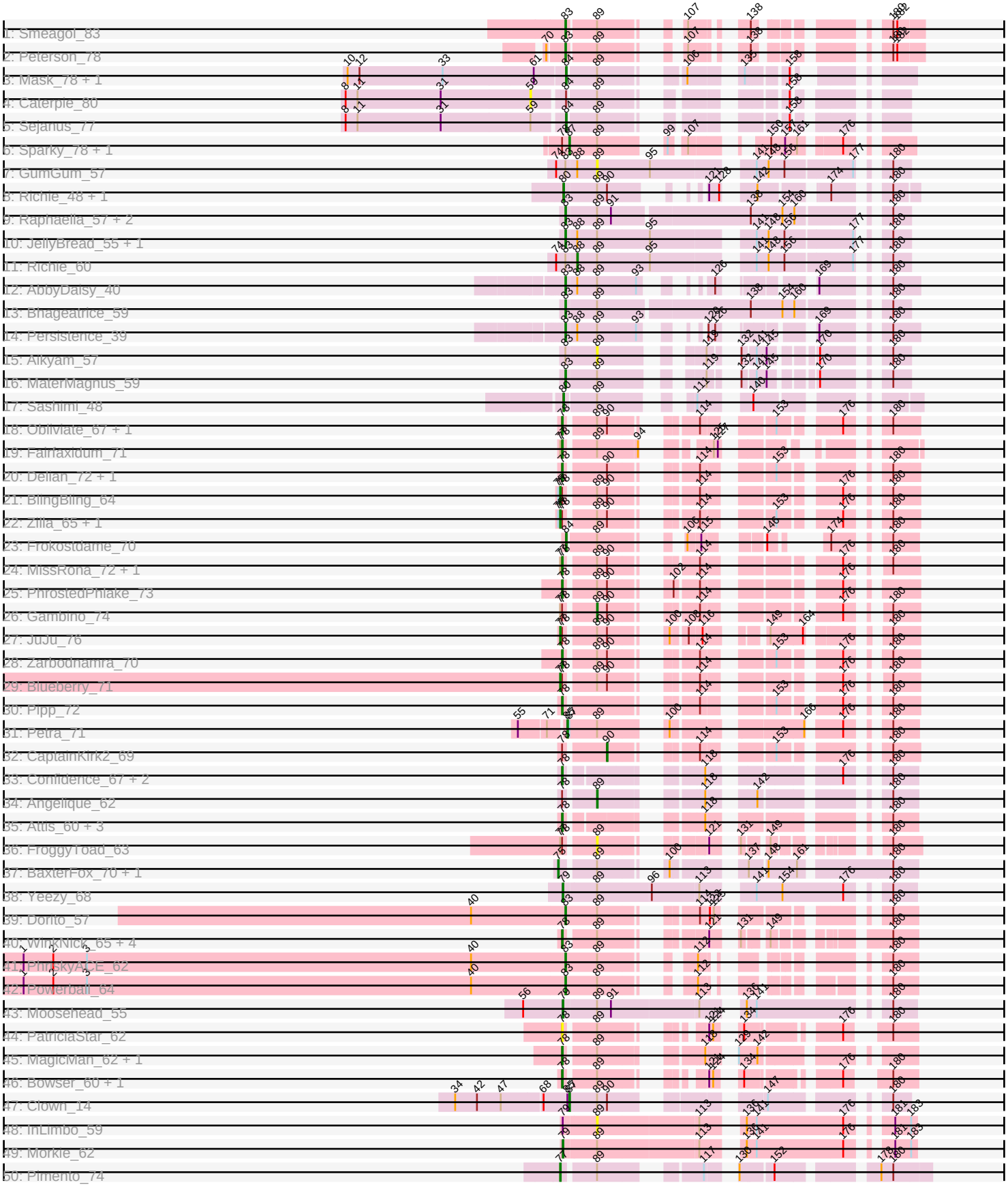
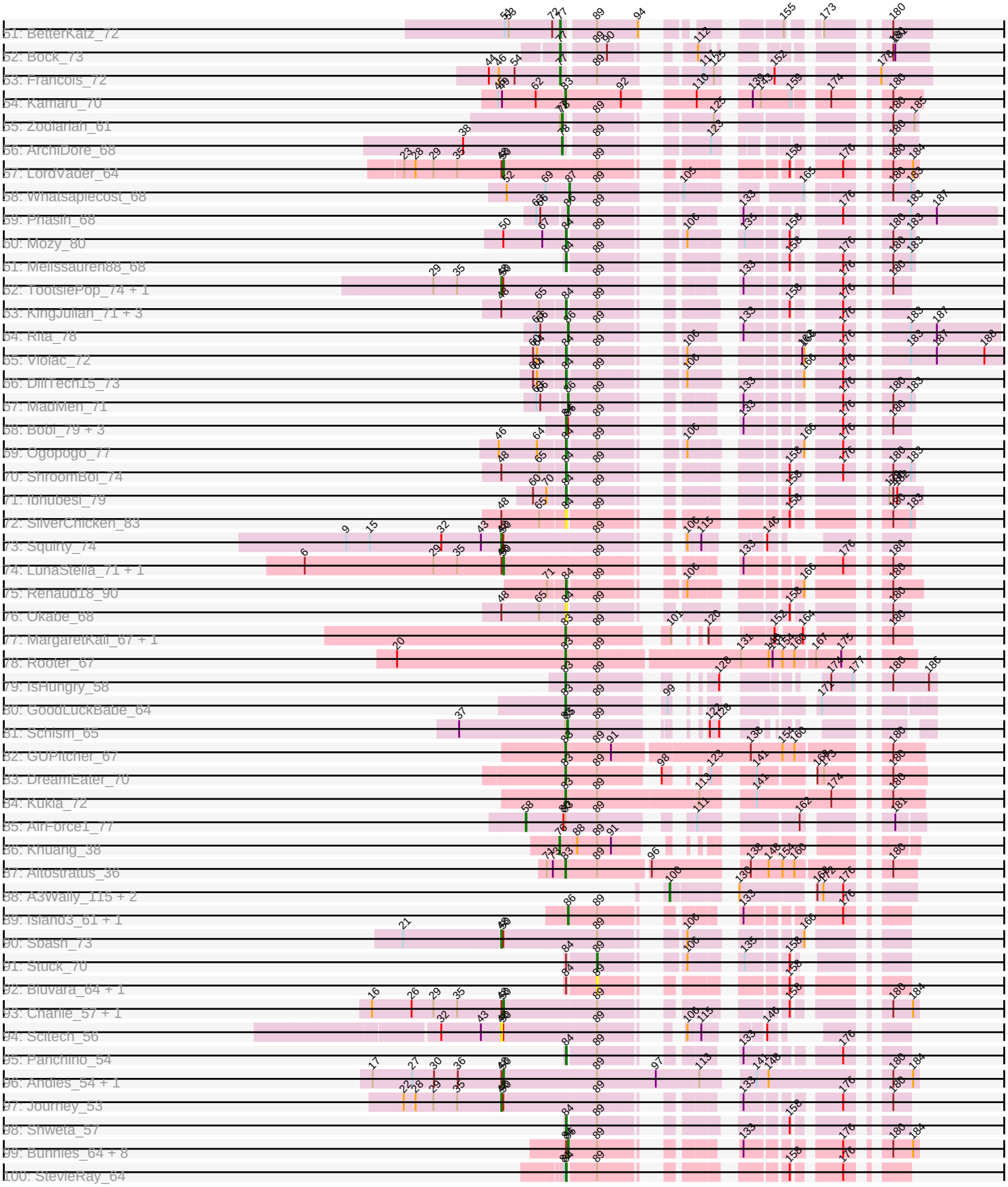
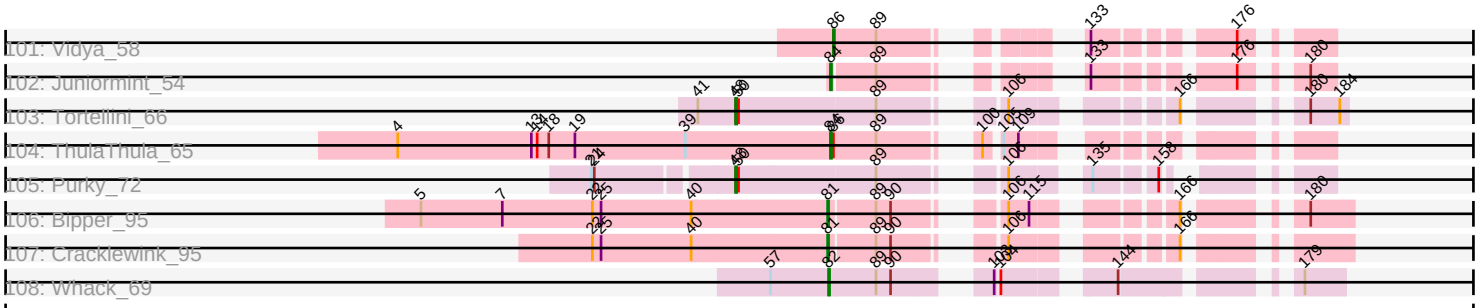
Pham 343717


1: Smeagol_83
2: Peterson_78
3: Mask_78 + 1
4: Caterpie_80
5: Sejanus_77
6: Sparky_78 + 1
7: GumGum_57
8: Richie_48 + 1
9: Raphaella_57 + 2
10: JellyBread_55 + 1
11: Richie_60
12: AbbyDaisy_40
13: Bhageatrice_59
14: Persistence_39
15: Alkyam_57
16: MaterMagnus_59
17: Sashimi_48
18: OblMate_67 + 1
19: Fairfaxidum_71
20: Delian_72 + 1
21: BlingBling_64
22: Zilla_65 + 1
23: Frokostdame_70
24: MissRona_72 + 1
25: PhrostedPhlake_73
26: Gambino_74
27: JuJu_76
28: Zarbodnamra_70
29: Blueberry_71
30: Pipp_72
31: Petra_71
32: CaptainKirk2_69
33: Confidence_67 + 2
34: Angelique_62
35: Attis_60 + 3
36: FroggyToad_63
37: BaxterFox_70 + 1
38: Yeezy_68
39: Dorito_57
40: WinkNick_65 + 4
41: PinkSkyACE_62
42: Powerball_64
43: Moosehead_55
44: PatriciaStar_62
45: MagicMan_62 + 1
46: Bowser_60 + 1
47: Clown_14
48: InLimbo_59
49: Morkie_62
50: Pimento_74

Pham 343717


51: BetterKatz_72
52: Bock_73
53: Francois_72
54: Kamaru_70
55: Zodiarian_61
56: ArchiDore_68
57: LordVader_64
58: Whatsaplecost_68
59: Phasin_68
60: Mozy_80
61: Melissaureh88_68
62: TootsiePop_74 + 1
63: KingJulian_71 + 3
64: Rita_78
65: Violac_72
66: DilTech15_73
67: MadMen_71
68: Bobi_79 + 3
69: Ogopogo_77
70: ShroomBoi_74
71: Ibhubesi_79
72: SilverChicken_83
73: Squirty_74
74: LunaStella_71 + 1
75: Renaud18_90
76: Okabe_68
77: MargaretKali_67 + 1
78: Rooter_67
79: IsHungry_58
80: GoodLuckBabe_64
81: Schism_65
82: GOPitcher_67
83: DreamEater_70
84: Kukla_72
85: AirForce1_77
86: Khuang_38
87: Altostratus_36
88: A3Wally_115 + 2
89: Island3_61 + 1
90: Sbash_73
91: Stuck_70
92: Bluvara_64 + 1
93: Charlie_57 + 1
94: Scitech_56
95: Panchino_54
96: Andies_54 + 1
97: Journey_53
98: Shweta_57
99: Bunnies_64 + 8
100: StevieRay_64

Pham 343717


101: Vidya_58
102: Juniormint_54
103: Tortellini_66
104: ThulaThula_65
105: Purky_72
106: Bipper_95
107: Cracklewink_95
108: Whack_69

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 343717 Report

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

Pham number 343717 has 153 members, 17 are drafts.

Phages represented in each track:
- Track 1 : Smeagol_83
- Track 2 : Peterson_78
- Track 3 : Mask_78, JohnLord_79
- Track 4 : Caterpie_80
- Track 5 : Sejanus_77
- Track 6 : Sparky_78, Farewell_79
- Track 7 : GumGum_57
- Track 8 : Richie_48, YoungHarleezy_46
- Track 9 : Raphaella_57, Kabloowy_58, MUWow_58
- Track 10 : JellyBread_55, YoungHarleezy_58
- Track 11 : Richie_60
- Track 12 : AbbyDaisy_40
- Track 13 : Bhageatrice_59
- Track 14 : Persistence_39
- Track 15 : Aikyam_57
- Track 16 : MaterMagnus_59
- Track 17 : Sashimi_48
- Track 18 : Obliviate_67, CheeseSpider_76
- Track 19 : Fairfaxidum_71
- Track 20 : Delian_72, MintFen_69
- Track 21 : BlingBling_64
- Track 22 : Zilla_65, Barco_65
- Track 23 : Frokostdame_70
- Track 24 : MissRona_72, Azula_72
- Track 25 : PhrostedPhlake_73
- Track 26 : Gambino_74
- Track 27 : JuJu_76
- Track 28 : Zarbodnamra_70
- Track 29 : Blueberry_71
- Track 30 : Pipp_72
- Track 31 : Petra_71
- Track 32 : CaptainKirk2_69
- Track 33 : Confidence_67, Hyzer_79, Bunnybear_62
- Track 34 : Angelique_62
- Track 35 : Attis_60, SoilAssassin_60, LordFarquaad_62, FroggyToad_61
- Track 36 : FroggyToad_63
- Track 37 : BaxterFox_70, SushiChef_65

• Track 38 : Yeezy_68
• Track 39 : Dorito_57
• Track 40 : WinkNick_65, Easley_62, Dolores_65, Sekhmet_64, Madavieve_64
• Track 41 : PhriskyACE_62
• Track 42 : Powerball_64
• Track 43 : Moosehead_55
• Track 44 : PatriciaStar_62
• Track 45 : MagicMan_62, Opie_65
• Track 46 : Bowser_60, TaronosaurasRx_67
• Track 47 : Clown_14
• Track 48 : InLimbo_59
• Track 49 : Morkie_62
• Track 50 : Pimento_74
• Track 51 : BetterKatz_72
• Track 52 : Bock_73
• Track 53 : Francois_72
• Track 54 : Kamaru_70
• Track 55 : Zodiariah_61
• Track 56 : ArchiDore_68
• Track 57 : LordVader_64
• Track 58 : Whatsapiecost_68
• Track 59 : Phasih_68
• Track 60 : Mozy_80
• Track 61 : Melissauren88_68
• Track 62 : TootsiePop_74, Misha28_74
• Track 63 : KingJulian_71, PatoPoderoso_66, Flathead_71, Corium_66
• Track 64 : Rita_78
• Track 65 : Violac_72
• Track 66 : DillTech15_73
• Track 67 : MadMen_71
• Track 68 : Bobi_79, Atcoo_61, Brusacoram_61, Thespis_61
• Track 69 : Ogopogo_77
• Track 70 : ShroomBoi_74
• Track 71 : Ibhubesi_79
• Track 72 : SilverChicken_83
• Track 73 : Squirty_74
• Track 74 : LunaStella_71, TChen_73
• Track 75 : Renaud18_90
• Track 76 : Okabe_68
• Track 77 : MargaretKali_67, Kumotta_71
• Track 78 : Rooter_67
• Track 79 : IsHungry_58
• Track 80 : GoodLuckBabe_64
• Track 81 : Schism_65
• Track 82 : GUPitcher_67
• Track 83 : DreamEater_70
• Track 84 : Kukla_72
• Track 85 : AirForce1_77
• Track 86 : Khuang_38
• Track 87 : Altostratus_36
• Track 88 : A3Wally_115, Dodo_117, PauloDiaboli_115
• Track 89 : Island3_61, Brujita_60
• Track 90 : Sbash_73

• Track 91 : Stuck_70
• Track 92 : Bluvara_64, Polkaroo_61
• Track 93 : Charlie_57, Bosection6_55
• Track 94 : Scitech_56
• Track 95 : Panchino_54
• Track 96 : Andies_54, Tapioca_58
• Track 97 : Journey_53
• Track 98 : Shweta_57
• Track 99 : Bunnies_64, CactusJack_59, Willsammy_59, Glaske_58, Gavriela_59, Ksquared_62, KilKor_59, Phalm_59, StressBall_59
• Track 100 : StevieRay_64
• Track 101 : Vidya_58
• Track 102 : Juniormint_54
• Track 103 : Tortellini_66
• Track 104 : ThulaThula_65
• Track 105 : Purky_72
• Track 106 : Bipper_95
• Track 107 : Cracklewink_95
• Track 108 : Whack_69

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

The start number called the most often in the published annotations is 78, it was called in 26 of the 136 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ArchiDore_68, Attis_60, Azula_72, Bowser_60, Bunnybear_62, CheeseSpider_76, Confidence_67, Delian_72, Dolores_65, Easley_62, Fairfaxidum_71, FroggyToad_61, Hyzer_79, LordFarquaad_62, Madavieve_64, MagicMan_62, MintFen_69, MissRona_72, Obliviate_67, Opie_65, PatriciaStar_62, PhrostedPhlake_73, Pipp_72, Sekhmet_64, SoilAssassin_60, TaronosaurasRx_67, WinkNick_65, Zarbodnamra_70, Zodiariah_61,

Genes that have the "Most Annotated" start but do not call it:
• Angelique_62, Barco_65, BlingBling_64, Blueberry_71, CaptainKirk2_69, Farewell_79, FroggyToad_63, Gambino_74, JuJu_76, Sparky_78, Zilla_65,

Genes that do not have the "Most Annotated" start:
• A3Wally_115, AbbyDaisy_40, Aikyam_57, AirForce1_77, Altostratus_36, Andies_54, Atcoo_61, BaxterFox_70, BetterKatz_72, Bhageatrice_59, Bipper_95, Bluvara_64, Bobi_79, Bock_73, Bosection6_55, Brujita_60, Brusacoram_61, Bunnies_64, CactusJack_59, Caterpie_80, Charlie_57, Clown_14, Corium_66, Cracklewink_95, DillTech15_73, Dodo_117, Dorito_57, DreamEater_70, Flathead_71, Francois_72, Frokostdame_70, GUPitcher_67, Gavriela_59, Glaske_58, GoodLuckBabe_64, GumGum_57, Ibhubesi_79, InLimbo_59, IsHungry_58, Island3_61, JellyBread_55, JohnLord_79, Journey_53, Juniormint_54, Kabloowy_58, Kamaru_70, Khuang_38, KilKor_59, KingJulian_71, Ksquared_62, Kukla_72, Kumotta_71, LordVader_64, LunaStella_71, MUWow_58, MadMen_71, MargaretKali_67, Mask_78, MaterMagnus_59, Melissauren88_68, Misha28_74, Moosehead_55, Morkie_62, Mozy_80, Ogopogo_77, Okabe_68, Panchino_54,

PatoPoderoso_66, PauloDiaboli_115, Persistence_39, Peterson_78, Petra_71, Phalm_59, Phasih_68, PhriskyACE_62, Pimento_74, Polkaroo_61, Powerball_64, Purky_72, Raphaella_57, Renaud18_90, Richie_48, Richie_60, Rita_78, Rooter_67, Sashimi_48, Sbash_73, Schism_65, Scitech_56, Sejanus_77, ShroomBoi_74, Shweta_57, SilverChicken_83, Smeagol_83, Squirty_74, StevieRay_64, StressBall_59, Stuck_70, SushiChef_65, TChen_73, Tapioca_58, Thespis_61, ThulaThula_65, TootsiePop_74, Tortellini_66, Vidya_58, Violac_72, Whack_69, Whatsapiecost_68, Willsammy_59, Yeezy_68, YoungHarleezy_46, YoungHarleezy_58,

Summary by start number:

Start 48:
• Found in 22 of 153 (14.4%) of genes in pham
• Manual Annotations of this start: 7 of 136
• Called 36.4% of time when present
• Phage (with cluster) where this start called: Journey_53 (N), Misha28_74 (F1), Purky_72 (P6), Sbash_73 (I2), Scitech_56 (N), Squirty_74 (F3), TootsiePop_74 (F1), Tortellini_66 (P2),

Start 50:
• Found in 16 of 153 (10.5%) of genes in pham
• Manual Annotations of this start: 7 of 136
• Called 43.8% of time when present
• Phage (with cluster) where this start called: Andies_54 (N), Bosection6_55 (N), Charlie_57 (N), LordVader_64 (F), LunaStella_71 (F4), TChen_73 (F4), Tapioca_58 (N),

Start 58:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 136
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AirForce1_77 (FL),

Start 59:
• Found in 2 of 153 (1.3%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Caterpie_80 (AD),

Start 75:
• Found in 5 of 153 (3.3%) of genes in pham
• Manual Annotations of this start: 1 of 136
• Called 40.0% of time when present
• Phage (with cluster) where this start called: BaxterFox_70 (CZ3), SushiChef_65 (CZ),

Start 76:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 136
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Khuang_38 (FS),

Start 77:
• Found in 15 of 153 (9.8%) of genes in pham
• Manual Annotations of this start: 9 of 136
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Barco_65 (CV), BetterKatz_72 (DI), BlingBling_64 (CV), Blueberry_71 (CV), Bock_73 (DI), Francois_72 (DI), JuJu_76 (CV), Pimento_74 (DI), Zilla_65 (CV),

Start 78:
• Found in 40 of 153 (26.1%) of genes in pham
• Manual Annotations of this start: 26 of 136
• Called 72.5% of time when present
• Phage (with cluster) where this start called: ArchiDore_68 (DW), Attis_60 (CZ2), Azula_72 (CV), Bowser_60 (DB), Bunnybear_62 (CZ), CheeseSpider_76 (CV), Confidence_67 (CY1), Delian_72 (CV), Dolores_65 (CZ4), Easley_62 (CZ4), Fairfaxidum_71 (CV), FroggyToad_61 (CZ2), Hyzer_79 (CZ1), LordFarquaad_62 (CZ2), Madavieve_64 (CZ1), MagicMan_62 (DB), MintFen_69 (CV), MissRona_72 (CV), Obliviate_67 (CV), Opie_65 (DB), PatriciaStar_62 (DB), PhrostedPhlake_73 (CV), Pipp_72 (CV), Sekhmet_64 (CZ4), SoilAssassin_60 (CZ2), TaronosaurasRx_67 (DB), WinkNick_65 (CZ4), Zarbodnamra_70 (CV), Zodiariah_61 (DW),

Start 79:
• Found in 4 of 153 (2.6%) of genes in pham
• Manual Annotations of this start: 3 of 136
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Moosehead_55 (CZ6), Morkie_62 (DH), Yeezy_68 (CZ3),

Start 80:
• Found in 4 of 153 (2.6%) of genes in pham
• Manual Annotations of this start: 3 of 136
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Richie_48 (AY), Sashimi_48 (AY), YoungHarleezy_46 (AY),

Start 81:
• Found in 3 of 153 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 136
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Bipper_95 (Y), Cracklewink_95 (Y),

Start 82:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 136
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Whack_69 (singleton),

Start 83:
• Found in 29 of 153 (19.0%) of genes in pham
• Manual Annotations of this start: 24 of 136
• Called 82.8% of time when present
• Phage (with cluster) where this start called: AbbyDaisy_40 (AY), Altostratus_36 (FS), Bhageatrice_59 (AY), Dorito_57 (CZ4), DreamEater_70 (FJ), GUPitcher_67 (FJ),

GoodLuckBabe_64 (FF), IsHungry_58 (FF), JellyBread_55 (AY), Kabloowy_58 (AY), Kamaru_70 (DN1), Kukla_72 (FJ), Kumotta_71 (FB), MUWow_58 (AY), MargaretKali_67 (FB), MaterMagnus_59 (AY), Persistence_39 (AY), Peterson_78 (A1), PhriskyACE_62 (CZ4), Powerball_64 (CZ4), Raphaella_57 (AY), Rooter_67 (FB), Smeagol_83 (A1), YoungHarleezy_58 (AY),

Start 84:
• Found in 40 of 153 (26.1%) of genes in pham
• Manual Annotations of this start: 22 of 136
• Called 67.5% of time when present
• Phage (with cluster) where this start called: Atcoo_61 (P1), Bobi_79 (F1), Brusacoram_61 (P1), Corium_66 (F1), DillTech15_73 (F1), Flathead_71 (F1), Frokostdame_70 (CV), Ibhubesi_79 (F1), JohnLord_79 (AD), Juniormint_54 (P1), KingJulian_71 (F1), Mask_78 (AD), Melissauren88_68 (F1), Mozy_80 (F1), Ogopogo_77 (F1), Okabe_68 (F8), Panchino_54 (N), PatoPoderoso_66 (F1), Renaud18_90 (F4), Sejanus_77 (AD), ShroomBoi_74 (F1), Shweta_57 (N), SilverChicken_83 (F2), StevieRay_64 (P1), Thespis_61 (P1), ThulaThula_65 (P5), Violac_72 (F1),

Start 85:
• Found in 3 of 153 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 136
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Petra_71 (CV), Schism_65 (FF),

Start 86:
• Found in 20 of 153 (13.1%) of genes in pham
• Manual Annotations of this start: 15 of 136
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Brujita_60 (I1), Bunnies_64 (P1), CactusJack_59 (P1), Gavriela_59 (P1), Glaske_58 (P1), Island3_61 (I1), KilKor_59 (P1), Ksquared_62 (P1), MadMen_71 (F1), Phalm_59 (P1), Phasih_68 (F1), Rita_78 (F1), StressBall_59 (P1), Vidya_58 (P1), Willsammy_59 (P1),

Start 87:
• Found in 5 of 153 (3.3%) of genes in pham
• Manual Annotations of this start: 4 of 136
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Clown_14 (DC2), Farewell_79 (AF), Sparky_78 (AF), Whatsapiecost_68 (F1),

Start 88:
• Found in 7 of 153 (4.6%) of genes in pham
• Manual Annotations of this start: 1 of 136
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Richie_60 (AY),

Start 89:
• Found in 138 of 153 (90.2%) of genes in pham
• Manual Annotations of this start: 3 of 136
• Called 6.5% of time when present
• Phage (with cluster) where this start called: Aikyam_57 (AY), Angelique_62 (CY1), Bluvara_64 (I3), FroggyToad_63 (CZ2), Gambino_74 (CV), GumGum_57 (AY),

InLimbo_59 (DH), Polkaroo_61 (P1), Stuck_70 (I2),

Start 90:
• Found in 22 of 153 (14.4%) of genes in pham
• Manual Annotations of this start: 1 of 136
• Called 4.5% of time when present
• Phage (with cluster) where this start called: CaptainKirk2_69 (CV),

Start 100:
• Found in 8 of 153 (5.2%) of genes in pham
• Manual Annotations of this start: 3 of 136
• Called 37.5% of time when present
• Phage (with cluster) where this start called: A3Wally_115 (GD1), Dodo_117 (GD1), PauloDiaboli_115 (GD1),

Summary by clusters:

There are 40 clusters represented in this pham: GD1, singleton, FS, DH, DI, CZ2, CZ3, CZ1, DB, CZ4, Y, FB, FF, DW, FJ, FL, F, I1, I3, AF, A1, DN1, P2, CY1, P1, P6, AD, P5, CZ6, N, CZ, AY, DC2, CV, F1, F2, F3, F4, F8, I2,

Info for manual annotations of cluster A1:
•Start number 83 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster AD:
•Start number 84 was manually annotated 2 times for cluster AD.

Info for manual annotations of cluster AF:
•Start number 87 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AY:
•Start number 80 was manually annotated 3 times for cluster AY.
•Start number 83 was manually annotated 9 times for cluster AY.
•Start number 88 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CV:
•Start number 77 was manually annotated 5 times for cluster CV.
•Start number 78 was manually annotated 10 times for cluster CV.
•Start number 84 was manually annotated 1 time for cluster CV.
•Start number 85 was manually annotated 1 time for cluster CV.
•Start number 89 was manually annotated 1 time for cluster CV.
•Start number 90 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY1:
•Start number 78 was manually annotated 1 time for cluster CY1.
•Start number 89 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CZ:
•Start number 78 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 78 was manually annotated 1 time for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 78 was manually annotated 3 times for cluster CZ2.

Info for manual annotations of cluster CZ3:
•Start number 75 was manually annotated 1 time for cluster CZ3.
•Start number 79 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:
•Start number 78 was manually annotated 4 times for cluster CZ4.
•Start number 83 was manually annotated 3 times for cluster CZ4.

Info for manual annotations of cluster CZ6:
•Start number 79 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DB:
•Start number 78 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DC2:
•Start number 87 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DH:
•Start number 79 was manually annotated 1 time for cluster DH.

Info for manual annotations of cluster DI:
•Start number 77 was manually annotated 4 times for cluster DI.

Info for manual annotations of cluster DN1:
•Start number 83 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DW:
•Start number 78 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster F:
•Start number 50 was manually annotated 1 time for cluster F.

Info for manual annotations of cluster F1:
•Start number 48 was manually annotated 2 times for cluster F1.
•Start number 84 was manually annotated 10 times for cluster F1.
•Start number 86 was manually annotated 3 times for cluster F1.
•Start number 87 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F3:
•Start number 48 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:
•Start number 50 was manually annotated 2 times for cluster F4.
•Start number 84 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FB:
•Start number 83 was manually annotated 3 times for cluster FB.

Info for manual annotations of cluster FF:
•Start number 83 was manually annotated 2 times for cluster FF.
•Start number 85 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster FJ:
•Start number 83 was manually annotated 3 times for cluster FJ.

Info for manual annotations of cluster FL:
•Start number 58 was manually annotated 1 time for cluster FL.

Info for manual annotations of cluster FS:
•Start number 76 was manually annotated 1 time for cluster FS.
•Start number 83 was manually annotated 1 time for cluster FS.

Info for manual annotations of cluster GD1:
•Start number 100 was manually annotated 3 times for cluster GD1.

Info for manual annotations of cluster I1:
•Start number 86 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:
•Start number 48 was manually annotated 1 time for cluster I2.
•Start number 89 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster N:
•Start number 48 was manually annotated 1 time for cluster N.
•Start number 50 was manually annotated 4 times for cluster N.
•Start number 84 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:
•Start number 84 was manually annotated 5 times for cluster P1.
•Start number 86 was manually annotated 10 times for cluster P1.

Info for manual annotations of cluster P2:
•Start number 48 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P5:
•Start number 84 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:
•Start number 48 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Y:
•Start number 81 was manually annotated 2 times for cluster Y.

Gene Information:

Gene: A3Wally_115 Start: 79463, Stop: 79188, Start Num: 100
Candidate Starts for A3Wally_115:
(Start: 100 @79463 has 3 MA's), (130, 79391), (168, 79298), (172, 79289), (176, 79259),

Gene: AbbyDaisy_40 Start: 28577, Stop: 28236, Start Num: 83
Candidate Starts for AbbyDaisy_40:
(Start: 83 @28577 has 24 MA's), (Start: 88 @28562 has 1 MA's), (Start: 89 @28532 has 3 MA's), (93, 28475), (126, 28436), (169, 28346), (180, 28274),

Gene: Aikyam_57 Start: 32072, Stop: 32380, Start Num: 89
Candidate Starts for Aikyam_57:
(Start: 83 @32027 has 24 MA's), (Start: 89 @32072 has 3 MA's), (119, 32180), (132, 32198), (141, 32216), (145, 32231), (170, 32282), (180, 32354),

Gene: AirForce1_77 Start: 44013, Stop: 44456, Start Num: 58
Candidate Starts for AirForce1_77:
(Start: 58 @44013 has 1 MA's), (Start: 80 @44070 has 3 MA's), (Start: 83 @44073 has 24 MA's), (Start: 89 @44118 has 3 MA's), (111, 44211), (162, 44328), (181, 44415),

Gene: Altostratus_36 Start: 24819, Stop: 24376, Start Num: 83
Candidate Starts for Altostratus_36:
(71, 24846), (73, 24837), (Start: 83 @24819 has 24 MA's), (Start: 89 @24771 has 3 MA's), (96, 24699), (138, 24582), (148, 24555), (154, 24534), (160, 24516), (180, 24411),

Gene: Andies_54 Start: 38349, Stop: 38900, Start Num: 50
Candidate Starts for Andies_54:
(17, 38151), (27, 38211), (30, 38244), (36, 38280), (Start: 48 @38346 has 7 MA's), (Start: 50 @38349 has 7 MA's), (Start: 89 @38487 has 3 MA's), (97, 38574), (113, 38637), (141, 38694), (148, 38712), (180, 38862), (184, 38892),

Gene: Angelique_62 Start: 44919, Stop: 45251, Start Num: 89
Candidate Starts for Angelique_62:
(Start: 78 @44877 has 26 MA's), (Start: 89 @44919 has 3 MA's), (118, 45030), (142, 45078), (180, 45216),

Gene: ArchiDore_68 Start: 47597, Stop: 47950, Start Num: 78
Candidate Starts for ArchiDore_68:
(38, 47447), (Start: 78 @47597 has 26 MA's), (Start: 89 @47639 has 3 MA's), (123, 47750), (180, 47915),

Gene: Atcoo_61 Start: 41458, Stop: 41793, Start Num: 84
Candidate Starts for Atcoo_61:
(Start: 84 @41458 has 22 MA's), (Start: 86 @41461 has 15 MA's), (Start: 89 @41503 has 3 MA's), (133, 41620), (176, 41728), (180, 41767),

Gene: Attis_60 Start: 40973, Stop: 41338, Start Num: 78
Candidate Starts for Attis_60:
(Start: 78 @40973 has 26 MA's), (118, 41117), (180, 41303),

Gene: Azula_72 Start: 45840, Stop: 46205, Start Num: 78
Candidate Starts for Azula_72:
(Start: 77 @45837 has 9 MA's), (Start: 78 @45840 has 26 MA's), (Start: 89 @45882 has 3 MA's), (Start: 90 @45897 has 1 MA's), (114, 45981), (176, 46131), (180, 46167),

Gene: Barco_65 Start: 42185, Stop: 42556, Start Num: 77
Candidate Starts for Barco_65:

(Start: 75 @42182 has 1 MA's), (Start: 77 @42185 has 9 MA's), (Start: 78 @42188 has 26 MA's), (Start: 89 @42230 has 3 MA's), (Start: 90 @42245 has 1 MA's), (114, 42329), (153, 42407), (176, 42479), (180, 42518),

Gene: BaxterFox_70 Start: 47064, Stop: 47483, Start Num: 75
Candidate Starts for BaxterFox_70:
(Start: 75 @47064 has 1 MA's), (Start: 89 @47112 has 3 MA's), (Start: 100 @47175 has 3 MA's), (137, 47256), (148, 47280), (161, 47322), (180, 47448),

Gene: BetterKatz_72 Start: 48566, Stop: 48934, Start Num: 77
Candidate Starts for BetterKatz_72:
(51, 48482), (53, 48488), (72, 48554), (Start: 77 @48566 has 9 MA's), (Start: 89 @48611 has 3 MA's), (94, 48671), (155, 48788), (173, 48815), (180, 48881),

Gene: Bhageatrice_59 Start: 35623, Stop: 36084, Start Num: 83
Candidate Starts for Bhageatrice_59:
(Start: 83 @35623 has 24 MA's), (Start: 89 @35668 has 3 MA's), (138, 35887), (154, 35935), (160, 35953), (180, 36058),

Gene: Bipper_95 Start: 60239, Stop: 60613, Start Num: 81
Candidate Starts for Bipper_95:
(5, 59825), (7, 59909), (22, 60002), (25, 60011), (40, 60104), (Start: 81 @60239 has 2 MA's), (Start: 89 @60284 has 3 MA's), (Start: 90 @60299 has 1 MA's), (106, 60365), (115, 60386), (166, 60491), (180, 60569),

Gene: BlingBling_64 Start: 43067, Stop: 43438, Start Num: 77
Candidate Starts for BlingBling_64:
(Start: 75 @43064 has 1 MA's), (Start: 77 @43067 has 9 MA's), (Start: 78 @43070 has 26 MA's), (Start: 89 @43112 has 3 MA's), (Start: 90 @43127 has 1 MA's), (114, 43211), (176, 43361), (180, 43400),

Gene: Blueberry_71 Start: 45837, Stop: 46205, Start Num: 77
Candidate Starts for Blueberry_71:
(Start: 77 @45837 has 9 MA's), (Start: 78 @45840 has 26 MA's), (Start: 89 @45882 has 3 MA's), (Start: 90 @45897 has 1 MA's), (114, 45981), (176, 46131), (180, 46167),

Gene: Bluvara_64 Start: 42768, Stop: 43067, Start Num: 89
Candidate Starts for Bluvara_64:
(Start: 84 @42726 has 22 MA's), (Start: 89 @42768 has 3 MA's), (158, 42951),

Gene: Bobi_79 Start: 48352, Stop: 48687, Start Num: 84
Candidate Starts for Bobi_79:
(Start: 84 @48352 has 22 MA's), (Start: 86 @48355 has 15 MA's), (Start: 89 @48397 has 3 MA's), (133, 48514), (176, 48622), (180, 48661),

Gene: Bock_73 Start: 48168, Stop: 48518, Start Num: 77
Candidate Starts for Bock_73:
(Start: 77 @48168 has 9 MA's), (Start: 89 @48213 has 3 MA's), (Start: 90 @48228 has 1 MA's), (112, 48300), (180, 48465), (181, 48468),

Gene: Bosection6_55 Start: 38055, Stop: 38504, Start Num: 50
Candidate Starts for Bosection6_55:

(16, 37857), (26, 37917), (29, 37950), (35, 37986), (Start: 48 @38052 has 7 MA's), (Start: 50 @38055 has 7 MA's), (Start: 89 @38193 has 3 MA's), (158, 38376), (180, 38466), (184, 38496),

Gene: Bowser_60 Start: 41674, Stop: 42021, Start Num: 78
Candidate Starts for Bowser_60:
(Start: 78 @41674 has 26 MA's), (Start: 89 @41716 has 3 MA's), (121, 41812), (124, 41818), (134, 41836), (176, 41947), (180, 41986),

Gene: Brujita_60 Start: 39319, Stop: 39651, Start Num: 86
Candidate Starts for Brujita_60:
(Start: 86 @39319 has 15 MA's), (Start: 89 @39361 has 3 MA's), (133, 39478), (176, 39586),

Gene: Brusacoram_61 Start: 40001, Stop: 40336, Start Num: 84
Candidate Starts for Brusacoram_61:
(Start: 84 @40001 has 22 MA's), (Start: 86 @40004 has 15 MA's), (Start: 89 @40046 has 3 MA's), (133, 40163), (176, 40271), (180, 40310),

Gene: Bunnies_64 Start: 41294, Stop: 41638, Start Num: 86
Candidate Starts for Bunnies_64:
(Start: 84 @41291 has 22 MA's), (Start: 86 @41294 has 15 MA's), (Start: 89 @41336 has 3 MA's), (133, 41453), (176, 41561), (180, 41600), (184, 41630),

Gene: Bunnybear_62 Start: 45138, Stop: 45503, Start Num: 78
Candidate Starts for Bunnybear_62:
(Start: 78 @45138 has 26 MA's), (118, 45282), (176, 45429), (180, 45468),

Gene: CactusJack_59 Start: 40162, Stop: 40506, Start Num: 86
Candidate Starts for CactusJack_59:
(Start: 84 @40159 has 22 MA's), (Start: 86 @40162 has 15 MA's), (Start: 89 @40204 has 3 MA's), (133, 40321), (176, 40429), (180, 40468), (184, 40498),

Gene: CaptainKirk2_69 Start: 41893, Stop: 42204, Start Num: 90
Candidate Starts for CaptainKirk2_69:
(Start: 78 @41836 has 26 MA's), (Start: 90 @41893 has 1 MA's), (114, 41977), (153, 42055), (180, 42166),

Gene: Caterpie_80 Start: 55039, Stop: 55425, Start Num: 59
Candidate Starts for Caterpie_80:
(8, 54760), (11, 54778), (31, 54904), (59, 55039), (Start: 84 @55084 has 22 MA's), (Start: 89 @55126 has 3 MA's), (158, 55309),

Gene: Charlie_57 Start: 37679, Stop: 38128, Start Num: 50
Candidate Starts for Charlie_57:
(16, 37481), (26, 37541), (29, 37574), (35, 37610), (Start: 48 @37676 has 7 MA's), (Start: 50 @37679 has 7 MA's), (Start: 89 @37817 has 3 MA's), (158, 38000), (180, 38090), (184, 38120),

Gene: CheeseSpider_76 Start: 45762, Stop: 46130, Start Num: 78
Candidate Starts for CheeseSpider_76:
(Start: 78 @45762 has 26 MA's), (Start: 89 @45804 has 3 MA's), (Start: 90 @45819 has 1 MA's), (114, 45903), (153, 45981), (176, 46053), (180, 46092),

Gene: Clown_14 Start: 8028, Stop: 8411, Start Num: 87
Candidate Starts for Clown_14:

(34, 7860), (42, 7893), (47, 7929), (68, 7989), (Start: 85 @8025 has 2 MA's), (Start: 87 @8028 has 4 MA's), (Start: 89 @8070 has 3 MA's), (Start: 90 @8085 has 1 MA's), (147, 8250), (180, 8385),

Gene: Confidence_67 Start: 44239, Stop: 44604, Start Num: 78
Candidate Starts for Confidence_67:
(Start: 78 @44239 has 26 MA's), (118, 44383), (176, 44530), (180, 44569),

Gene: Corium_66 Start: 44159, Stop: 44500, Start Num: 84
Candidate Starts for Corium_66:
(Start: 48 @44066 has 7 MA's), (65, 44123), (Start: 84 @44159 has 22 MA's), (Start: 89 @44201 has 3 MA's), (158, 44384), (176, 44435),

Gene: Cracklewink_95 Start: 59474, Stop: 59848, Start Num: 81
Candidate Starts for Cracklewink_95:
(22, 59237), (25, 59246), (40, 59339), (Start: 81 @59474 has 2 MA's), (Start: 89 @59519 has 3 MA's), (Start: 90 @59534 has 1 MA's), (106, 59600), (166, 59726),

Gene: Delian_72 Start: 41834, Stop: 42202, Start Num: 78
Candidate Starts for Delian_72:
(Start: 78 @41834 has 26 MA's), (Start: 90 @41891 has 1 MA's), (114, 41975), (153, 42053), (180, 42164),

Gene: DillTech15_73 Start: 44178, Stop: 44531, Start Num: 84
Candidate Starts for DillTech15_73:
(60, 44133), (64, 44139), (Start: 84 @44178 has 22 MA's), (Start: 89 @44220 has 3 MA's), (106, 44301), (166, 44427), (176, 44466),

Gene: Dodo_117 Start: 79773, Stop: 79498, Start Num: 100
Candidate Starts for Dodo_117:
(Start: 100 @79773 has 3 MA's), (130, 79701), (168, 79608), (172, 79599), (176, 79569),

Gene: Dolores_65 Start: 41484, Stop: 41837, Start Num: 78
Candidate Starts for Dolores_65:
(Start: 78 @41484 has 26 MA's), (Start: 89 @41526 has 3 MA's), (121, 41631), (131, 41652), (149, 41679), (180, 41802),

Gene: Dorito_57 Start: 39050, Stop: 39421, Start Num: 83
Candidate Starts for Dorito_57:
(40, 38909), (Start: 83 @39050 has 24 MA's), (Start: 89 @39098 has 3 MA's), (114, 39197), (122, 39209), (125, 39215), (180, 39386),

Gene: DreamEater_70 Start: 41860, Stop: 42225, Start Num: 83
Candidate Starts for DreamEater_70:
(Start: 83 @41860 has 24 MA's), (Start: 89 @41905 has 3 MA's), (98, 41971), (123, 41998), (141, 42037), (168, 42103), (173, 42112), (180, 42178),

Gene: Easley_62 Start: 40977, Stop: 41312, Start Num: 78
Candidate Starts for Easley_62:
(Start: 78 @40977 has 26 MA's), (Start: 89 @41019 has 3 MA's), (121, 41124), (131, 41145), (149, 41172), (180, 41277),

Gene: Fairfaxidum_71 Start: 44423, Stop: 44767, Start Num: 78
Candidate Starts for Fairfaxidum_71:

(Start: 77 @44420 has 9 MA's), (Start: 78 @44423 has 26 MA's), (Start: 89 @44465 has 3 MA's), (94, 44522), (125, 44576), (127, 44582),

Gene: Farewell_79 Start: 52056, Stop: 52409, Start Num: 87
Candidate Starts for Farewell_79:
(Start: 78 @52047 has 26 MA's), (Start: 87 @52056 has 4 MA's), (Start: 89 @52098 has 3 MA's), (99, 52164), (107, 52182), (150, 52251), (157, 52272), (161, 52290), (176, 52338),

Gene: Flathead_71 Start: 44823, Stop: 45164, Start Num: 84
Candidate Starts for Flathead_71:
(Start: 48 @44730 has 7 MA's), (65, 44787), (Start: 84 @44823 has 22 MA's), (Start: 89 @44865 has 3 MA's), (158, 45048), (176, 45099),

Gene: Francois_72 Start: 48407, Stop: 48832, Start Num: 77
Candidate Starts for Francois_72:
(44, 48302), (46, 48317), (54, 48341), (Start: 77 @48407 has 9 MA's), (Start: 89 @48452 has 3 MA's), (117, 48566), (125, 48578), (152, 48635), (178, 48758),

Gene: FroggyToad_61 Start: 41480, Stop: 41845, Start Num: 78
Candidate Starts for FroggyToad_61:
(Start: 78 @41480 has 26 MA's), (118, 41624), (180, 41810),

Gene: FroggyToad_63 Start: 42129, Stop: 42428, Start Num: 89
Candidate Starts for FroggyToad_63:
(Start: 77 @42084 has 9 MA's), (Start: 78 @42087 has 26 MA's), (Start: 89 @42129 has 3 MA's), (121, 42234), (131, 42255), (149, 42282), (180, 42387),

Gene: Frokostdame_70 Start: 45207, Stop: 45515, Start Num: 84
Candidate Starts for Frokostdame_70:
(Start: 84 @45207 has 22 MA's), (Start: 89 @45249 has 3 MA's), (106, 45318), (115, 45336), (146, 45390), (174, 45420), (180, 45477),

Gene: GUPitcher_67 Start: 41033, Stop: 41515, Start Num: 83
Candidate Starts for GUPitcher_67:
(Start: 83 @41033 has 24 MA's), (Start: 89 @41078 has 3 MA's), (91, 41099), (138, 41297), (154, 41345), (160, 41363), (180, 41468),

Gene: Gambino_74 Start: 45882, Stop: 46205, Start Num: 89
Candidate Starts for Gambino_74:
(Start: 77 @45837 has 9 MA's), (Start: 78 @45840 has 26 MA's), (Start: 89 @45882 has 3 MA's), (Start: 90 @45897 has 1 MA's), (114, 45981), (176, 46131), (180, 46167),

Gene: Gavriela_59 Start: 40162, Stop: 40506, Start Num: 86
Candidate Starts for Gavriela_59:
(Start: 84 @40159 has 22 MA's), (Start: 86 @40162 has 15 MA's), (Start: 89 @40204 has 3 MA's), (133, 40321), (176, 40429), (180, 40468), (184, 40498),

Gene: Glaske_58 Start: 40162, Stop: 40506, Start Num: 86
Candidate Starts for Glaske_58:
(Start: 84 @40159 has 22 MA's), (Start: 86 @40162 has 15 MA's), (Start: 89 @40204 has 3 MA's), (133, 40321), (176, 40429), (180, 40468), (184, 40498),

Gene: GoodLuckBabe_64 Start: 38416, Stop: 38787, Start Num: 83

Candidate Starts for GoodLuckBabe_64:
(Start: 83 @38416 has 24 MA's), (Start: 89 @38461 has 3 MA's), (99, 38536), (171, 38662),

Gene: GumGum_57 Start: 32778, Stop: 33170, Start Num: 89
Candidate Starts for GumGum_57:
(74, 32721), (Start: 83 @32733 has 24 MA's), (Start: 88 @32748 has 1 MA's), (Start: 89 @32778 has 3 MA's), (95, 32853), (141, 32982), (148, 33000), (156, 33024), (177, 33120), (180, 33144),

Gene: Hyzer_79 Start: 52741, Stop: 53109, Start Num: 78
Candidate Starts for Hyzer_79:
(Start: 78 @52741 has 26 MA's), (118, 52885), (176, 53032), (180, 53071),

Gene: Ibhubesi_79 Start: 46556, Stop: 46915, Start Num: 84
Candidate Starts for Ibhubesi_79:
(60, 46514), (70, 46532), (Start: 84 @46556 has 22 MA's), (Start: 89 @46598 has 3 MA's), (158, 46781), (179, 46865), (180, 46871), (182, 46877),

Gene: InLimbo_59 Start: 36698, Stop: 37105, Start Num: 89
Candidate Starts for InLimbo_59:
(Start: 79 @36650 has 3 MA's), (Start: 89 @36698 has 3 MA's), (113, 36845), (136, 36887), (141, 36902), (176, 37031), (181, 37073), (183, 37097),

Gene: IsHungry_58 Start: 36843, Stop: 37187, Start Num: 83
Candidate Starts for IsHungry_58:
(Start: 83 @36843 has 24 MA's), (Start: 89 @36888 has 3 MA's), (128, 36987), (174, 37065), (177, 37098), (180, 37122), (186, 37176),

Gene: Island3_61 Start: 39319, Stop: 39651, Start Num: 86
Candidate Starts for Island3_61:
(Start: 86 @39319 has 15 MA's), (Start: 89 @39361 has 3 MA's), (133, 39478), (176, 39586),

Gene: JellyBread_55 Start: 32395, Stop: 32832, Start Num: 83
Candidate Starts for JellyBread_55:
(Start: 83 @32395 has 24 MA's), (Start: 88 @32410 has 1 MA's), (Start: 89 @32440 has 3 MA's), (95, 32515), (141, 32644), (148, 32662), (156, 32686), (177, 32782), (180, 32806),

Gene: JohnLord_79 Start: 54544, Stop: 54888, Start Num: 84
Candidate Starts for JohnLord_79:
(10, 54220), (12, 54238), (33, 54364), (61, 54499), (Start: 84 @54544 has 22 MA's), (Start: 89 @54586 has 3 MA's), (106, 54667), (135, 54721), (158, 54772),

Gene: Journey_53 Start: 35411, Stop: 35842, Start Num: 48
Candidate Starts for Journey_53:
(22, 35267), (28, 35282), (29, 35309), (35, 35345), (Start: 48 @35411 has 7 MA's), (Start: 50 @35414 has 7 MA's), (Start: 89 @35552 has 3 MA's), (133, 35669), (176, 35777), (180, 35816),

Gene: JuJu_76 Start: 47574, Stop: 47936, Start Num: 77
Candidate Starts for JuJu_76:
(Start: 77 @47574 has 9 MA's), (Start: 78 @47577 has 26 MA's), (Start: 89 @47619 has 3 MA's), (Start: 90 @47634 has 1 MA's), (Start: 100 @47682 has 3 MA's), (108, 47700), (116, 47718), (149, 47772), (164, 47820), (180, 47898),

Gene: Juniormint_54 Start: 36223, Stop: 36555, Start Num: 84

Candidate Starts for Juniormint_54:
(Start: 84 @36223 has 22 MA's), (Start: 89 @36265 has 3 MA's), (133, 36382), (176, 36490), (180, 36529),

Gene: Kabloowy_58 Start: 34291, Stop: 34752, Start Num: 83
Candidate Starts for Kabloowy_58:
(Start: 83 @34291 has 24 MA's), (Start: 89 @34336 has 3 MA's), (91, 34357), (138, 34555), (154, 34603), (160, 34621), (180, 34726),

Gene: Kamaru_70 Start: 42911, Stop: 43327, Start Num: 83
Candidate Starts for Kamaru_70:
(45, 42809), (49, 42815), (62, 42866), (Start: 83 @42911 has 24 MA's), (92, 42995), (110, 43073), (139, 43130), (143, 43142), (159, 43187), (174, 43226), (180, 43283),

Gene: Khuang_38 Start: 25760, Stop: 25416, Start Num: 76
Candidate Starts for Khuang_38:
(Start: 76 @25760 has 1 MA's), (Start: 88 @25736 has 1 MA's), (Start: 89 @25706 has 3 MA's), (91, 25685),

Gene: KilKor_59 Start: 40855, Stop: 41199, Start Num: 86
Candidate Starts for KilKor_59:
(Start: 84 @40852 has 22 MA's), (Start: 86 @40855 has 15 MA's), (Start: 89 @40897 has 3 MA's), (133, 41014), (176, 41122), (180, 41161), (184, 41191),

Gene: KingJulian_71 Start: 44159, Stop: 44500, Start Num: 84
Candidate Starts for KingJulian_71:
(Start: 48 @44066 has 7 MA's), (65, 44123), (Start: 84 @44159 has 22 MA's), (Start: 89 @44201 has 3 MA's), (158, 44384), (176, 44435),

Gene: Ksquared_62 Start: 41294, Stop: 41638, Start Num: 86
Candidate Starts for Ksquared_62:
(Start: 84 @41291 has 22 MA's), (Start: 86 @41294 has 15 MA's), (Start: 89 @41336 has 3 MA's), (133, 41453), (176, 41561), (180, 41600), (184, 41630),

Gene: Kukla_72 Start: 41885, Stop: 42343, Start Num: 83
Candidate Starts for Kukla_72:
(Start: 83 @41885 has 24 MA's), (Start: 89 @41930 has 3 MA's), (113, 42077), (141, 42134), (174, 42239), (180, 42296),

Gene: Kumotta_71 Start: 37919, Stop: 38248, Start Num: 83
Candidate Starts for Kumotta_71:
(Start: 83 @37919 has 24 MA's), (Start: 89 @37964 has 3 MA's), (101, 38042), (120, 38051), (152, 38111), (164, 38144), (180, 38222),

Gene: LordFarquaad_62 Start: 40954, Stop: 41319, Start Num: 78
Candidate Starts for LordFarquaad_62:
(Start: 78 @40954 has 26 MA's), (118, 41098), (180, 41284),

Gene: LordVader_64 Start: 39814, Stop: 40263, Start Num: 50
Candidate Starts for LordVader_64:
(23, 39667), (28, 39682), (29, 39709), (35, 39745), (Start: 48 @39811 has 7 MA's), (Start: 50 @39814 has 7 MA's), (Start: 89 @39952 has 3 MA's), (158, 40135), (176, 40186), (180, 40225), (184, 40255),

Gene: LunaStella_71 Start: 45366, Stop: 45794, Start Num: 50
Candidate Starts for LunaStella_71:
(6, 45066), (29, 45261), (35, 45297), (Start: 48 @45363 has 7 MA's), (Start: 50 @45366 has 7 MA's), (Start: 89 @45504 has 3 MA's), (133, 45621), (176, 45729), (180, 45768),

Gene: MUWow_58 Start: 33686, Stop: 34147, Start Num: 83
Candidate Starts for MUWow_58:
(Start: 83 @33686 has 24 MA's), (Start: 89 @33731 has 3 MA's), (91, 33752), (138, 33950), (154, 33998), (160, 34016), (180, 34121),

Gene: MadMen_71 Start: 44891, Stop: 45229, Start Num: 86
Candidate Starts for MadMen_71:
(63, 44849), (66, 44855), (Start: 86 @44891 has 15 MA's), (Start: 89 @44933 has 3 MA's), (133, 45050), (176, 45158), (180, 45197), (183, 45224),

Gene: Madavieve_64 Start: 45712, Stop: 46047, Start Num: 78
Candidate Starts for Madavieve_64:
(Start: 78 @45712 has 26 MA's), (Start: 89 @45754 has 3 MA's), (121, 45859), (131, 45880), (149, 45907), (180, 46012),

Gene: MagicMan_62 Start: 42714, Stop: 43088, Start Num: 78
Candidate Starts for MagicMan_62:
(Start: 78 @42714 has 26 MA's), (Start: 89 @42756 has 3 MA's), (118, 42867), (129, 42888), (142, 42915),

Gene: MargaretKali_67 Start: 36537, Stop: 36866, Start Num: 83
Candidate Starts for MargaretKali_67:
(Start: 83 @36537 has 24 MA's), (Start: 89 @36582 has 3 MA's), (101, 36660), (120, 36669), (152, 36729), (164, 36762), (180, 36840),

Gene: Mask_78 Start: 57551, Stop: 57895, Start Num: 84
Candidate Starts for Mask_78:
(10, 57227), (12, 57245), (33, 57371), (61, 57506), (Start: 84 @57551 has 22 MA's), (Start: 89 @57593 has 3 MA's), (106, 57674), (135, 57728), (158, 57779),

Gene: MaterMagnus_59 Start: 34199, Stop: 34552, Start Num: 83
Candidate Starts for MaterMagnus_59:
(Start: 83 @34199 has 24 MA's), (Start: 89 @34244 has 3 MA's), (119, 34352), (132, 34370), (141, 34388), (145, 34403), (170, 34454), (180, 34526),

Gene: Melissauren88_68 Start: 43644, Stop: 43991, Start Num: 84
Candidate Starts for Melissauren88_68:
(Start: 84 @43644 has 22 MA's), (Start: 89 @43686 has 3 MA's), (158, 43869), (176, 43920), (180, 43959), (183, 43986),

Gene: MintFen_69 Start: 42450, Stop: 42818, Start Num: 78
Candidate Starts for MintFen_69:
(Start: 78 @42450 has 26 MA's), (Start: 90 @42507 has 1 MA's), (114, 42591), (153, 42669), (180, 42780),

Gene: Misha28_74 Start: 45990, Stop: 46421, Start Num: 48
Candidate Starts for Misha28_74:

(29, 45888), (35, 45924), (Start: 48 @45990 has 7 MA's), (Start: 50 @45993 has 7 MA's), (Start: 89 @46131 has 3 MA's), (133, 46248), (176, 46356), (180, 46395),

Gene: MissRona_72 Start: 45841, Stop: 46206, Start Num: 78
Candidate Starts for MissRona_72:
(Start: 77 @45838 has 9 MA's), (Start: 78 @45841 has 26 MA's), (Start: 89 @45883 has 3 MA's), (Start: 90 @45898 has 1 MA's), (114, 45982), (176, 46132), (180, 46168),

Gene: Moosehead_55 Start: 33633, Stop: 34088, Start Num: 79
Candidate Starts for Moosehead_55:
(56, 33573), (Start: 79 @33633 has 3 MA's), (Start: 89 @33681 has 3 MA's), (91, 33702), (113, 33828), (136, 33870), (141, 33885), (180, 34053),

Gene: Morkie_62 Start: 37124, Stop: 37579, Start Num: 79
Candidate Starts for Morkie_62:
(Start: 79 @37124 has 3 MA's), (Start: 89 @37172 has 3 MA's), (113, 37319), (136, 37361), (141, 37376), (176, 37505), (181, 37547), (183, 37571),

Gene: Mozy_80 Start: 45738, Stop: 46079, Start Num: 84
Candidate Starts for Mozy_80:
(Start: 50 @45645 has 7 MA's), (67, 45702), (Start: 84 @45738 has 22 MA's), (Start: 89 @45780 has 3 MA's), (106, 45861), (135, 45915), (158, 45966), (180, 46047), (183, 46074),

Gene: Obliviate_67 Start: 42359, Stop: 42727, Start Num: 78
Candidate Starts for Obliviate_67:
(Start: 78 @42359 has 26 MA's), (Start: 89 @42401 has 3 MA's), (Start: 90 @42416 has 1 MA's), (114, 42500), (153, 42578), (176, 42650), (180, 42689),

Gene: Ogopogo_77 Start: 45102, Stop: 45455, Start Num: 84
Candidate Starts for Ogopogo_77:
(46, 45006), (64, 45063), (Start: 84 @45102 has 22 MA's), (Start: 89 @45144 has 3 MA's), (106, 45225), (166, 45351), (176, 45390),

Gene: Okabe_68 Start: 41449, Stop: 41790, Start Num: 84
Candidate Starts for Okabe_68:
(Start: 48 @41356 has 7 MA's), (65, 41413), (Start: 84 @41449 has 22 MA's), (Start: 89 @41491 has 3 MA's), (158, 41674), (180, 41764),

Gene: Opie_65 Start: 42832, Stop: 43206, Start Num: 78
Candidate Starts for Opie_65:
(Start: 78 @42832 has 26 MA's), (Start: 89 @42874 has 3 MA's), (118, 42985), (129, 43006), (142, 43033),

Gene: Panchino_54 Start: 38226, Stop: 38558, Start Num: 84
Candidate Starts for Panchino_54:
(Start: 84 @38226 has 22 MA's), (Start: 89 @38268 has 3 MA's), (133, 38385), (176, 38493),

Gene: PatoPoderoso_66 Start: 44159, Stop: 44500, Start Num: 84
Candidate Starts for PatoPoderoso_66:
(Start: 48 @44066 has 7 MA's), (65, 44123), (Start: 84 @44159 has 22 MA's), (Start: 89 @44201 has 3 MA's), (158, 44384), (176, 44435),

Gene: PatriciaStar_62 Start: 43883, Stop: 44230, Start Num: 78

Candidate Starts for PatriciaStar_62:
(Start: 78 @43883 has 26 MA's), (Start: 89 @43925 has 3 MA's), (121, 44021), (124, 44027), (134, 44045), (176, 44156), (180, 44195),

Gene: PauloDiaboli_115 Start: 78808, Stop: 78533, Start Num: 100
Candidate Starts for PauloDiaboli_115:
(Start: 100 @78808 has 3 MA's), (130, 78736), (168, 78643), (172, 78634), (176, 78604),

Gene: Persistence_39 Start: 27398, Stop: 27057, Start Num: 83
Candidate Starts for Persistence_39:
(Start: 83 @27398 has 24 MA's), (Start: 88 @27383 has 1 MA's), (Start: 89 @27353 has 3 MA's), (93, 27296), (120, 27266), (126, 27257), (169, 27167), (180, 27095),

Gene: Peterson_78 Start: 48630, Stop: 48289, Start Num: 83
Candidate Starts for Peterson_78:
(70, 48654), (Start: 83 @48630 has 24 MA's), (Start: 89 @48588 has 3 MA's), (107, 48516), (138, 48462), (180, 48333), (182, 48327),

Gene: Petra_71 Start: 43963, Stop: 44358, Start Num: 85
Candidate Starts for Petra_71:
(55, 43900), (71, 43939), (Start: 85 @43963 has 2 MA's), (Start: 87 @43966 has 4 MA's), (Start: 89 @44008 has 3 MA's), (Start: 100 @44077 has 3 MA's), (166, 44239), (176, 44281), (180, 44320),

Gene: Phalm_59 Start: 40162, Stop: 40506, Start Num: 86
Candidate Starts for Phalm_59:
(Start: 84 @40159 has 22 MA's), (Start: 86 @40162 has 15 MA's), (Start: 89 @40204 has 3 MA's), (133, 40321), (176, 40429), (180, 40468), (184, 40498),

Gene: Phasih_68 Start: 44413, Stop: 44874, Start Num: 86
Candidate Starts for Phasih_68:
(63, 44371), (66, 44377), (Start: 86 @44413 has 15 MA's), (Start: 89 @44455 has 3 MA's), (133, 44572), (176, 44680), (183, 44746), (187, 44785),

Gene: PhriskyACE_62 Start: 42055, Stop: 42390, Start Num: 83
Candidate Starts for PhriskyACE_62:
(1, 41236), (2, 41281), (3, 41332), (40, 41914), (Start: 83 @42055 has 24 MA's), (Start: 89 @42103 has 3 MA's), (112, 42190), (180, 42355),

Gene: PhrostedPhlake_73 Start: 44238, Stop: 44606, Start Num: 78
Candidate Starts for PhrostedPhlake_73:
(Start: 78 @44238 has 26 MA's), (Start: 89 @44280 has 3 MA's), (Start: 90 @44295 has 1 MA's), (102, 44346), (114, 44379), (176, 44529),

Gene: Pimento_74 Start: 47870, Stop: 48292, Start Num: 77
Candidate Starts for Pimento_74:
(Start: 77 @47870 has 9 MA's), (Start: 89 @47915 has 3 MA's), (117, 48029), (130, 48053), (152, 48098), (178, 48221), (180, 48239),

Gene: Pipp_72 Start: 44407, Stop: 44775, Start Num: 78
Candidate Starts for Pipp_72:
(Start: 78 @44407 has 26 MA's), (114, 44548), (153, 44626), (176, 44698), (180, 44737),

Gene: Polkaroo_61 Start: 40802, Stop: 41101, Start Num: 89

Candidate Starts for Polkaroo_61:
(Start: 84 @40760 has 22 MA's), (Start: 89 @40802 has 3 MA's), (158, 40985),

Gene: Powerball_64 Start: 42164, Stop: 42493, Start Num: 83
Candidate Starts for Powerball_64:
(1, 41345), (2, 41390), (3, 41441), (40, 42023), (Start: 83 @42164 has 24 MA's), (Start: 89 @42212 has 3 MA's), (112, 42299), (180, 42458),

Gene: Purky_72 Start: 44925, Stop: 45359, Start Num: 48
Candidate Starts for Purky_72:
(21, 44793), (24, 44796), (Start: 48 @44925 has 7 MA's), (Start: 50 @44928 has 7 MA's), (Start: 89 @45066 has 3 MA's), (106, 45147), (135, 45201), (158, 45252),

Gene: Raphaella_57 Start: 33209, Stop: 33670, Start Num: 83
Candidate Starts for Raphaella_57:
(Start: 83 @33209 has 24 MA's), (Start: 89 @33254 has 3 MA's), (91, 33275), (138, 33473), (154, 33521), (160, 33539), (180, 33644),

Gene: Renaud18_90 Start: 49824, Stop: 50195, Start Num: 84
Candidate Starts for Renaud18_90:
(71, 49800), (Start: 84 @49824 has 22 MA's), (Start: 89 @49866 has 3 MA's), (106, 49947), (166, 50073), (180, 50151),

Gene: Richie_48 Start: 30189, Stop: 30533, Start Num: 80
Candidate Starts for Richie_48:
(Start: 80 @30189 has 3 MA's), (Start: 89 @30237 has 3 MA's), (Start: 90 @30252 has 1 MA's), (121, 30318), (128, 30333), (142, 30360), (174, 30441), (180, 30498),

Gene: Richie_60 Start: 34284, Stop: 34706, Start Num: 88
Candidate Starts for Richie_60:
(74, 34257), (Start: 83 @34269 has 24 MA's), (Start: 88 @34284 has 1 MA's), (Start: 89 @34314 has 3 MA's), (95, 34389), (141, 34518), (148, 34536), (156, 34560), (177, 34656), (180, 34680),

Gene: Rita_78 Start: 47814, Stop: 48281, Start Num: 86
Candidate Starts for Rita_78:
(63, 47766), (66, 47772), (Start: 86 @47814 has 15 MA's), (Start: 89 @47856 has 3 MA's), (133, 47973), (176, 48081), (183, 48147), (187, 48186),

Gene: Rooter_67 Start: 36413, Stop: 36883, Start Num: 83
Candidate Starts for Rooter_67:
(20, 36158), (Start: 83 @36413 has 24 MA's), (Start: 89 @36458 has 3 MA's), (131, 36662), (148, 36704), (151, 36710), (154, 36725), (160, 36743), (167, 36770), (175, 36806),

Gene: Sashimi_48 Start: 31136, Stop: 31513, Start Num: 80
Candidate Starts for Sashimi_48:
(Start: 80 @31136 has 3 MA's), (Start: 89 @31181 has 3 MA's), (111, 31274), (140, 31328),

Gene: Sbash_73 Start: 47394, Stop: 47846, Start Num: 48
Candidate Starts for Sbash_73:
(21, 47247), (Start: 48 @47394 has 7 MA's), (Start: 50 @47397 has 7 MA's), (Start: 89 @47535 has 3 MA's), (106, 47616), (166, 47742),

Gene: Schism_65 Start: 39526, Stop: 39828, Start Num: 85

Candidate Starts for Schism_65:
(37, 39367), (Start: 83 @39523 has 24 MA's), (Start: 85 @39526 has 2 MA's), (Start: 89 @39568 has 3 MA's), (122, 39652), (128, 39664),

Gene: Scitech_56 Start: 38238, Stop: 38633, Start Num: 48
Candidate Starts for Scitech_56:
(32, 38148), (43, 38208), (Start: 48 @38238 has 7 MA's), (Start: 50 @38241 has 7 MA's), (Start: 89 @38379 has 3 MA's), (106, 38448), (115, 38466), (146, 38520),

Gene: Sejanus_77 Start: 56012, Stop: 56353, Start Num: 84
Candidate Starts for Sejanus_77:
(8, 55688), (11, 55706), (31, 55832), (59, 55967), (Start: 84 @56012 has 22 MA's), (Start: 89 @56054 has 3 MA's), (158, 56237),

Gene: Sekhmet_64 Start: 41883, Stop: 42236, Start Num: 78
Candidate Starts for Sekhmet_64:
(Start: 78 @41883 has 26 MA's), (Start: 89 @41925 has 3 MA's), (121, 42030), (131, 42051), (149, 42078), (180, 42201),

Gene: ShroomBoi_74 Start: 46463, Stop: 46810, Start Num: 84
Candidate Starts for ShroomBoi_74:
(Start: 48 @46370 has 7 MA's), (65, 46427), (Start: 84 @46463 has 22 MA's), (Start: 89 @46505 has 3 MA's), (158, 46688), (176, 46739), (180, 46778), (183, 46805),

Gene: Shweta_57 Start: 37933, Stop: 38274, Start Num: 84
Candidate Starts for Shweta_57:
(Start: 84 @37933 has 22 MA's), (Start: 89 @37975 has 3 MA's), (158, 38158),

Gene: SilverChicken_83 Start: 46399, Stop: 46746, Start Num: 84
Candidate Starts for SilverChicken_83:
(Start: 48 @46306 has 7 MA's), (65, 46363), (Start: 84 @46399 has 22 MA's), (Start: 89 @46441 has 3 MA's), (158, 46624), (180, 46714), (183, 46741),

Gene: Smeagol_83 Start: 50364, Stop: 50023, Start Num: 83
Candidate Starts for Smeagol_83:
(Start: 83 @50364 has 24 MA's), (Start: 89 @50322 has 3 MA's), (107, 50250), (138, 50196), (180, 50067), (182, 50061),

Gene: SoilAssassin_60 Start: 40972, Stop: 41337, Start Num: 78
Candidate Starts for SoilAssassin_60:
(Start: 78 @40972 has 26 MA's), (118, 41116), (180, 41302),

Gene: Sparky_78 Start: 53650, Stop: 54003, Start Num: 87
Candidate Starts for Sparky_78:
(Start: 78 @53641 has 26 MA's), (Start: 87 @53650 has 4 MA's), (Start: 89 @53692 has 3 MA's), (99, 53758), (107, 53776), (150, 53845), (157, 53866), (161, 53884), (176, 53932),

Gene: Squirty_74 Start: 49246, Stop: 49641, Start Num: 48
Candidate Starts for Squirty_74:
(9, 49012), (15, 49048), (32, 49156), (43, 49216), (Start: 48 @49246 has 7 MA's), (Start: 50 @49249 has 7 MA's), (Start: 89 @49387 has 3 MA's), (106, 49456), (115, 49474), (146, 49528),

Gene: StevieRay_64 Start: 41228, Stop: 41569, Start Num: 84

Candidate Starts for StevieRay_64:
(Start: 81 @41225 has 2 MA's), (Start: 84 @41228 has 22 MA's), (Start: 89 @41270 has 3 MA's), (158, 41453), (176, 41504),

Gene: StressBall_59 Start: 40162, Stop: 40506, Start Num: 86
Candidate Starts for StressBall_59:
(Start: 84 @40159 has 22 MA's), (Start: 86 @40162 has 15 MA's), (Start: 89 @40204 has 3 MA's), (133, 40321), (176, 40429), (180, 40468), (184, 40498),

Gene: Stuck_70 Start: 47639, Stop: 47932, Start Num: 89
Candidate Starts for Stuck_70:
(Start: 84 @47597 has 22 MA's), (Start: 89 @47639 has 3 MA's), (106, 47720), (135, 47774), (158, 47825),

Gene: SushiChef_65 Start: 46783, Stop: 47202, Start Num: 75
Candidate Starts for SushiChef_65:
(Start: 75 @46783 has 1 MA's), (Start: 89 @46831 has 3 MA's), (Start: 100 @46894 has 3 MA's), (137, 46975), (148, 46999), (161, 47041), (180, 47167),

Gene: TChen_73 Start: 47317, Stop: 47745, Start Num: 50
Candidate Starts for TChen_73:
(6, 47017), (29, 47212), (35, 47248), (Start: 48 @47314 has 7 MA's), (Start: 50 @47317 has 7 MA's), (Start: 89 @47455 has 3 MA's), (133, 47572), (176, 47680), (180, 47719),

Gene: Tapioca_58 Start: 38788, Stop: 39339, Start Num: 50
Candidate Starts for Tapioca_58:
(17, 38590), (27, 38650), (30, 38683), (36, 38719), (Start: 48 @38785 has 7 MA's), (Start: 50 @38788 has 7 MA's), (Start: 89 @38926 has 3 MA's), (97, 39013), (113, 39076), (141, 39133), (148, 39151), (180, 39301), (184, 39331),

Gene: TaronosaurasRx_67 Start: 42279, Stop: 42626, Start Num: 78
Candidate Starts for TaronosaurasRx_67:
(Start: 78 @42279 has 26 MA's), (Start: 89 @42321 has 3 MA's), (121, 42417), (124, 42423), (134, 42441), (176, 42552), (180, 42591),

Gene: Thespis_61 Start: 40001, Stop: 40336, Start Num: 84
Candidate Starts for Thespis_61:
(Start: 84 @40001 has 22 MA's), (Start: 86 @40004 has 15 MA's), (Start: 89 @40046 has 3 MA's), (133, 40163), (176, 40271), (180, 40310),

Gene: ThulaThula_65 Start: 43845, Stop: 44189, Start Num: 84
Candidate Starts for ThulaThula_65:
(4, 43398), (13, 43536), (14, 43542), (18, 43554), (19, 43581), (39, 43695), (Start: 84 @43845 has 22 MA's), (Start: 86 @43848 has 15 MA's), (Start: 89 @43890 has 3 MA's), (Start: 100 @43953 has 3 MA's), (105, 43962), (109, 43977),

Gene: TootsiePop_74 Start: 45990, Stop: 46421, Start Num: 48
Candidate Starts for TootsiePop_74:
(29, 45888), (35, 45924), (Start: 48 @45990 has 7 MA's), (Start: 50 @45993 has 7 MA's), (Start: 89 @46131 has 3 MA's), (133, 46248), (176, 46356), (180, 46395),

Gene: Tortellini_66 Start: 44536, Stop: 45000, Start Num: 48
Candidate Starts for Tortellini_66:

(41, 44500), (Start: 48 @44536 has 7 MA's), (Start: 50 @44539 has 7 MA's), (Start: 89 @44677 has 3 MA's), (106, 44758), (166, 44884), (180, 44962), (184, 44992),

Gene: Vidya_58 Start: 38673, Stop: 39005, Start Num: 86
Candidate Starts for Vidya_58:
(Start: 86 @38673 has 15 MA's), (Start: 89 @38715 has 3 MA's), (133, 38832), (176, 38940),

Gene: Violac_72 Start: 46458, Stop: 46964, Start Num: 84
Candidate Starts for Violac_72:
(60, 46416), (64, 46422), (Start: 84 @46458 has 22 MA's), (Start: 89 @46500 has 3 MA's), (106, 46581), (163, 46704), (166, 46707), (176, 46746), (183, 46812), (187, 46851), (188, 46923),

Gene: Whack_69 Start: 45414, Stop: 45812, Start Num: 82
Candidate Starts for Whack_69:
(57, 45354), (Start: 82 @45414 has 1 MA's), (Start: 89 @45462 has 3 MA's), (Start: 90 @45477 has 1 MA's), (103, 45543), (104, 45546), (144, 45636), (179, 45771),

Gene: Whatsapiecost_68 Start: 41989, Stop: 42354, Start Num: 87
Candidate Starts for Whatsapiecost_68:
(52, 41896), (69, 41953), (Start: 87 @41989 has 4 MA's), (Start: 89 @42031 has 3 MA's), (105, 42115), (165, 42244), (180, 42322), (183, 42349),

Gene: Willsammy_59 Start: 40338, Stop: 40682, Start Num: 86
Candidate Starts for Willsammy_59:
(Start: 84 @40335 has 22 MA's), (Start: 86 @40338 has 15 MA's), (Start: 89 @40380 has 3 MA's), (133, 40497), (176, 40605), (180, 40644), (184, 40674),

Gene: WinkNick_65 Start: 41407, Stop: 41760, Start Num: 78
Candidate Starts for WinkNick_65:
(Start: 78 @41407 has 26 MA's), (Start: 89 @41449 has 3 MA's), (121, 41554), (131, 41575), (149, 41602), (180, 41725),

Gene: Yeezy_68 Start: 43930, Stop: 44385, Start Num: 79
Candidate Starts for Yeezy_68:
(Start: 79 @43930 has 3 MA's), (Start: 89 @43978 has 3 MA's), (96, 44056), (113, 44125), (141, 44182), (154, 44221), (176, 44311), (180, 44350),

Gene: YoungHarleezy_46 Start: 29794, Stop: 30138, Start Num: 80
Candidate Starts for YoungHarleezy_46:
(Start: 80 @29794 has 3 MA's), (Start: 89 @29842 has 3 MA's), (Start: 90 @29857 has 1 MA's), (121, 29923), (128, 29938), (142, 29965), (174, 30046), (180, 30103),

Gene: YoungHarleezy_58 Start: 33772, Stop: 34209, Start Num: 83
Candidate Starts for YoungHarleezy_58:
(Start: 83 @33772 has 24 MA's), (Start: 88 @33787 has 1 MA's), (Start: 89 @33817 has 3 MA's), (95, 33892), (141, 34021), (148, 34039), (156, 34063), (177, 34159), (180, 34183),

Gene: Zarbodnamra_70 Start: 42931, Stop: 43299, Start Num: 78
Candidate Starts for Zarbodnamra_70:
(Start: 78 @42931 has 26 MA's), (Start: 89 @42973 has 3 MA's), (Start: 90 @42988 has 1 MA's), (114, 43072), (153, 43150), (176, 43222), (180, 43261),

Gene: Zilla_65 Start: 42202, Stop: 42573, Start Num: 77

Candidate Starts for Zilla_65:
(Start: 75 @42199 has 1 MA's), (Start: 77 @42202 has 9 MA's), (Start: 78 @42205 has 26 MA's), (Start: 89 @42247 has 3 MA's), (Start: 90 @42262 has 1 MA's), (114, 42346), (153, 42424), (176, 42496), (180, 42535),

Gene: Zodiariah_61 Start: 46504, Stop: 46875, Start Num: 78
Candidate Starts for Zodiariah_61:
(Start: 77 @46501 has 9 MA's), (Start: 78 @46504 has 26 MA's), (Start: 89 @46546 has 3 MA's), (125, 46663), (180, 46840), (185, 46870),