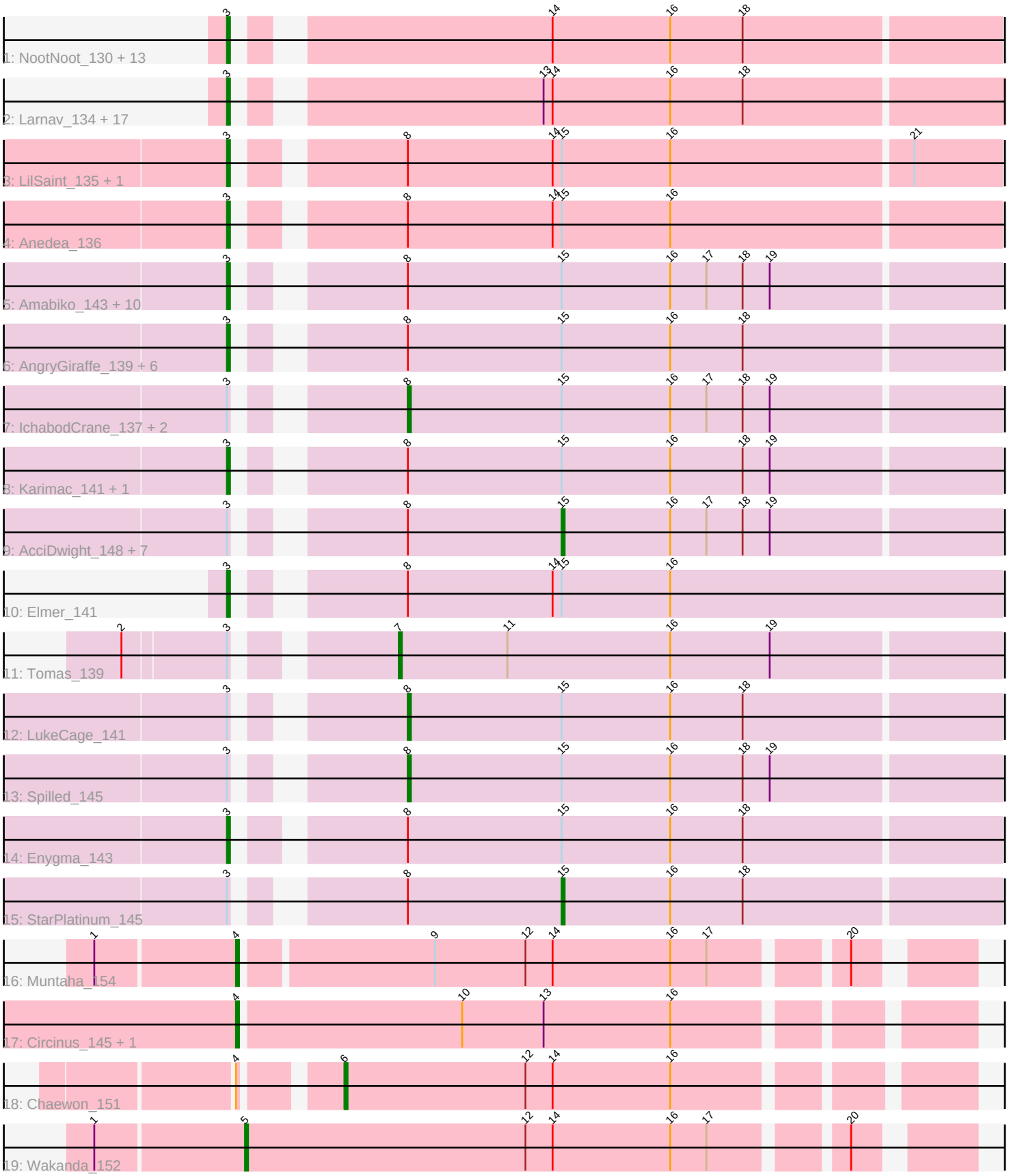
Pham 338218


1: NootNoot_130 + 13
2: Larnav_134 + 17
3: LilSaint_135 + 1
4: Anedea_136
5: Amabiko_143 + 10
6: AngryGiraffe_139 + 6
7: IchabodCrane_137 + 2
8: Karimac_141 + 1
9: AcciDwight_148 + 7
10: Elmer_141
11: Tomas_139
12: LukeCage_141
13: Spilled_145
14: Enygma_143
15: StarPlatinum_145
16: Muntaha_154
17: Circinus_145 + 1
18: Chaewon_151
19: Wakanda_152

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 338218 Report

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

Pham number 338218 has 77 members, 4 are drafts.

Phages represented in each track:
• Track 1 : NootNoot_130, Braelyn_134, WhereRU_132, PinkiePie_130, Liandry_133, Bartholomune_133, Eliot67_131, PynkPanther_133, Paradiddles_129, Persimmon_133, Navo_131, Davielle_133, Squillium_133, FreddyDRoo_133
• Track 2 : Larnav_134, Teutsch_133, HangryHippo_133, Watermoore_133, Pepperwood_133, BlueOtter_133, WashU_133, Leo04_135, Tribute_133, PacManQ_133, Samisti12_135, Scheme_135, Peebs_132, Cross_134, ArianaSWT_135, Coogler_133, Lululemon_133, Sushi23_133
• Track 3 : LilSaint_135, Riptide_130
• Track 4 : Anedea_136
• Track 5 : Amabiko_143, PumpkinSpice_144, Jollison_141, SaltySpitoon_142, CeilingFan_142, KentuckyRacer_144, Quaran19_142, Birchlyn_141, JimJam_145, Rikishi_141, Daisy123_144
• Track 6 : AngryGiraffe_139, BoomerJR_142, Yaboi_141, Stanimal_140, Mugiwara_143, Genie2_142, Sollertia_141
• Track 7 : IchabodCrane_137, MindFlayer_138, Wipeout_136
• Track 8 : Karimac_141, Brizzy_140
• Track 9 : AcciDwight_148, Tuesday_146, Bordeaux_141, Spelly_144, TomSawyer_143, Starbow_140, Gibbi_148, Battuta_141
• Track 10 : Elmer_141
• Track 11 : Tomas_139
• Track 12 : LukeCage_141
• Track 13 : Spilled_145
• Track 14 : Enygma_143
• Track 15 : StarPlatinum_145
• Track 16 : Muntaha_154
• Track 17 : Circinus_145, BillNye_144
• Track 18 : Chaewon_151
• Track 19 : Wakanda_152

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

The start number called the most often in the published annotations is 3, it was called in 56 of the 73 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Amabiko_143, Anedea_136, AngryGiraffe_139, ArianaSWT_135, Bartholomune_133, Birchlyn_141, BlueOtter_133, BoomerJR_142, Braelyn_134, Brizzy_140, CeilingFan_142, Coogler_133, Cross_134, Daisy123_144, Davielle_133, Eliot67_131, Elmer_141, Enygma_143, FreddyDRoo_133, Genie2_142, HangryHippo_133, JimJam_145, Jollison_141, Karimac_141, KentuckyRacer_144, Larnav_134, Leo04_135, Liandry_133, LilSaint_135, Lululemon_133, Mugiwara_143, Navo_131, NootNoot_130, PacManQ_133, Paradiddles_129, Peebs_132, Pepperwood_133, Persimmon_133, PinkiePie_130, PumpkinSpice_144, PynkPanther_133, Quaran19_142, Rikishi_141, Riptide_130, SaltySpitoon_142, Samisti12_135, Scheme_135, Sollertia_141, Squillium_133, Stanimal_140, Sushi23_133, Teutsch_133, Tribute_133, WashU_133, Watermoore_133, WhereRU_132, Yaboi_141,

Genes that have the "Most Annotated" start but do not call it:
• AcciDwight_148, Battuta_141, Bordeaux_141, Gibbi_148, IchabodCrane_137, LukeCage_141, MindFlayer_138, Spelly_144, Spilled_145, StarPlatinum_145, Starbow_140, TomSawyer_143, Tomas_139, Tuesday_146, Wipeout_136,

Genes that do not have the "Most Annotated" start:
• BillNye_144, Chaewon_151, Circinus_145, Muntaha_154, Wakanda_152,

Summary by start number:

Start 3:
• Found in 72 of 77 (93.5%) of genes in pham
• Manual Annotations of this start: 56 of 73
• Called 79.2% of time when present
• Phage (with cluster) where this start called: Amabiko_143 (BE2), Anedea_136 (BE1), AngryGiraffe_139 (BE2), ArianaSWT_135 (BE1), Bartholomune_133 (BE1), Birchlyn_141 (BE2), BlueOtter_133 (BE1), BoomerJR_142 (BE2), Braelyn_134 (BE1), Brizzy_140 (BE2), CeilingFan_142 (BE2), Coogler_133 (BE1), Cross_134 (BE1), Daisy123_144 (BE2), Davielle_133 (BE1), Eliot67_131 (BE1), Elmer_141 (BE2), Enygma_143 (BE2), FreddyDRoo_133 (BE1), Genie2_142 (BE2), HangryHippo_133 (BE1), JimJam_145 (BE2), Jollison_141 (BE2), Karimac_141 (BE2), KentuckyRacer_144 (BE2), Larnav_134 (BE1), Leo04_135 (BE1), Liandry_133 (BE1), LilSaint_135 (BE1), Lululemon_133 (BE1), Mugiwara_143 (BE2), Navo_131 (BE1), NootNoot_130 (BE1), PacManQ_133 (BE1), Paradiddles_129 (BE1), Peebs_132 (BE1), Pepperwood_133 (BE1), Persimmon_133 (BE1), PinkiePie_130 (BE1), PumpkinSpice_144 (BE2), PynkPanther_133 (BE1), Quaran19_142 (BE2), Rikishi_141 (BE2), Riptide_130 (BE1), SaltySpitoon_142 (BE2), Samisti12_135 (BE1), Scheme_135 (BE1), Sollertia_141 (BE2), Squillium_133 (BE1), Stanimal_140 (BE2), Sushi23_133 (BE1), Teutsch_133 (BE1), Tribute_133 (BE1), WashU_133 (BE1), Watermoore_133 (BE1), WhereRU_132 (BE1), Yaboi_141 (BE2),

Start 4:
• Found in 4 of 77 (5.2%) of genes in pham
• Manual Annotations of this start: 3 of 73
• Called 75.0% of time when present
• Phage (with cluster) where this start called: BillNye_144 (BK2), Circinus_145 (BK2), Muntaha_154 (BK2),

Start 5:

• Found in 1 of 77 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Wakanda_152 (BK2),

Start 6:
• Found in 1 of 77 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chaewon_151 (BK2),

Start 7:
• Found in 1 of 77 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tomas_139 (BE2),

Start 8:
• Found in 39 of 77 (50.6%) of genes in pham
• Manual Annotations of this start: 5 of 73
• Called 12.8% of time when present
• Phage (with cluster) where this start called: IchabodCrane_137 (BE2), LukeCage_141 (BE2), MindFlayer_138 (BE2), Spilled_145 (BE2), Wipeout_136 (BE2),

Start 15:
• Found in 39 of 77 (50.6%) of genes in pham
• Manual Annotations of this start: 6 of 73
• Called 23.1% of time when present
• Phage (with cluster) where this start called: AcciDwight_148 (BE2), Battuta_141 (BE2), Bordeaux_141 (BE2), Gibbi_148 (BE2), Spelly_144 (BE2), StarPlatinum_145 (BE2), Starbow_140 (BE2), TomSawyer_143 (BE2), Tuesday_146 (BE2),

Summary by clusters:

There are 3 clusters represented in this pham: BE2, BE1, BK2,

Info for manual annotations of cluster BE1:
•Start number 3 was manually annotated 34 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 3 was manually annotated 22 times for cluster BE2.
•Start number 7 was manually annotated 1 time for cluster BE2.
•Start number 8 was manually annotated 5 times for cluster BE2.
•Start number 15 was manually annotated 6 times for cluster BE2.

Info for manual annotations of cluster BK2:
•Start number 4 was manually annotated 3 times for cluster BK2.
•Start number 5 was manually annotated 1 time for cluster BK2.
•Start number 6 was manually annotated 1 time for cluster BK2.

Gene Information:

Gene: AcciDwight_148 Start: 85443, Stop: 85598, Start Num: 15
Candidate Starts for AcciDwight_148:
(Start: 3 @85350 has 56 MA's), (Start: 8 @85392 has 5 MA's), (Start: 15 @85443 has 6 MA's), (16, 85479), (17, 85491), (18, 85503), (19, 85512),

Gene: Amabiko_143 Start: 85395, Stop: 85643, Start Num: 3
Candidate Starts for Amabiko_143:
(Start: 3 @85395 has 56 MA's), (Start: 8 @85437 has 5 MA's), (Start: 15 @85488 has 6 MA's), (16, 85524), (17, 85536), (18, 85548), (19, 85557),

Gene: Anedea_136 Start: 83625, Stop: 83885, Start Num: 3
Candidate Starts for Anedea_136:
(Start: 3 @83625 has 56 MA's), (Start: 8 @83670 has 5 MA's), (14, 83718), (Start: 15 @83721 has 6 MA's), (16, 83757),

Gene: AngryGiraffe_139 Start: 85321, Stop: 85569, Start Num: 3
Candidate Starts for AngryGiraffe_139:
(Start: 3 @85321 has 56 MA's), (Start: 8 @85363 has 5 MA's), (Start: 15 @85414 has 6 MA's), (16, 85450), (18, 85474),

Gene: ArianaSWT_135 Start: 86126, Stop: 86377, Start Num: 3
Candidate Starts for ArianaSWT_135:
(Start: 3 @86126 has 56 MA's), (13, 86213), (14, 86216), (16, 86255), (18, 86279),

Gene: Bartholomune_133 Start: 83929, Stop: 84177, Start Num: 3
Candidate Starts for Bartholomune_133:
(Start: 3 @83929 has 56 MA's), (14, 84019), (16, 84058), (18, 84082),

Gene: Battuta_141 Start: 85461, Stop: 85616, Start Num: 15
Candidate Starts for Battuta_141:
(Start: 3 @85368 has 56 MA's), (Start: 8 @85410 has 5 MA's), (Start: 15 @85461 has 6 MA's), (16, 85497), (17, 85509), (18, 85521), (19, 85530),

Gene: BillNye_144 Start: 86005, Stop: 86232, Start Num: 4
Candidate Starts for BillNye_144:
(Start: 4 @86005 has 3 MA's), (10, 86077), (13, 86104), (16, 86146),

Gene: Birchlyn_141 Start: 83255, Stop: 83503, Start Num: 3
Candidate Starts for Birchlyn_141:
(Start: 3 @83255 has 56 MA's), (Start: 8 @83297 has 5 MA's), (Start: 15 @83348 has 6 MA's), (16, 83384), (17, 83396), (18, 83408), (19, 83417),

Gene: BlueOtter_133 Start: 86163, Stop: 86414, Start Num: 3
Candidate Starts for BlueOtter_133:
(Start: 3 @86163 has 56 MA's), (13, 86250), (14, 86253), (16, 86292), (18, 86316),

Gene: BoomerJR_142 Start: 85736, Stop: 85984, Start Num: 3
Candidate Starts for BoomerJR_142:
(Start: 3 @85736 has 56 MA's), (Start: 8 @85778 has 5 MA's), (Start: 15 @85829 has 6 MA's), (16, 85865), (18, 85889),

Gene: Bordeaux_141 Start: 85616, Stop: 85771, Start Num: 15
Candidate Starts for Bordeaux_141:
(Start: 3 @85523 has 56 MA's), (Start: 8 @85565 has 5 MA's), (Start: 15 @85616 has 6 MA's), (16, 85652), (17, 85664), (18, 85676), (19, 85685),

Gene: Braelyn_134 Start: 84800, Stop: 85048, Start Num: 3
Candidate Starts for Braelyn_134:
(Start: 3 @84800 has 56 MA's), (14, 84890), (16, 84929), (18, 84953),

Gene: Brizzy_140 Start: 85176, Stop: 85424, Start Num: 3
Candidate Starts for Brizzy_140:
(Start: 3 @85176 has 56 MA's), (Start: 8 @85218 has 5 MA's), (Start: 15 @85269 has 6 MA's), (16, 85305), (18, 85329), (19, 85338),

Gene: CeilingFan_142 Start: 85286, Stop: 85534, Start Num: 3
Candidate Starts for CeilingFan_142:
(Start: 3 @85286 has 56 MA's), (Start: 8 @85328 has 5 MA's), (Start: 15 @85379 has 6 MA's), (16, 85415), (17, 85427), (18, 85439), (19, 85448),

Gene: Chaewon_151 Start: 86189, Stop: 86383, Start Num: 6
Candidate Starts for Chaewon_151:
(Start: 4 @86162 has 3 MA's), (Start: 6 @86189 has 1 MA's), (12, 86249), (14, 86258), (16, 86297),

Gene: Circinus_145 Start: 85973, Stop: 86200, Start Num: 4
Candidate Starts for Circinus_145:
(Start: 4 @85973 has 3 MA's), (10, 86045), (13, 86072), (16, 86114),

Gene: Coogler_133 Start: 86188, Stop: 86439, Start Num: 3
Candidate Starts for Coogler_133:
(Start: 3 @86188 has 56 MA's), (13, 86275), (14, 86278), (16, 86317), (18, 86341),

Gene: Cross_134 Start: 86164, Stop: 86415, Start Num: 3
Candidate Starts for Cross_134:
(Start: 3 @86164 has 56 MA's), (13, 86251), (14, 86254), (16, 86293), (18, 86317),

Gene: Daisy123_144 Start: 85707, Stop: 85955, Start Num: 3
Candidate Starts for Daisy123_144:
(Start: 3 @85707 has 56 MA's), (Start: 8 @85749 has 5 MA's), (Start: 15 @85800 has 6 MA's), (16, 85836), (17, 85848), (18, 85860), (19, 85869),

Gene: Davielle_133 Start: 84257, Stop: 84505, Start Num: 3
Candidate Starts for Davielle_133:
(Start: 3 @84257 has 56 MA's), (14, 84347), (16, 84386), (18, 84410),

Gene: Eliot67_131 Start: 83965, Stop: 84213, Start Num: 3
Candidate Starts for Eliot67_131:
(Start: 3 @83965 has 56 MA's), (14, 84055), (16, 84094), (18, 84118),

Gene: Elmer_141 Start: 86761, Stop: 87012, Start Num: 3
Candidate Starts for Elmer_141:
(Start: 3 @86761 has 56 MA's), (Start: 8 @86803 has 5 MA's), (14, 86851), (Start: 15 @86854 has 6 MA's), (16, 86890),

Gene: Enygma_143 Start: 87204, Stop: 87455, Start Num: 3
Candidate Starts for Enygma_143:
(Start: 3 @87204 has 56 MA's), (Start: 8 @87249 has 5 MA's), (Start: 15 @87300 has 6 MA's), (16, 87336), (18, 87360),

Gene: FreddyDRoo_133 Start: 83965, Stop: 84213, Start Num: 3
Candidate Starts for FreddyDRoo_133:
(Start: 3 @83965 has 56 MA's), (14, 84055), (16, 84094), (18, 84118),

Gene: Genie2_142 Start: 85850, Stop: 86098, Start Num: 3
Candidate Starts for Genie2_142:
(Start: 3 @85850 has 56 MA's), (Start: 8 @85892 has 5 MA's), (Start: 15 @85943 has 6 MA's), (16, 85979), (18, 86003),

Gene: Gibbi_148 Start: 85600, Stop: 85755, Start Num: 15
Candidate Starts for Gibbi_148:
(Start: 3 @85507 has 56 MA's), (Start: 8 @85549 has 5 MA's), (Start: 15 @85600 has 6 MA's), (16, 85636), (17, 85648), (18, 85660), (19, 85669),

Gene: HangryHippo_133 Start: 86163, Stop: 86414, Start Num: 3
Candidate Starts for HangryHippo_133:
(Start: 3 @86163 has 56 MA's), (13, 86250), (14, 86253), (16, 86292), (18, 86316),

Gene: IchabodCrane_137 Start: 85138, Stop: 85344, Start Num: 8
Candidate Starts for IchabodCrane_137:
(Start: 3 @85096 has 56 MA's), (Start: 8 @85138 has 5 MA's), (Start: 15 @85189 has 6 MA's), (16, 85225), (17, 85237), (18, 85249), (19, 85258),

Gene: JimJam_145 Start: 85917, Stop: 86165, Start Num: 3
Candidate Starts for JimJam_145:
(Start: 3 @85917 has 56 MA's), (Start: 8 @85959 has 5 MA's), (Start: 15 @86010 has 6 MA's), (16, 86046), (17, 86058), (18, 86070), (19, 86079),

Gene: Jollison_141 Start: 85351, Stop: 85599, Start Num: 3
Candidate Starts for Jollison_141:
(Start: 3 @85351 has 56 MA's), (Start: 8 @85393 has 5 MA's), (Start: 15 @85444 has 6 MA's), (16, 85480), (17, 85492), (18, 85504), (19, 85513),

Gene: Karimac_141 Start: 85634, Stop: 85882, Start Num: 3
Candidate Starts for Karimac_141:
(Start: 3 @85634 has 56 MA's), (Start: 8 @85676 has 5 MA's), (Start: 15 @85727 has 6 MA's), (16, 85763), (18, 85787), (19, 85796),

Gene: KentuckyRacer_144 Start: 85782, Stop: 86030, Start Num: 3
Candidate Starts for KentuckyRacer_144:
(Start: 3 @85782 has 56 MA's), (Start: 8 @85824 has 5 MA's), (Start: 15 @85875 has 6 MA's), (16, 85911), (17, 85923), (18, 85935), (19, 85944),

Gene: Larnav_134 Start: 86147, Stop: 86398, Start Num: 3
Candidate Starts for Larnav_134:
(Start: 3 @86147 has 56 MA's), (13, 86234), (14, 86237), (16, 86276), (18, 86300),

Gene: Leo04_135 Start: 86663, Stop: 86914, Start Num: 3

Candidate Starts for Leo04_135:
(Start: 3 @86663 has 56 MA's), (13, 86750), (14, 86753), (16, 86792), (18, 86816),

Gene: Liandry_133 Start: 84672, Stop: 84920, Start Num: 3
Candidate Starts for Liandry_133:
(Start: 3 @84672 has 56 MA's), (14, 84762), (16, 84801), (18, 84825),

Gene: LilSaint_135 Start: 83441, Stop: 83701, Start Num: 3
Candidate Starts for LilSaint_135:
(Start: 3 @83441 has 56 MA's), (Start: 8 @83486 has 5 MA's), (14, 83534), (Start: 15 @83537 has 6 MA's), (16, 83573), (21, 83651),

Gene: LukeCage_141 Start: 86461, Stop: 86667, Start Num: 8
Candidate Starts for LukeCage_141:
(Start: 3 @86419 has 56 MA's), (Start: 8 @86461 has 5 MA's), (Start: 15 @86512 has 6 MA's), (16, 86548), (18, 86572),

Gene: Lululemon_133 Start: 85544, Stop: 85795, Start Num: 3
Candidate Starts for Lululemon_133:
(Start: 3 @85544 has 56 MA's), (13, 85631), (14, 85634), (16, 85673), (18, 85697),

Gene: MindFlayer_138 Start: 85045, Stop: 85251, Start Num: 8
Candidate Starts for MindFlayer_138:
(Start: 3 @85003 has 56 MA's), (Start: 8 @85045 has 5 MA's), (Start: 15 @85096 has 6 MA's), (16, 85132), (17, 85144), (18, 85156), (19, 85165),

Gene: Mugiwara_143 Start: 86241, Stop: 86492, Start Num: 3
Candidate Starts for Mugiwara_143:
(Start: 3 @86241 has 56 MA's), (Start: 8 @86286 has 5 MA's), (Start: 15 @86337 has 6 MA's), (16, 86373), (18, 86397),

Gene: Muntaha_154 Start: 85280, Stop: 85501, Start Num: 4
Candidate Starts for Muntaha_154:
(1, 85235), (Start: 4 @85280 has 3 MA's), (9, 85340), (12, 85370), (14, 85379), (16, 85418), (17, 85430), (20, 85469),

Gene: Navo_131 Start: 84462, Stop: 84710, Start Num: 3
Candidate Starts for Navo_131:
(Start: 3 @84462 has 56 MA's), (14, 84552), (16, 84591), (18, 84615),

Gene: NootNoot_130 Start: 83571, Stop: 83819, Start Num: 3
Candidate Starts for NootNoot_130:
(Start: 3 @83571 has 56 MA's), (14, 83661), (16, 83700), (18, 83724),

Gene: PacManQ_133 Start: 85544, Stop: 85795, Start Num: 3
Candidate Starts for PacManQ_133:
(Start: 3 @85544 has 56 MA's), (13, 85631), (14, 85634), (16, 85673), (18, 85697),

Gene: Paradiddles_129 Start: 85869, Stop: 86117, Start Num: 3
Candidate Starts for Paradiddles_129:
(Start: 3 @85869 has 56 MA's), (14, 85959), (16, 85998), (18, 86022),

Gene: Peebs_132 Start: 85960, Stop: 86211, Start Num: 3

Candidate Starts for Peebs_132:
(Start: 3 @85960 has 56 MA's), (13, 86047), (14, 86050), (16, 86089), (18, 86113),

Gene: Pepperwood_133 Start: 86090, Stop: 86341, Start Num: 3
Candidate Starts for Pepperwood_133:
(Start: 3 @86090 has 56 MA's), (13, 86177), (14, 86180), (16, 86219), (18, 86243),

Gene: Persimmon_133 Start: 83505, Stop: 83753, Start Num: 3
Candidate Starts for Persimmon_133:
(Start: 3 @83505 has 56 MA's), (14, 83595), (16, 83634), (18, 83658),

Gene: PinkiePie_130 Start: 84672, Stop: 84920, Start Num: 3
Candidate Starts for PinkiePie_130:
(Start: 3 @84672 has 56 MA's), (14, 84762), (16, 84801), (18, 84825),

Gene: PumpkinSpice_144 Start: 85959, Stop: 86207, Start Num: 3
Candidate Starts for PumpkinSpice_144:
(Start: 3 @85959 has 56 MA's), (Start: 8 @86001 has 5 MA's), (Start: 15 @86052 has 6 MA's), (16, 86088), (17, 86100), (18, 86112), (19, 86121),

Gene: PynkPanther_133 Start: 85209, Stop: 85457, Start Num: 3
Candidate Starts for PynkPanther_133:
(Start: 3 @85209 has 56 MA's), (14, 85299), (16, 85338), (18, 85362),

Gene: Quaran19_142 Start: 85385, Stop: 85633, Start Num: 3
Candidate Starts for Quaran19_142:
(Start: 3 @85385 has 56 MA's), (Start: 8 @85427 has 5 MA's), (Start: 15 @85478 has 6 MA's), (16, 85514), (17, 85526), (18, 85538), (19, 85547),

Gene: Rikishi_141 Start: 85301, Stop: 85549, Start Num: 3
Candidate Starts for Rikishi_141:
(Start: 3 @85301 has 56 MA's), (Start: 8 @85343 has 5 MA's), (Start: 15 @85394 has 6 MA's), (16, 85430), (17, 85442), (18, 85454), (19, 85463),

Gene: Riptide_130 Start: 82465, Stop: 82725, Start Num: 3
Candidate Starts for Riptide_130:
(Start: 3 @82465 has 56 MA's), (Start: 8 @82510 has 5 MA's), (14, 82558), (Start: 15 @82561 has 6 MA's), (16, 82597), (21, 82675),

Gene: SaltySpitoon_142 Start: 85398, Stop: 85646, Start Num: 3
Candidate Starts for SaltySpitoon_142:
(Start: 3 @85398 has 56 MA's), (Start: 8 @85440 has 5 MA's), (Start: 15 @85491 has 6 MA's), (16, 85527), (17, 85539), (18, 85551), (19, 85560),

Gene: Samisti12_135 Start: 87342, Stop: 87593, Start Num: 3
Candidate Starts for Samisti12_135:
(Start: 3 @87342 has 56 MA's), (13, 87429), (14, 87432), (16, 87471), (18, 87495),

Gene: Scheme_135 Start: 86745, Stop: 86996, Start Num: 3
Candidate Starts for Scheme_135:
(Start: 3 @86745 has 56 MA's), (13, 86832), (14, 86835), (16, 86874), (18, 86898),

Gene: Sollertia_141 Start: 85850, Stop: 86098, Start Num: 3

Candidate Starts for Sollertia_141:
(Start: 3 @85850 has 56 MA's), (Start: 8 @85892 has 5 MA's), (Start: 15 @85943 has 6 MA's), (16, 85979), (18, 86003),

Gene: Spelly_144 Start: 85443, Stop: 85598, Start Num: 15
Candidate Starts for Spelly_144:
(Start: 3 @85350 has 56 MA's), (Start: 8 @85392 has 5 MA's), (Start: 15 @85443 has 6 MA's), (16, 85479), (17, 85491), (18, 85503), (19, 85512),

Gene: Spilled_145 Start: 85510, Stop: 85716, Start Num: 8
Candidate Starts for Spilled_145:
(Start: 3 @85468 has 56 MA's), (Start: 8 @85510 has 5 MA's), (Start: 15 @85561 has 6 MA's), (16, 85597), (18, 85621), (19, 85630),

Gene: Squillium_133 Start: 84674, Stop: 84922, Start Num: 3
Candidate Starts for Squillium_133:
(Start: 3 @84674 has 56 MA's), (14, 84764), (16, 84803), (18, 84827),

Gene: Stanimal_140 Start: 85739, Stop: 85987, Start Num: 3
Candidate Starts for Stanimal_140:
(Start: 3 @85739 has 56 MA's), (Start: 8 @85781 has 5 MA's), (Start: 15 @85832 has 6 MA's), (16, 85868), (18, 85892),

Gene: StarPlatinum_145 Start: 86955, Stop: 87110, Start Num: 15
Candidate Starts for StarPlatinum_145:
(Start: 3 @86862 has 56 MA's), (Start: 8 @86904 has 5 MA's), (Start: 15 @86955 has 6 MA's), (16, 86991), (18, 87015),

Gene: Starbow_140 Start: 85463, Stop: 85618, Start Num: 15
Candidate Starts for Starbow_140:
(Start: 3 @85370 has 56 MA's), (Start: 8 @85412 has 5 MA's), (Start: 15 @85463 has 6 MA's), (16, 85499), (17, 85511), (18, 85523), (19, 85532),

Gene: Sushi23_133 Start: 86316, Stop: 86567, Start Num: 3
Candidate Starts for Sushi23_133:
(Start: 3 @86316 has 56 MA's), (13, 86403), (14, 86406), (16, 86445), (18, 86469),

Gene: Teutsch_133 Start: 86521, Stop: 86772, Start Num: 3
Candidate Starts for Teutsch_133:
(Start: 3 @86521 has 56 MA's), (13, 86608), (14, 86611), (16, 86650), (18, 86674),

Gene: TomSawyer_143 Start: 85509, Stop: 85664, Start Num: 15
Candidate Starts for TomSawyer_143:
(Start: 3 @85416 has 56 MA's), (Start: 8 @85458 has 5 MA's), (Start: 15 @85509 has 6 MA's), (16, 85545), (17, 85557), (18, 85569), (19, 85578),

Gene: Tomas_139 Start: 87574, Stop: 87783, Start Num: 7
Candidate Starts for Tomas_139:
(2, 87499), (Start: 3 @87532 has 56 MA's), (Start: 7 @87574 has 1 MA's), (11, 87610), (16, 87664), (19, 87697),

Gene: Tribute_133 Start: 86508, Stop: 86759, Start Num: 3
Candidate Starts for Tribute_133:

(Start: 3 @86508 has 56 MA's), (13, 86595), (14, 86598), (16, 86637), (18, 86661),

Gene: Tuesday_146 Start: 85626, Stop: 85781, Start Num: 15
Candidate Starts for Tuesday_146:
(Start: 3 @85533 has 56 MA's), (Start: 8 @85575 has 5 MA's), (Start: 15 @85626 has 6 MA's), (16, 85662), (17, 85674), (18, 85686), (19, 85695),

Gene: Wakanda_152 Start: 84956, Stop: 85180, Start Num: 5
Candidate Starts for Wakanda_152:
(1, 84908), (Start: 5 @84956 has 1 MA's), (12, 85049), (14, 85058), (16, 85097), (17, 85109), (20, 85148),

Gene: WashU_133 Start: 86533, Stop: 86784, Start Num: 3
Candidate Starts for WashU_133:
(Start: 3 @86533 has 56 MA's), (13, 86620), (14, 86623), (16, 86662), (18, 86686),

Gene: Watermoore_133 Start: 86735, Stop: 86986, Start Num: 3
Candidate Starts for Watermoore_133:
(Start: 3 @86735 has 56 MA's), (13, 86822), (14, 86825), (16, 86864), (18, 86888),

Gene: WhereRU_132 Start: 84257, Stop: 84505, Start Num: 3
Candidate Starts for WhereRU_132:
(Start: 3 @84257 has 56 MA's), (14, 84347), (16, 84386), (18, 84410),

Gene: Wipeout_136 Start: 85782, Stop: 85988, Start Num: 8
Candidate Starts for Wipeout_136:
(Start: 3 @85740 has 56 MA's), (Start: 8 @85782 has 5 MA's), (Start: 15 @85833 has 6 MA's), (16, 85869), (17, 85881), (18, 85893), (19, 85902),

Gene: Yaboi_141 Start: 85312, Stop: 85560, Start Num: 3
Candidate Starts for Yaboi_141:
(Start: 3 @85312 has 56 MA's), (Start: 8 @85354 has 5 MA's), (Start: 15 @85405 has 6 MA's), (16, 85441), (18, 85465),