244), (25, 126253), (Start: 72 @126433 has 5 MA's), (129, 126691), (130, 126694), (142, 126787), (146, 126802), (157, 126868), (158, 126871),

Gene: NewKitty_46 Start: 29058, Stop: 28480, Start Num: 37
Candidate Starts for NewKitty_46:
(9, 29316), (19, 29187), (21, 29169), (22, 29166), (26, 29124), (30, 29103), (Start: 37 @29058 has 6 MA's), (111, 28827),

Gene: NewKitty_69 Start: 35732, Stop: 36250, Start Num: 70
Candidate Starts for NewKitty_69:
(Start: 70 @35732 has 2 MA's), (81, 35762), (105, 35888), (121, 35945), (126, 35981), (158, 36182), (167, 36236),

Gene: Nyilah_54 Start: 31262, Stop: 31804, Start Num: 58
Candidate Starts for Nyilah_54:
(Start: 58 @31262 has 4 MA's), (75, 31304), (92, 31340), (115, 31475), (118, 31481),

Gene: Ollypop_83 Start: 52100, Stop: 51516, Start Num: 41
Candidate Starts for Ollypop_83:
(34, 52130), (Start: 41 @52100 has 1 MA's), (42, 52097), (52, 52067), (57, 52052), (63, 52037), (96, 51947), (122, 51806), (134, 51710), (139, 51677), (143, 51647), (146, 51638), (164, 51524),

Gene: OwlsT2W_15 Start: 9352, Stop: 9891, Start Num: 48
Candidate Starts for OwlsT2W_15:
(Start: 39 @9331 has 17 MA's), (Start: 48 @9352 has 14 MA's), (94, 9469), (96, 9481), (121, 9613), (137, 9727), (139, 9736),

Gene: Persistence_41 Start: 28068, Stop: 28532, Start Num: 84
Candidate Starts for Persistence_41:
(Start: 84 @28068 has 2 MA's), (102, 28164), (121, 28236), (126, 28272), (130, 28296), (137, 28359), (141, 28386),

Gene: Persistence_49 Start: 31206, Stop: 31667, Start Num: 86
Candidate Starts for Persistence_49:
(13, 30876), (14, 30882), (15, 30888), (Start: 86 @31206 has 11 MA's), (124, 31392), (146, 31545), (151, 31578),

Gene: Persistence_67 Start: 37115, Stop: 37588, Start Num: 87
Candidate Starts for Persistence_67:
(Start: 87 @37115 has 1 MA's), (101, 37217), (107, 37241), (113, 37256), (137, 37415), (146, 37463), (158, 37532), (164, 37577),

Gene: Persistence_34 Start: 24603, Stop: 25106, Start Num: 69
Candidate Starts for Persistence_34:
(44, 24537), (Start: 69 @24603 has 3 MA's), (Start: 79 @24627 has 14 MA's), (108, 24762), (110, 24765), (121, 24819), (130, 24879), (157, 25053),

Gene: Peterson_6 Start: 3021, Stop: 3500, Start Num: 76
Candidate Starts for Peterson_6:
(Start: 76 @3021 has 5 MA's), (113, 3180), (116, 3192), (124, 3234),

Gene: Phasih_14 Start: 9525, Stop: 10064, Start Num: 48
Candidate Starts for Phasih_14:
(Start: 39 @9504 has 17 MA's), (Start: 48 @9525 has 14 MA's), (94, 9642), (96, 9654), (121, 9786), (137, 9900), (139, 9909),

Gene: Phatniss_14 Start: 9487, Stop: 10026, Start Num: 48
Candidate Starts for Phatniss_14:
(Start: 48 @9487 has 14 MA's), (94, 9604), (96, 9616), (121, 9748), (137, 9862), (139, 9871),

Gene: Phrank15_38 Start: 25579, Stop: 26058, Start Num: 79
Candidate Starts for Phrank15_38:
(44, 25489), (Start: 69 @25555 has 3 MA's), (Start: 79 @25579 has 14 MA's), (121, 25771), (127, 25822), (130, 25831),

Gene: Phrank15_56 Start: 32976, Stop: 33476, Start Num: 65
Candidate Starts for Phrank15_56:
(5, 32526), (11, 32664), (Start: 65 @32976 has 4 MA's), (89, 33024), (123, 33189), (146, 33351),

Gene: Phrank15_79 Start: 42147, Stop: 42713, Start Num: 38
Candidate Starts for Phrank15_79:
(Start: 38 @42147 has 3 MA's), (119, 42429), (127, 42498), (131, 42525), (133, 42537), (155, 42654),

Gene: Pitbull_27 Start: 21048, Stop: 21602, Start Num: 46
Candidate Starts for Pitbull_27:
(Start: 46 @21048 has 1 MA's), (120, 21300), (121, 21312), (127, 21363), (146, 21480), (154, 21525),

Gene: Polka14_14 Start: 9487, Stop: 10026, Start Num: 48
Candidate Starts for Polka14_14:
(Start: 39 @9466 has 17 MA's), (Start: 48 @9487 has 14 MA's), (94, 9604), (96, 9616), (121, 9748), (137, 9862), (139, 9871),

Gene: Porcelain_45 Start: 36889, Stop: 37434, Start Num: 51
Candidate Starts for Porcelain_45:
(17, 36670), (20, 36727), (31, 36805), (Start: 46 @36871 has 1 MA's), (50, 36886), (Start: 51 @36889 has 6 MA's), (Start: 73 @36946 has 4 MA's), (95, 37003), (121, 37153), (139, 37282), (159, 37390), (160, 37402), (161, 37405),

Gene: RadFad_57 Start: 33410, Stop: 33871, Start Num: 86
Candidate Starts for RadFad_57:
(Start: 86 @33410 has 11 MA's), (113, 33542), (124, 33596), (146, 33749), (151, 33782),

Gene: RadFad_39 Start: 26218, Stop: 26697, Start Num: 79
Candidate Starts for RadFad_39:
(Start: 69 @26194 has 3 MA's), (Start: 79 @26218 has 14 MA's), (110, 26356), (121, 26410), (149, 26602), (150, 26605),

Gene: Raqqa_97 Start: 52473, Stop: 52976, Start Num: 79
Candidate Starts for Raqqa_97:
(Start: 79 @52473 has 14 MA's), (99, 52554), (115, 52638), (121, 52665), (124, 52680), (126, 52701), (127, 52716), (133, 52755), (157, 52896), (159, 52905), (165, 52944),

Gene: Raqqa_48 Start: 30332, Stop: 30787, Start Num: 82
Candidate Starts for Raqqa_48:

(Start: 58 @30296 has 4 MA's), (Start: 82 @30332 has 1 MA's), (110, 30443), (121, 30494), (126, 30530), (131, 30572), (144, 30656),

Gene: Raqqa_45 Start: 29275, Stop: 29736, Start Num: 86
Candidate Starts for Raqqa_45:
(Start: 86 @29275 has 11 MA's), (113, 29407), (124, 29461), (146, 29614), (151, 29647),

Gene: Rialto_15 Start: 9346, Stop: 9885, Start Num: 48
Candidate Starts for Rialto_15:
(Start: 48 @9346 has 14 MA's), (94, 9463), (96, 9475), (121, 9607), (137, 9721), (139, 9730),

Gene: Richie_96 Start: 52435, Stop: 52971, Start Num: 56
Candidate Starts for Richie_96:
(10, 52150), (Start: 56 @52435 has 1 MA's), (63, 52456), (Start: 73 @52480 has 4 MA's), (115, 52651), (117, 52654), (137, 52798), (159, 52921),

Gene: Sandalphon_14 Start: 9504, Stop: 10043, Start Num: 48
Candidate Starts for Sandalphon_14:
(Start: 48 @9504 has 14 MA's), (94, 9621), (96, 9633), (121, 9765), (137, 9879), (139, 9888),

Gene: Sarge_50 Start: 29604, Stop: 30206, Start Num: 36
Candidate Starts for Sarge_50:
(Start: 36 @29604 has 1 MA's), (67, 29688), (77, 29715), (90, 29742), (96, 29772), (113, 29868), (121, 29907),

Gene: Sarge_34 Start: 24292, Stop: 24756, Start Num: 86
Candidate Starts for Sarge_34:
(Start: 86 @24292 has 11 MA's), (115, 24436), (162, 24733),

Gene: Satrap_73 Start: 38750, Stop: 39217, Start Num: 78
Candidate Starts for Satrap_73:
(47, 38669), (Start: 78 @38750 has 1 MA's), (113, 38894), (121, 38933), (122, 38936), (126, 38969), (139, 39062), (146, 39101),

Gene: ShawBrad_104 Start: 53519, Stop: 54079, Start Num: 37
Candidate Starts for ShawBrad_104:
(32, 53495), (Start: 37 @53519 has 6 MA's), (93, 53639), (95, 53651), (115, 53759), (125, 53816), (139, 53915), (146, 53954), (150, 53981),

Gene: ShiaLabeouf_219 Start: 124687, Stop: 125181, Start Num: 72
Candidate Starts for ShiaLabeouf_219:
(23, 124486), (24, 124498), (25, 124507), (Start: 72 @124687 has 5 MA's), (129, 124945), (130, 124948), (142, 125041), (146, 125056), (157, 125122), (158, 125125),

Gene: Shukran_72 Start: 40696, Stop: 41226, Start Num: 43
Candidate Starts for Shukran_72:
(6, 40381), (12, 40450), (Start: 43 @40696 has 1 MA's), (96, 40843), (123, 40987), (126, 41017), (128, 41035), (131, 41059), (155, 41188),

Gene: Shukran_92 Start: 50394, Stop: 50843, Start Num: 79
Candidate Starts for Shukran_92:
(Start: 51 @50334 has 6 MA's), (Start: 79 @50394 has 14 MA's), (121, 50568), (136, 50664),

Gene: Shukran_48 Start: 30453, Stop: 30917, Start Num: 82
Candidate Starts for Shukran_48:
(Start: 82 @30453 has 1 MA's), (112, 30579), (121, 30627),

Gene: Sisko_10 Start: 10106, Stop: 9555, Start Num: 54
Candidate Starts for Sisko_10:
(Start: 54 @10106 has 1 MA's), (90, 10022), (96, 9992), (101, 9926), (123, 9839), (126, 9806), (130, 9782), (137, 9722), (157, 9608),

Gene: Smooch_56 Start: 27829, Stop: 28428, Start Num: 39
Candidate Starts for Smooch_56:
(Start: 39 @27829 has 17 MA's), (45, 27844), (101, 28054), (114, 28117), (121, 28147), (127, 28201), (129, 28207), (130, 28210), (139, 28273), (143, 28297),

Gene: SonDevVon_39 Start: 26563, Stop: 27042, Start Num: 79
Candidate Starts for SonDevVon_39:
(44, 26473), (Start: 69 @26539 has 3 MA's), (Start: 79 @26563 has 14 MA's), (121, 26755), (127, 26806), (130, 26815),

Gene: SpicyFrank_59 Start: 33886, Stop: 34386, Start Num: 65
Candidate Starts for SpicyFrank_59:
(Start: 65 @33886 has 4 MA's), (89, 33934), (117, 34069), (123, 34099), (146, 34261),

Gene: Squint_45 Start: 37065, Stop: 37553, Start Num: 73
Candidate Starts for Squint_45:
(17, 36789), (20, 36846), (31, 36924), (Start: 46 @36990 has 1 MA's), (50, 37005), (Start: 51 @37008 has 6 MA's), (Start: 73 @37065 has 4 MA's), (95, 37122), (121, 37272), (139, 37401), (159, 37509), (160, 37521), (161, 37524),

Gene: Stellammi_131 Start: 61866, Stop: 62381, Start Num: 66
Candidate Starts for Stellammi_131:
(Start: 66 @61866 has 1 MA's), (105, 62028), (113, 62046), (121, 62085), (122, 62088), (137, 62205), (158, 62316),

Gene: Sunshine924_65 Start: 41214, Stop: 40627, Start Num: 35
Candidate Starts for Sunshine924_65:
(Start: 35 @41214 has 4 MA's), (42, 41199), (57, 41154), (64, 41136), (75, 41112), (113, 40953), (117, 40938), (134, 40815), (138, 40791), (143, 40758), (145, 40752), (157, 40683), (158, 40680),

Gene: SuperGrey_14 Start: 9478, Stop: 10038, Start Num: 39
Candidate Starts for SuperGrey_14:
(Start: 39 @9478 has 17 MA's), (Start: 48 @9499 has 14 MA's), (94, 9616), (96, 9628), (121, 9760), (137, 9874), (139, 9883),

Gene: Superphikiman_46 Start: 37080, Stop: 37625, Start Num: 51
Candidate Starts for Superphikiman_46:
(17, 36861), (20, 36918), (31, 36996), (Start: 46 @37062 has 1 MA's), (50, 37077), (Start: 51 @37080 has 6 MA's), (Start: 73 @37137 has 4 MA's), (95, 37194), (121, 37344), (139, 37473), (159, 37581), (160, 37593), (161, 37596),

Gene: Tiff81_42 Start: 27360, Stop: 27824, Start Num: 84
Candidate Starts for Tiff81_42:
(Start: 84 @27360 has 2 MA's), (121, 27528), (126, 27564), (130, 27588), (137, 27651), (141, 27678),

Gene: Tripl3t_5 Start: 2428, Stop: 2907, Start Num: 76
Candidate Starts for Tripl3t_5:
(Start: 76 @2428 has 5 MA's), (113, 2587), (116, 2599), (124, 2641),

Gene: Trouble_4 Start: 2065, Stop: 2544, Start Num: 76
Candidate Starts for Trouble_4:
(Start: 76 @2065 has 5 MA's), (113, 2224), (116, 2236), (124, 2278),

Gene: Violac_14 Start: 9472, Stop: 10032, Start Num: 39
Candidate Starts for Violac_14:
(Start: 39 @9472 has 17 MA's), (Start: 48 @9493 has 14 MA's), (94, 9610), (96, 9622), (121, 9754), (137, 9868), (139, 9877),

Gene: Vopal_48 Start: 32400, Stop: 32864, Start Num: 84
Candidate Starts for Vopal_48:
(Start: 84 @32400 has 2 MA's), (121, 32568), (126, 32604), (130, 32628), (137, 32691), (141, 32718),

Gene: Vopal_42 Start: 29036, Stop: 29515, Start Num: 79
Candidate Starts for Vopal_42:
(59, 28991), (Start: 69 @29012 has 3 MA's), (Start: 79 @29036 has 14 MA's), (121, 29228), (130, 29288), (149, 29420),

Gene: Vopal_56 Start: 35307, Stop: 35768, Start Num: 86
Candidate Starts for Vopal_56:
(Start: 86 @35307 has 11 MA's), (113, 35439), (124, 35493), (146, 35646), (151, 35679),

Gene: Vorrps_53 Start: 26287, Stop: 26886, Start Num: 39
Candidate Starts for Vorrps_53:
(Start: 39 @26287 has 17 MA's), (45, 26302), (101, 26512), (114, 26575), (121, 26605), (127, 26659), (129, 26665), (130, 26668), (139, 26731), (143, 26755),

Gene: Watermelon_6 Start: 2607, Stop: 3086, Start Num: 76
Candidate Starts for Watermelon_6:
(Start: 76 @2607 has 5 MA's), (113, 2766), (116, 2778), (124, 2820),

Gene: Wee_14 Start: 9531, Stop: 10070, Start Num: 48
Candidate Starts for Wee_14:
(Start: 48 @9531 has 14 MA's), (94, 9648), (96, 9660), (121, 9792), (137, 9906), (139, 9915),

Gene: Windest_39 Start: 25032, Stop: 25535, Start Num: 69
Candidate Starts for Windest_39:
(44, 24966), (Start: 69 @25032 has 3 MA's), (Start: 79 @25056 has 14 MA's), (121, 25248), (127, 25299), (130, 25308),

Gene: YungJamal_57 Start: 27006, Stop: 27605, Start Num: 39
Candidate Starts for YungJamal_57:
(Start: 39 @27006 has 17 MA's), (45, 27021), (101, 27231), (114, 27294), (121, 27324), (127, 27378), (129, 27384), (130, 27387), (139, 27450), (143, 27474),

Gene: Zucker_62 Start: 35518, Stop: 36036, Start Num: 70
Candidate Starts for Zucker_62:

(Start: 70 @35518 has 2 MA's), (81, 35548), (105, 35674), (114, 35701), (121, 35731), (126, 35767), (129, 35788), (158, 35968), (167, 36022),