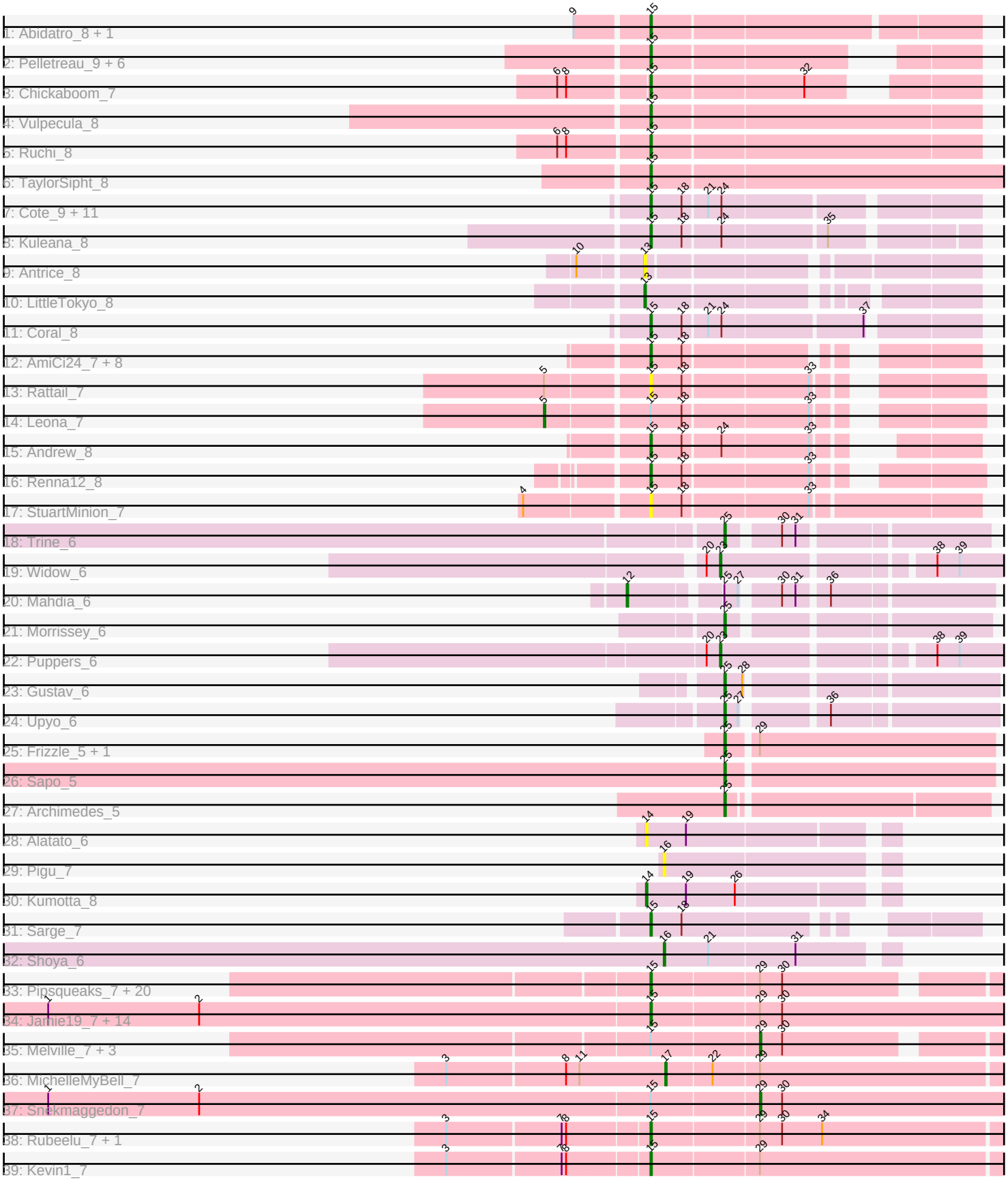
Pham 202820


1: Abidatro_8 + 1
2: Pelletreau_9 + 6
3: Chickaboom_7
4: Vulpecula_8
5: Ruchi_8
6: TaylorSipht_8
7: Cote_9 + 11
8: Kuleana_8
9: Antrice_8
10: LittleTokyo_8
11: Coral_8
12: AmiCi24_7 + 8
13: Rattail_7
14: Leona_7
15: Andrew_8
16: Renna12_8
17: StuartMinion_7
18: Trine_6
19: Widow_6
20: Mahdia_6
21: Morrissey_6
22: Puppers_6
23: Gustav_6
24: Upyo_6
25: Frizzle_5 + 1
26: Sapo_5
27: Archimedes_5
28: Alatato_6
29: Pigu_7
30: Kumotta_8
31: Sarge_7
32: Shoya_6
33: Pipsqueaks_7 + 20
34: Jamie19_7 + 14
35: Melville_7 + 3
36: MichelleMyBell_7
37: Snekmaggedon_7
38: Rubeelu_7 + 1
39: Kevin1_7

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 202820 Report

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

Pham number 202820 has 104 members, 23 are drafts.

Phages represented in each track:
• Track 1 : Abidatro_8, Galaxy_8
• Track 2 : Pelletreau_9, Toad24_9, Orcanus_8, KendraB23_9, Gravel_9, Eesa_8, Westrich_9
• Track 3 : Chickaboom_7
• Track 4 : Vulpecula_8
• Track 5 : Ruchi_8
• Track 6 : TaylorSipht_8
• Track 7 : Cote_9, Jerole_9, Daob_9, Amelia_9, Polka_8, Lunar_9, Melons_9, Bedetta_9, Bibble12_9, Kepler_8, Colusalem_8, HannahPhantana_9
• Track 8 : Kuleana_8
• Track 9 : Antrice_8
• Track 10 : LittleTokyo_8
• Track 11 : Coral_8
• Track 12 : AmiCi24_7, Camara_7, Juno112_7, KHumphrey_7, PhluffyCoco_7, HamCheese_7, Glotell_7, RedFox_7, Atlantica_7
• Track 13 : Rattail_7
• Track 14 : Leona_7
• Track 15 : Andrew_8
• Track 16 : Renna12_8
• Track 17 : StuartMinion_7
• Track 18 : Trine_6
• Track 19 : Widow_6
• Track 20 : Mahdia_6
• Track 21 : Morrissey_6
• Track 22 : Puppers_6
• Track 23 : Gustav_6
• Track 24 : Upyo_6
• Track 25 : Frizzle_5, Ghobes_5
• Track 26 : Sapo_5
• Track 27 : Archimedes_5
• Track 28 : Alatato_6
• Track 29 : Pigu_7
• Track 30 : Kumotta_8
• Track 31 : Sarge_7
• Track 32 : Shoya_6
• Track 33 : Pipsqueaks_7, Carcharodon_7, Xerxes_7, Parmesanjohn_7, Duplicity_7, Andies_7, Fulbright_7, Xeno_7, Schnauzer_7, Silvafighter_7, Journey_7, Tapioca_7,

Magsby_7, Philonius_7, Aggie_7, Charlie_7, Silvy_7, Gex_7, Smurph_7, Chewbacca_7, Phloss_7
• Track 34 : Jamie19_7, PhancyPhin_7, Hanako_7, Phrann_7, Raymond7_7, Shweta_7, Redi_7, SpongeBob_7, Nenae_7, ShrimpFriedEgg_7, Panchino_7, Rebel_7, SkinnyPete_7, BabeRuth_7, Purgamenstris_7
• Track 35 : Melville_7, Bosection6_7, Scitech_7, EGUnicorn_7
• Track 36 : MichelleMyBell_7
• Track 37 : Snekmaggedon_7
• Track 38 : Rubeelu_7, Butters_7
• Track 39 : Kevin1_7

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

The start number called the most often in the published annotations is 15, it was called in 64 of the 81 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abidatro_8, Aggie_7, Amelia_9, AmiCi24_7, Andies_7, Andrew_8, Atlantica_7, BabeRuth_7, Bedetta_9, Bibble12_9, Butters_7, Camara_7, Carcharodon_7, Charlie_7, Chewbacca_7, Chickaboom_7, Colusalem_8, Coral_8, Cote_9, Daob_9, Duplicity_7, Eesa_8, Fulbright_7, Galaxy_8, Gex_7, Glotell_7, Gravel_9, HamCheese_7, Hanako_7, HannahPhantana_9, Jamie19_7, Jerole_9, Journey_7, Juno112_7, KHumphrey_7, KendraB23_9, Kepler_8, Kevin1_7, Kuleana_8, Lunar_9, Magsby_7, Melons_9, Nenae_7, Orcanus_8, Panchino_7, Parmesanjohn_7, Pelletreau_9, PhancyPhin_7, Philonius_7, Phloss_7, PhluffyCoco_7, Phrann_7, Pipsqueaks_7, Polka_8, Purgamenstris_7, Rattail_7, Raymond7_7, Rebel_7, RedFox_7, Redi_7, Renna12_8, Rubeelu_7, Ruchi_8, Sarge_7, Schnauzer_7, ShrimpFriedEgg_7, Shweta_7, Silvafighter_7, Silvy_7, SkinnyPete_7, Smurph_7, SpongeBob_7, StuartMinion_7, Tapioca_7, TaylorSipht_8, Toad24_9, Vulpecula_8, Westrich_9, Xeno_7, Xerxes_7,

Genes that have the "Most Annotated" start but do not call it:
• Bosection6_7, EGUnicorn_7, Leona_7, Melville_7, Scitech_7, Snekmaggedon_7,

Genes that do not have the "Most Annotated" start:
• Alatato_6, Antrice_8, Archimedes_5, Frizzle_5, Ghobes_5, Gustav_6, Kumotta_8, LittleTokyo_8, Mahdia_6, MichelleMyBell_7, Morrissey_6, Pigu_7, Puppers_6, Sapo_5, Shoya_6, Trine_6, Upyo_6, Widow_6,

Summary by start number:

Start 5:
• Found in 2 of 104 (1.9%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Leona_7 (AS3),

Start 12:
• Found in 1 of 104 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 81

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mahdia_6 (CD),

Start 13:
• Found in 2 of 104 (1.9%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Antrice_8 (AS2), LittleTokyo_8 (AS2),

Start 14:
• Found in 2 of 104 (1.9%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alatato_6 (FB), Kumotta_8 (FB),

Start 15:
• Found in 86 of 104 (82.7%) of genes in pham
• Manual Annotations of this start: 64 of 81
• Called 93.0% of time when present
• Phage (with cluster) where this start called: Abidatro_8 (AS1), Aggie_7 (N), Amelia_9 (AS2), AmiCi24_7 (AS3), Andies_7 (N), Andrew_8 (AS3), Atlantica_7 (AS3), BabeRuth_7 (N), Bedetta_9 (AS2), Bibble12_9 (AS2), Butters_7 (N), Camara_7 (AS3), Carcharodon_7 (N), Charlie_7 (N), Chewbacca_7 (N), Chickaboom_7 (AS1), Colusalem_8 (AS2), Coral_8 (AS2), Cote_9 (AS2), Daob_9 (AS2), Duplicity_7 (N), Eesa_8 (AS1), Fulbright_7 (N), Galaxy_8 (AS1), Gex_7 (N), Glotell_7 (AS3), Gravel_9 (AS1), HamCheese_7 (AS3), Hanako_7 (N), HannahPhantana_9 (AS2), Jamie19_7 (N), Jerole_9 (AS2), Journey_7 (N), Juno112_7 (AS3), KHumphrey_7 (AS3), KendraB23_9 (AS1), Kepler_8 (AS2), Kevin1_7 (N), Kuleana_8 (AS2), Lunar_9 (AS2), Magsby_7 (N), Melons_9 (AS2), Nenae_7 (N), Orcanus_8 (AS1), Panchino_7 (N), Parmesanjohn_7 (N), Pelletreau_9 (AS1), PhancyPhin_7 (N), Philonius_7 (N), Phloss_7 (N), PhluffyCoco_7 (AS3), Phrann_7 (N), Pipsqueaks_7 (N), Polka_8 (AS2), Purgamenstris_7 (N), Rattail_7 (AS3), Raymond7_7 (N), Rebel_7 (N), RedFox_7 (AS3), Redi_7 (N), Renna12_8 (AS3), Rubeelu_7 (N), Ruchi_8 (AS1), Sarge_7 (FB), Schnauzer_7 (N), ShrimpFriedEgg_7 (N), Shweta_7 (N), Silvafighter_7 (N), Silvy_7 (N), SkinnyPete_7 (N), Smurph_7 (N), SpongeBob_7 (N), StuartMinion_7 (AS3), Tapioca_7 (N), TaylorSipht_8 (AS1), Toad24_9 (AS1), Vulpecula_8 (AS1), Westrich_9 (AS1), Xeno_7 (N), Xerxes_7 (N),

Start 16:
• Found in 2 of 104 (1.9%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pigu_7 (FB), Shoya_6 (FB),

Start 17:
• Found in 1 of 104 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MichelleMyBell_7 (N),

Start 23:
• Found in 2 of 104 (1.9%) of genes in pham

• Manual Annotations of this start: 2 of 81
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Puppers_6 (CD), Widow_6 (CD),

Start 25:
• Found in 9 of 104 (8.7%) of genes in pham
• Manual Annotations of this start: 7 of 81
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Archimedes_5 (DA), Frizzle_5 (DA), Ghobes_5 (DA), Gustav_6 (CD), Morrissey_6 (CD), Sapo_5 (DA), Trine_6 (CD), Upyo_6 (CD),

Start 29:
• Found in 47 of 104 (45.2%) of genes in pham
• Manual Annotations of this start: 2 of 81
• Called 10.6% of time when present
• Phage (with cluster) where this start called: Bosection6_7 (N), EGUnicorn_7 (N), Melville_7 (N), Scitech_7 (N), Snekmaggedon_7 (N),

Summary by clusters:

There are 7 clusters represented in this pham: AS3, AS2, AS1, DA, N, FB, CD,

Info for manual annotations of cluster AS1:
•Start number 15 was manually annotated 8 times for cluster AS1.

Info for manual annotations of cluster AS2:
•Start number 13 was manually annotated 1 time for cluster AS2.
•Start number 15 was manually annotated 10 times for cluster AS2.

Info for manual annotations of cluster AS3:
•Start number 5 was manually annotated 1 time for cluster AS3.
•Start number 15 was manually annotated 6 times for cluster AS3.

Info for manual annotations of cluster CD:
•Start number 12 was manually annotated 1 time for cluster CD.
•Start number 23 was manually annotated 2 times for cluster CD.
•Start number 25 was manually annotated 4 times for cluster CD.

Info for manual annotations of cluster DA:
•Start number 25 was manually annotated 3 times for cluster DA.

Info for manual annotations of cluster FB:
•Start number 14 was manually annotated 1 time for cluster FB.
•Start number 15 was manually annotated 1 time for cluster FB.
•Start number 16 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster N:
•Start number 15 was manually annotated 39 times for cluster N.
•Start number 17 was manually annotated 1 time for cluster N.
•Start number 29 was manually annotated 2 times for cluster N.

Gene Information:

Gene: Abidatro_8 Start: 6875, Stop: 7084, Start Num: 15
Candidate Starts for Abidatro_8:
(9, 6830), (Start: 15 @6875 has 64 MA's),

Gene: Aggie_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Aggie_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Alatato_6 Start: 5818, Stop: 5973, Start Num: 14
Candidate Starts for Alatato_6:
(Start: 14 @5818 has 1 MA's), (19, 5845),

Gene: Amelia_9 Start: 7077, Stop: 7280, Start Num: 15
Candidate Starts for Amelia_9:
(Start: 15 @7077 has 64 MA's), (18, 7098), (21, 7113), (24, 7122),

Gene: AmiCi24_7 Start: 6510, Stop: 6692, Start Num: 15
Candidate Starts for AmiCi24_7:
(Start: 15 @6510 has 64 MA's), (18, 6531),

Gene: Andies_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Andies_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Andrew_8 Start: 6895, Stop: 7071, Start Num: 15
Candidate Starts for Andrew_8:
(Start: 15 @6895 has 64 MA's), (18, 6916), (24, 6940), (33, 6997),

Gene: Antrice_8 Start: 6824, Stop: 7024, Start Num: 13
Candidate Starts for Antrice_8:
(10, 6785), (Start: 13 @6824 has 1 MA's),

Gene: Archimedes_5 Start: 5220, Stop: 5387, Start Num: 25
Candidate Starts for Archimedes_5:
(Start: 25 @5220 has 7 MA's),

Gene: Atlantica_7 Start: 6510, Stop: 6692, Start Num: 15
Candidate Starts for Atlantica_7:
(Start: 15 @6510 has 64 MA's), (18, 6531),

Gene: BabeRuth_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for BabeRuth_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Bedetta_9 Start: 7077, Stop: 7280, Start Num: 15
Candidate Starts for Bedetta_9:
(Start: 15 @7077 has 64 MA's), (18, 7098), (21, 7113), (24, 7122),

Gene: Bibble12_9 Start: 7080, Stop: 7283, Start Num: 15
Candidate Starts for Bibble12_9:
(Start: 15 @7080 has 64 MA's), (18, 7101), (21, 7116), (24, 7125),

Gene: Bosection6_7 Start: 5799, Stop: 5963, Start Num: 29
Candidate Starts for Bosection6_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Butters_7 Start: 5729, Stop: 5977, Start Num: 15
Candidate Starts for Butters_7:
(3, 5600), (7, 5675), (8, 5678), (Start: 15 @5729 has 64 MA's), (Start: 29 @5798 has 2 MA's), (30, 5813), (34, 5840),

Gene: Camara_7 Start: 6511, Stop: 6693, Start Num: 15
Candidate Starts for Camara_7:
(Start: 15 @6511 has 64 MA's), (18, 6532),

Gene: Carcharodon_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Carcharodon_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Charlie_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Charlie_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Chewbacca_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Chewbacca_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Chickaboom_7 Start: 6580, Stop: 6765, Start Num: 15
Candidate Starts for Chickaboom_7:
(6, 6526), (8, 6532), (Start: 15 @6580 has 64 MA's), (32, 6679),

Gene: Colusalem_8 Start: 6916, Stop: 7119, Start Num: 15
Candidate Starts for Colusalem_8:
(Start: 15 @6916 has 64 MA's), (18, 6937), (21, 6952), (24, 6961),

Gene: Coral_8 Start: 6916, Stop: 7119, Start Num: 15
Candidate Starts for Coral_8:
(Start: 15 @6916 has 64 MA's), (18, 6937), (21, 6952), (24, 6961), (37, 7051),

Gene: Cote_9 Start: 7077, Stop: 7280, Start Num: 15
Candidate Starts for Cote_9:
(Start: 15 @7077 has 64 MA's), (18, 7098), (21, 7113), (24, 7122),

Gene: Daob_9 Start: 7080, Stop: 7283, Start Num: 15
Candidate Starts for Daob_9:
(Start: 15 @7080 has 64 MA's), (18, 7101), (21, 7116), (24, 7125),

Gene: Duplicity_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Duplicity_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: EGUnicorn_7 Start: 5799, Stop: 5963, Start Num: 29
Candidate Starts for EGUnicorn_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Eesa_8 Start: 7101, Stop: 7283, Start Num: 15
Candidate Starts for Eesa_8:
(Start: 15 @7101 has 64 MA's),

Gene: Frizzle_5 Start: 5267, Stop: 5443, Start Num: 25
Candidate Starts for Frizzle_5:
(Start: 25 @5267 has 7 MA's), (Start: 29 @5285 has 2 MA's),

Gene: Fulbright_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Fulbright_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Galaxy_8 Start: 6882, Stop: 7091, Start Num: 15
Candidate Starts for Galaxy_8:
(9, 6837), (Start: 15 @6882 has 64 MA's),

Gene: Gex_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Gex_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Ghobes_5 Start: 5267, Stop: 5443, Start Num: 25
Candidate Starts for Ghobes_5:
(Start: 25 @5267 has 7 MA's), (Start: 29 @5285 has 2 MA's),

Gene: Glotell_7 Start: 6510, Stop: 6692, Start Num: 15
Candidate Starts for Glotell_7:
(Start: 15 @6510 has 64 MA's), (18, 6531),

Gene: Gravel_9 Start: 7098, Stop: 7280, Start Num: 15
Candidate Starts for Gravel_9:
(Start: 15 @7098 has 64 MA's),

Gene: Gustav_6 Start: 5862, Stop: 6029, Start Num: 25
Candidate Starts for Gustav_6:
(Start: 25 @5862 has 7 MA's), (28, 5874),

Gene: HamCheese_7 Start: 6510, Stop: 6692, Start Num: 15
Candidate Starts for HamCheese_7:
(Start: 15 @6510 has 64 MA's), (18, 6531),

Gene: Hanako_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Hanako_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: HannahPhantana_9 Start: 7080, Stop: 7283, Start Num: 15
Candidate Starts for HannahPhantana_9:
(Start: 15 @7080 has 64 MA's), (18, 7101), (21, 7116), (24, 7125),

Gene: Jamie19_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Jamie19_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Jerole_9 Start: 7077, Stop: 7280, Start Num: 15
Candidate Starts for Jerole_9:
(Start: 15 @7077 has 64 MA's), (18, 7098), (21, 7113), (24, 7122),

Gene: Journey_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Journey_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Juno112_7 Start: 6511, Stop: 6693, Start Num: 15
Candidate Starts for Juno112_7:
(Start: 15 @6511 has 64 MA's), (18, 6532),

Gene: KHumphrey_7 Start: 6510, Stop: 6692, Start Num: 15
Candidate Starts for KHumphrey_7:
(Start: 15 @6510 has 64 MA's), (18, 6531),

Gene: KendraB23_9 Start: 7098, Stop: 7280, Start Num: 15
Candidate Starts for KendraB23_9:
(Start: 15 @7098 has 64 MA's),

Gene: Kepler_8 Start: 6915, Stop: 7118, Start Num: 15
Candidate Starts for Kepler_8:
(Start: 15 @6915 has 64 MA's), (18, 6936), (21, 6951), (24, 6960),

Gene: Kevin1_7 Start: 5729, Stop: 5977, Start Num: 15
Candidate Starts for Kevin1_7:
(3, 5600), (7, 5675), (8, 5678), (Start: 15 @5729 has 64 MA's), (Start: 29 @5798 has 2 MA's),

Gene: Kuleana_8 Start: 6883, Stop: 7083, Start Num: 15
Candidate Starts for Kuleana_8:
(Start: 15 @6883 has 64 MA's), (18, 6904), (24, 6928), (35, 6994),

Gene: Kumotta_8 Start: 7171, Stop: 7326, Start Num: 14
Candidate Starts for Kumotta_8:
(Start: 14 @7171 has 1 MA's), (19, 7198), (26, 7231),

Gene: Leona_7 Start: 6489, Stop: 6743, Start Num: 5
Candidate Starts for Leona_7:
(Start: 5 @6489 has 1 MA's), (Start: 15 @6552 has 64 MA's), (18, 6573), (33, 6654),

Gene: LittleTokyo_8 Start: 6828, Stop: 7022, Start Num: 13
Candidate Starts for LittleTokyo_8:
(Start: 13 @6828 has 1 MA's),

Gene: Lunar_9 Start: 7077, Stop: 7280, Start Num: 15
Candidate Starts for Lunar_9:
(Start: 15 @7077 has 64 MA's), (18, 7098), (21, 7113), (24, 7122),

Gene: Magsby_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Magsby_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Mahdia_6 Start: 5826, Stop: 6041, Start Num: 12

Candidate Starts for Mahdia_6:
(Start: 12 @5826 has 1 MA's), (Start: 25 @5880 has 7 MA's), (27, 5889), (30, 5910), (31, 5919), (36, 5937),

Gene: Melons_9 Start: 7077, Stop: 7280, Start Num: 15
Candidate Starts for Melons_9:
(Start: 15 @7077 has 64 MA's), (18, 7098), (21, 7113), (24, 7122),

Gene: Melville_7 Start: 5799, Stop: 5963, Start Num: 29
Candidate Starts for Melville_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: MichelleMyBell_7 Start: 5758, Stop: 5997, Start Num: 17
Candidate Starts for MichelleMyBell_7:
(3, 5614), (8, 5692), (11, 5701), (Start: 17 @5758 has 1 MA's), (22, 5788), (Start: 29 @5818 has 2 MA's),

Gene: Morrissey_6 Start: 5871, Stop: 6029, Start Num: 25
Candidate Starts for Morrissey_6:
(Start: 25 @5871 has 7 MA's),

Gene: Nenae_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Nenae_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Orcanus_8 Start: 6891, Stop: 7073, Start Num: 15
Candidate Starts for Orcanus_8:
(Start: 15 @6891 has 64 MA's),

Gene: Panchino_7 Start: 5753, Stop: 5980, Start Num: 15
Candidate Starts for Panchino_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Parmesanjohn_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Parmesanjohn_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Pelletreau_9 Start: 7098, Stop: 7280, Start Num: 15
Candidate Starts for Pelletreau_9:
(Start: 15 @7098 has 64 MA's),

Gene: PhancyPhin_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for PhancyPhin_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Philonius_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Philonius_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Phloss_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Phloss_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: PhluffyCoco_7 Start: 6510, Stop: 6692, Start Num: 15
Candidate Starts for PhluffyCoco_7:
(Start: 15 @6510 has 64 MA's), (18, 6531),

Gene: Phrann_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Phrann_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Pigu_7 Start: 5789, Stop: 5935, Start Num: 16
Candidate Starts for Pigu_7:
(Start: 16 @5789 has 1 MA's),

Gene: Pipsqueaks_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Pipsqueaks_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Polka_8 Start: 6916, Stop: 7119, Start Num: 15
Candidate Starts for Polka_8:
(Start: 15 @6916 has 64 MA's), (18, 6937), (21, 6952), (24, 6961),

Gene: Puppers_6 Start: 5783, Stop: 5965, Start Num: 23
Candidate Starts for Puppers_6:
(20, 5774), (Start: 23 @5783 has 2 MA's), (38, 5912), (39, 5927),

Gene: Purgamenstris_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Purgamenstris_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Rattail_7 Start: 6552, Stop: 6743, Start Num: 15
Candidate Starts for Rattail_7:
(Start: 5 @6489 has 1 MA's), (Start: 15 @6552 has 64 MA's), (18, 6573), (33, 6654),

Gene: Raymond7_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Raymond7_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Rebel_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Rebel_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: RedFox_7 Start: 6510, Stop: 6692, Start Num: 15
Candidate Starts for RedFox_7:
(Start: 15 @6510 has 64 MA's), (18, 6531),

Gene: Redi_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Redi_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Renna12_8 Start: 6698, Stop: 6889, Start Num: 15
Candidate Starts for Renna12_8:
(Start: 15 @6698 has 64 MA's), (18, 6719), (33, 6800),

Gene: Rubeelu_7 Start: 5729, Stop: 5977, Start Num: 15

Candidate Starts for Rubeelu_7:
(3, 5600), (7, 5675), (8, 5678), (Start: 15 @5729 has 64 MA's), (Start: 29 @5798 has 2 MA's), (30, 5813), (34, 5840),

Gene: Ruchi_8 Start: 7139, Stop: 7354, Start Num: 15
Candidate Starts for Ruchi_8:
(6, 7082), (8, 7088), (Start: 15 @7139 has 64 MA's),

Gene: Sapo_5 Start: 5262, Stop: 5438, Start Num: 25
Candidate Starts for Sapo_5:
(Start: 25 @5262 has 7 MA's),

Gene: Sarge_7 Start: 6203, Stop: 6382, Start Num: 15
Candidate Starts for Sarge_7:
(Start: 15 @6203 has 64 MA's), (18, 6224),

Gene: Schnauzer_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Schnauzer_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Scitech_7 Start: 5799, Stop: 5963, Start Num: 29
Candidate Starts for Scitech_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Shoya_6 Start: 5816, Stop: 5962, Start Num: 16
Candidate Starts for Shoya_6:
(Start: 16 @5816 has 1 MA's), (21, 5846), (31, 5903),

Gene: ShrimpFriedEgg_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for ShrimpFriedEgg_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Shweta_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for Shweta_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Silvafighter_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Silvafighter_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Silvy_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Silvy_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: SkinnyPete_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for SkinnyPete_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: Smurph_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Smurph_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Snekmaggedon_7 Start: 5822, Stop: 6004, Start Num: 29

Candidate Starts for Snekmaggedon_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: SpongeBob_7 Start: 5753, Stop: 6004, Start Num: 15
Candidate Starts for SpongeBob_7:
(1, 5351), (2, 5453), (Start: 15 @5753 has 64 MA's), (Start: 29 @5822 has 2 MA's), (30, 5837),

Gene: StuartMinion_7 Start: 6509, Stop: 6718, Start Num: 15
Candidate Starts for StuartMinion_7:
(4, 6431), (Start: 15 @6509 has 64 MA's), (18, 6530), (33, 6611),

Gene: Tapioca_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Tapioca_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: TaylorSipht_8 Start: 6914, Stop: 7159, Start Num: 15
Candidate Starts for TaylorSipht_8:
(Start: 15 @6914 has 64 MA's),

Gene: Toad24_9 Start: 7098, Stop: 7280, Start Num: 15
Candidate Starts for Toad24_9:
(Start: 15 @7098 has 64 MA's),

Gene: Trine_6 Start: 5823, Stop: 5981, Start Num: 25
Candidate Starts for Trine_6:
(Start: 25 @5823 has 7 MA's), (30, 5853), (31, 5862),

Gene: Upyo_6 Start: 5831, Stop: 5995, Start Num: 25
Candidate Starts for Upyo_6:
(Start: 25 @5831 has 7 MA's), (27, 5840), (36, 5888),

Gene: Vulpecula_8 Start: 7215, Stop: 7430, Start Num: 15
Candidate Starts for Vulpecula_8:
(Start: 15 @7215 has 64 MA's),

Gene: Westrich_9 Start: 7086, Stop: 7268, Start Num: 15
Candidate Starts for Westrich_9:
(Start: 15 @7086 has 64 MA's),

Gene: Widow_6 Start: 5774, Stop: 5956, Start Num: 23
Candidate Starts for Widow_6:
(20, 5765), (Start: 23 @5774 has 2 MA's), (38, 5903), (39, 5918),

Gene: Xeno_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Xeno_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),

Gene: Xerxes_7 Start: 5730, Stop: 5963, Start Num: 15
Candidate Starts for Xerxes_7:
(Start: 15 @5730 has 64 MA's), (Start: 29 @5799 has 2 MA's), (30, 5814),