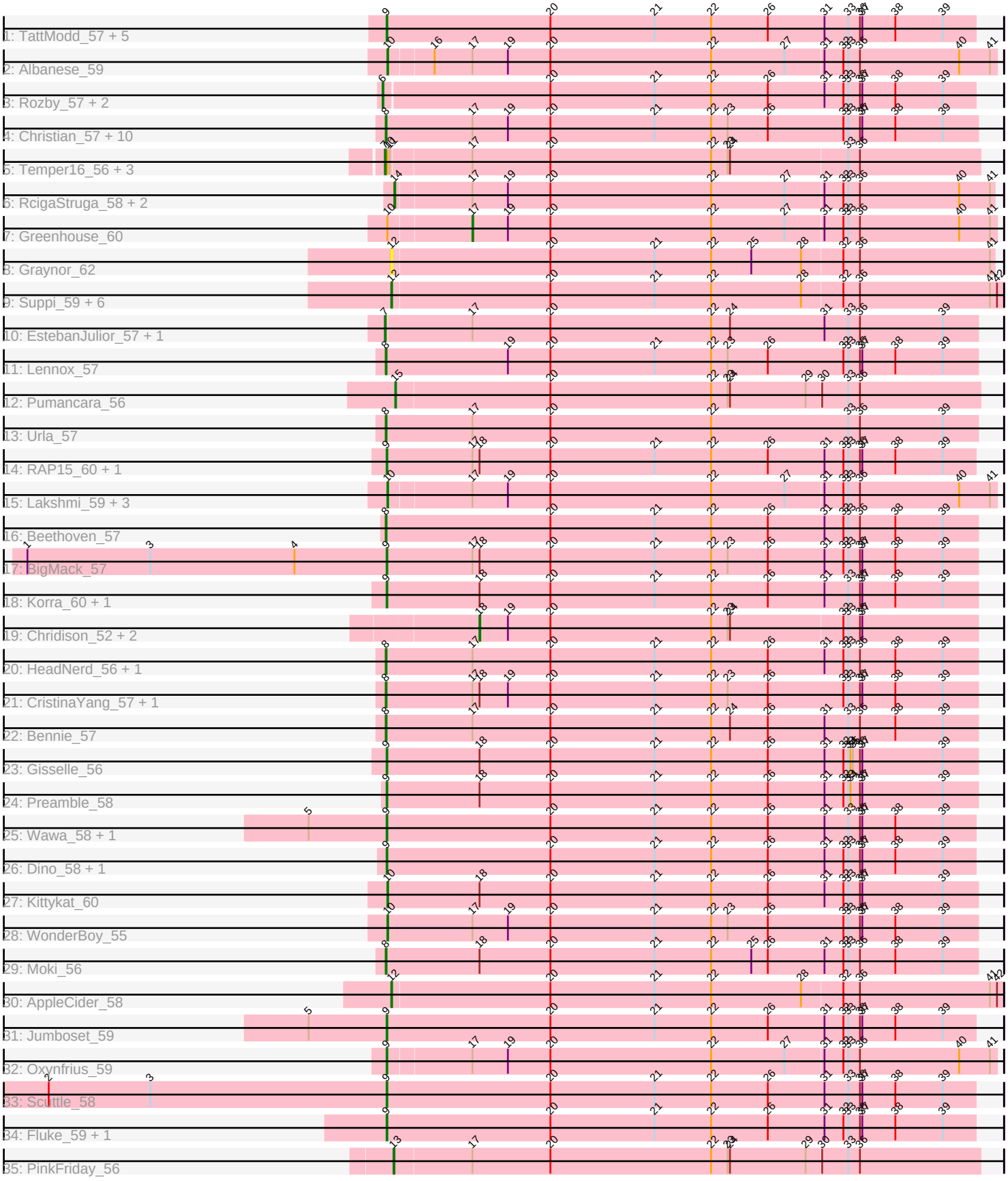
# Pham 347548


1: TattModd_57 + 5
2: Albanese_59
3: Rozby_57 + 2
4: Christian_57 + 10
5: Temper16_56 + 3
6: RcigaStruga_58 + 2
7: Greenhouse_60
8: Graynor_62
9: Suppi_59 + 6
10: EstebanJulior_57 + 1
11: Lennox_57
12: Pumancara_56
13: Urla_57
14: RAP15_60 + 1
15: Lakshmi_59 + 3
16: Beethoven_57
17: BigMack_57
18: Korra_60 + 1
19: Chridison_52 + 2
20: HeadNerd_56 + 1
21: CristinaYang_57 + 1
22: Bennie_57
23: Gisselle_56
24: Preamble_58
25: Wawa_58 + 1
26: Dino_58 + 1
27: Kittykat_60
28: WonderBoy_55
29: Moki_56
30: AppleCider_58
31: Jumboset_59
32: Oxynfrius_59
33: Scuttle_58
34: Fluke_59 + 1
35: PinkFriday_56

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 347548 Report

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

Pham number 347548 has 76 members, 2 are drafts.

Phages represented in each track:
• Track 1 : TattModd_57, Cholula_58, BrotherBLo_58, Potatoes_58, Immaculata_58, Kalizoi_58
• Track 2 : Albanese_59
• Track 3 : Rozby_57, Riverdale_58, Savage2526_58
• Track 4 : Christian_57, PitaDog_57, ChewChew_57, Bodacious_57, LilStuart_56, Makoto_56, Lasagna_55, OurGirlNessie_55, DrRobert_55, Nancia_57, Lucy_56
• Track 5 : Temper16_56, Maria1952_55, Herb_56, Daiboju_56
• Track 6 : RcigaStruga_58, Huntingdon_58, Misaeng_57
• Track 7 : Greenhouse_60
• Track 8 : Graynor_62
• Track 9 : Suppi_59, Litotes_58, CallieOMalley_59, Canowicakte_59, MrBoss_61, Wayne_61, PartyCup_60
• Track 10 : EstebanJulior_57, MamaPearl_57
• Track 11 : Lennox_57
• Track 12 : Pumancara_56
• Track 13 : Urla_57
• Track 14 : RAP15_60, MeganNoll_59
• Track 15 : Lakshmi_59, Joann_60, GreenHearts_60, Nubia_59
• Track 16 : Beethoven_57
• Track 17 : BigMack_57
• Track 18 : Korra_60, Glenn_60
• Track 19 : Chridison_52, HunterDalle_55, Vulture_55
• Track 20 : HeadNerd_56, Huckleberry_56
• Track 21 : CristinaYang_57, Pterodactyl_57
• Track 22 : Bennie_57
• Track 23 : Gisselle_56
• Track 24 : Preamble_58
• Track 25 : Wawa_58, Vallejo_58
• Track 26 : Dino_58, Zorro_58
• Track 27 : Kittykat_60
• Track 28 : WonderBoy_55
• Track 29 : Moki_56
• Track 30 : AppleCider_58
• Track 31 : Jumboset_59
• Track 32 : Oxynfrius_59
• Track 33 : Scuttle_58
• Track 34 : Fluke_59, MrGloopy_59

• Track 35 : PinkFriday_56

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

The start number called the most often in the published annotations is 9, it was called in 22 of the 74 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• BigMack_57, BrotherBLo_58, Cholula_58, Dino_58, Fluke_59, Gisselle_56, Glenn_60, Immaculata_58, Jumboset_59, Kalizoi_58, Korra_60, MeganNoll_59, MrGloopy_59, Oxynfrius_59, Potatoes_58, Preamble_58, RAP15_60, Scuttle_58, TattModd_57, Vallejo_58, Wawa_58, Zorro_58,

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

Genes that do not have the "Most Annotated" start:
• Albanese_59, AppleCider_58, Beethoven_57, Bennie_57, Bodacious_57, CallieOMalley_59, Canowicakte_59, ChewChew_57, Chridison_52, Christian_57, CristinaYang_57, Daiboju_56, DrRobert_55, EstebanJulior_57, Graynor_62, GreenHearts_60, Greenhouse_60, HeadNerd_56, Herb_56, Huckleberry_56, HunterDalle_55, Huntingdon_58, Joann_60, Kittykat_60, Lakshmi_59, Lasagna_55, Lennox_57, LilStuart_56, Litotes_58, Lucy_56, Makoto_56, MamaPearl_57, Maria1952_55, Misaeng_57, Moki_56, MrBoss_61, Nancia_57, Nubia_59, OurGirlNessie_55, PartyCup_60, PinkFriday_56, PitaDog_57, Pterodactyl_57, Pumancara_56, RcigaStruga_58, Riverdale_58, Rozby_57, Savage2526_58, Suppi_59, Temper16_56, Urla_57, Vulture_55, Wayne_61, WonderBoy_55,

**Summary by start number:**

Start 6:
• Found in 3 of 76 ( 3.9% ) of genes in pham
• Manual Annotations of this start: 3 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Riverdale_58 (AK), Rozby_57 (AK), Savage2526_58 (AK),

Start 7:
• Found in 6 of 76 ( 7.9% ) of genes in pham
• Manual Annotations of this start: 6 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Daiboju_56 (AK), EstebanJulior_57 (AK), Herb_56 (AK), MamaPearl_57 (AK), Maria1952_55 (AK), Temper16_56 (AK),

Start 8:
• Found in 20 of 76 ( 26.3% ) of genes in pham
• Manual Annotations of this start: 20 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Beethoven_57 (AK), Bennie_57 (AK), Bodacious_57 (AK), ChewChew_57 (AK), Christian_57 (AK), CristinaYang_57 (AK),

DrRobert_55 (AK), HeadNerd_56 (AK), Huckleberry_56 (AK), Lasagna_55 (AK), Lennox_57 (AK), LilStuart_56 (AK), Lucy_56 (AK), Makoto_56 (AK), Moki_56 (AK), Nancia_57 (AK), OurGirlNessie_55 (AK), PitaDog_57 (AK), Pterodactyl_57 (AK), Urla_57 (AK),

Start 9:
• Found in 22 of 76 ( 28.9% ) of genes in pham
• Manual Annotations of this start: 22 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BigMack_57 (AK), BrotherBLo_58 (AK), Cholula_58 (AK), Dino_58 (AK), Fluke_59 (AK), Gisselle_56 (AK), Glenn_60 (AK), Immaculata_58 (AK), Jumboset_59 (AK), Kalizoi_58 (AK), Korra_60 (AK), MeganNoll_59 (AK), MrGloopy_59 (AK), Oxynfrius_59 (AK), Potatoes_58 (AK), Preamble_58 (AK), RAP15_60 (AK), Scuttle_58 (AK), TattModd_57 (AK), Vallejo_58 (AK), Wawa_58 (AK), Zorro_58 (AK),

Start 10:
• Found in 12 of 76 ( 15.8% ) of genes in pham
• Manual Annotations of this start: 7 of 74
• Called 58.3% of time when present
• Phage (with cluster) where this start called: Albanese_59 (AK), GreenHearts_60 (AK), Joann_60 (AK), Kittykat_60 (AK), Lakshmi_59 (AK), Nubia_59 (AK), WonderBoy_55 (AK),

Start 12:
• Found in 9 of 76 ( 11.8% ) of genes in pham
• Manual Annotations of this start: 7 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AppleCider_58 (AK), CallieOMalley_59 (AK), Canowicakte_59 (AK), Graynor_62 (AK), Litotes_58 (AK), MrBoss_61 (AK), PartyCup_60 (AK), Suppi_59 (AK), Wayne_61 (AK),

Start 13:
• Found in 1 of 76 ( 1.3% ) of genes in pham
• Manual Annotations of this start: 1 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: PinkFriday_56 (AK),

Start 14:
• Found in 3 of 76 ( 3.9% ) of genes in pham
• Manual Annotations of this start: 3 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Huntingdon_58 (AK), Misaeng_57 (AK), RcigaStruga_58 (AK),

Start 15:
• Found in 1 of 76 ( 1.3% ) of genes in pham
• Manual Annotations of this start: 1 of 74
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pumancara_56 (AK),

Start 17:
• Found in 38 of 76 ( 50.0% ) of genes in pham

• Manual Annotations of this start: 1 of 74
• Called 2.6% of time when present
• Phage (with cluster) where this start called: Greenhouse_60 (AK),

Start 18:
• Found in 14 of 76 ( 18.4% ) of genes in pham
• Manual Annotations of this start: 3 of 74
• Called 21.4% of time when present
• Phage (with cluster) where this start called: Chridison_52 (AK), HunterDalle_55 (AK), Vulture_55 (AK),

**Summary by clusters:**

There is one cluster represented in this pham: AK

Info for manual annotations of cluster AK:
•Start number 6 was manually annotated 3 times for cluster AK.
•Start number 7 was manually annotated 6 times for cluster AK.
•Start number 8 was manually annotated 20 times for cluster AK.
•Start number 9 was manually annotated 22 times for cluster AK.
•Start number 10 was manually annotated 7 times for cluster AK.
•Start number 12 was manually annotated 7 times for cluster AK.
•Start number 13 was manually annotated 1 time for cluster AK.
•Start number 14 was manually annotated 3 times for cluster AK.
•Start number 15 was manually annotated 1 time for cluster AK.
•Start number 17 was manually annotated 1 time for cluster AK.
•Start number 18 was manually annotated 3 times for cluster AK.

***Gene Information:***

Gene: Albanese_59 Start: 42452, Stop: 43216, Start Num: 10
Candidate Starts for Albanese_59:
(Start: 10 @42452 has 7 MA's), (16, 42506), (Start: 17 @42554 has 1 MA's), (19, 42599), (20, 42653), (22, 42857), (27, 42950), (31, 42998), (32, 43022), (33, 43028), (36, 43043), (40, 43169), (41, 43208),

Gene: AppleCider_58 Start: 42009, Stop: 42779, Start Num: 12
Candidate Starts for AppleCider_58:
(Start: 12 @42009 has 7 MA's), (20, 42207), (21, 42339), (22, 42411), (28, 42525), (32, 42576), (36, 42597), (41, 42762), (42, 42771),

Gene: Beethoven_57 Start: 41725, Stop: 42474, Start Num: 8
Candidate Starts for Beethoven_57:
(Start: 8 @41725 has 20 MA's), (20, 41932), (21, 42064), (22, 42136), (26, 42208), (31, 42280), (32, 42304), (33, 42310), (36, 42325), (38, 42370), (39, 42430),

Gene: Bennie_57 Start: 40865, Stop: 41614, Start Num: 8
Candidate Starts for Bennie_57:
(Start: 8 @40865 has 20 MA's), (Start: 17 @40973 has 1 MA's), (20, 41072), (21, 41204), (22, 41276), (24, 41300), (26, 41348), (31, 41420), (33, 41450), (36, 41465), (38, 41510), (39, 41570),

Gene: BigMack_57 Start: 41314, Stop: 42063, Start Num: 9

Candidate Starts for BigMack_57:
(1, 40858), (3, 41014), (4, 41197), (Start: 9 @41314 has 22 MA's), (Start: 17 @41422 has 1 MA's), (Start: 18 @41431 has 3 MA's), (20, 41521), (21, 41653), (22, 41725), (23, 41746), (26, 41797), (31, 41869), (32, 41893), (33, 41899), (36, 41914), (37, 41917), (38, 41959), (39, 42019),

Gene: Bodacious_57 Start: 41287, Stop: 42036, Start Num: 8
Candidate Starts for Bodacious_57:
(Start: 8 @41287 has 20 MA's), (Start: 17 @41395 has 1 MA's), (19, 41440), (20, 41494), (21, 41626), (22, 41698), (23, 41719), (26, 41770), (32, 41866), (33, 41872), (36, 41887), (37, 41890), (38, 41932), (39, 41992),

Gene: BrotherBLo_58 Start: 41971, Stop: 42717, Start Num: 9
Candidate Starts for BrotherBLo_58:
(Start: 9 @41971 has 22 MA's), (20, 42178), (21, 42310), (22, 42382), (26, 42454), (31, 42526), (33, 42556), (36, 42571), (37, 42574), (38, 42616), (39, 42676),

Gene: CallieOMalley_59 Start: 42197, Stop: 42967, Start Num: 12
Candidate Starts for CallieOMalley_59:
(Start: 12 @42197 has 7 MA's), (20, 42395), (21, 42527), (22, 42599), (28, 42713), (32, 42764), (36, 42785), (41, 42950), (42, 42959),

Gene: Canowicakte_59 Start: 42249, Stop: 43019, Start Num: 12
Candidate Starts for Canowicakte_59:
(Start: 12 @42249 has 7 MA's), (20, 42447), (21, 42579), (22, 42651), (28, 42765), (32, 42816), (36, 42837), (41, 43002), (42, 43011),

Gene: ChewChew_57 Start: 41417, Stop: 42166, Start Num: 8
Candidate Starts for ChewChew_57:
(Start: 8 @41417 has 20 MA's), (Start: 17 @41525 has 1 MA's), (19, 41570), (20, 41624), (21, 41756), (22, 41828), (23, 41849), (26, 41900), (32, 41996), (33, 42002), (36, 42017), (37, 42020), (38, 42062), (39, 42122),

Gene: Cholula_58 Start: 41981, Stop: 42727, Start Num: 9
Candidate Starts for Cholula_58:
(Start: 9 @41981 has 22 MA's), (20, 42188), (21, 42320), (22, 42392), (26, 42464), (31, 42536), (33, 42566), (36, 42581), (37, 42584), (38, 42626), (39, 42686),

Gene: Chridison_52 Start: 41000, Stop: 41629, Start Num: 18
Candidate Starts for Chridison_52:
(Start: 18 @41000 has 3 MA's), (19, 41036), (20, 41090), (22, 41294), (23, 41315), (24, 41318), (32, 41459), (33, 41465), (36, 41480), (37, 41483),

Gene: Christian_57 Start: 41129, Stop: 41878, Start Num: 8
Candidate Starts for Christian_57:
(Start: 8 @41129 has 20 MA's), (Start: 17 @41237 has 1 MA's), (19, 41282), (20, 41336), (21, 41468), (22, 41540), (23, 41561), (26, 41612), (32, 41708), (33, 41714), (36, 41729), (37, 41732), (38, 41774), (39, 41834),

Gene: CristinaYang_57 Start: 41414, Stop: 42163, Start Num: 8
Candidate Starts for CristinaYang_57:
(Start: 8 @41414 has 20 MA's), (Start: 17 @41522 has 1 MA's), (Start: 18 @41531 has 3 MA's), (19, 41567), (20, 41621), (21, 41753), (22, 41825), (23, 41846), (26, 41897), (32, 41993), (33, 41999), (36, 42014), (37, 42017), (38, 42059), (39, 42119),

Gene: Daiboju_56 Start: 42005, Stop: 42748, Start Num: 7
Candidate Starts for Daiboju_56:
(Start: 7 @42005 has 6 MA's), (Start: 10 @42008 has 7 MA's), (11, 42011), (Start: 17 @42107 has 1 MA's), (20, 42206), (22, 42410), (23, 42431), (24, 42434), (33, 42581), (36, 42596),

Gene: Dino_58 Start: 41884, Stop: 42630, Start Num: 9
Candidate Starts for Dino_58:
(Start: 9 @41884 has 22 MA's), (20, 42091), (21, 42223), (22, 42295), (26, 42367), (31, 42439), (32, 42463), (33, 42469), (36, 42484), (37, 42487), (38, 42529), (39, 42589),

Gene: DrRobert_55 Start: 40648, Stop: 41397, Start Num: 8
Candidate Starts for DrRobert_55:
(Start: 8 @40648 has 20 MA's), (Start: 17 @40756 has 1 MA's), (19, 40801), (20, 40855), (21, 40987), (22, 41059), (23, 41080), (26, 41131), (32, 41227), (33, 41233), (36, 41248), (37, 41251), (38, 41293), (39, 41353),

Gene: EstebanJulior_57 Start: 41807, Stop: 42556, Start Num: 7
Candidate Starts for EstebanJulior_57:
(Start: 7 @41807 has 6 MA's), (Start: 17 @41915 has 1 MA's), (20, 42014), (22, 42218), (24, 42242), (31, 42362), (33, 42392), (36, 42407), (39, 42512),

Gene: Fluke_59 Start: 42342, Stop: 43088, Start Num: 9
Candidate Starts for Fluke_59:
(Start: 9 @42342 has 22 MA's), (20, 42549), (21, 42681), (22, 42753), (26, 42825), (31, 42897), (32, 42921), (33, 42927), (36, 42942), (37, 42945), (38, 42987), (39, 43047),

Gene: Gisselle_56 Start: 41030, Stop: 41779, Start Num: 9
Candidate Starts for Gisselle_56:
(Start: 9 @41030 has 22 MA's), (Start: 18 @41147 has 3 MA's), (20, 41237), (21, 41369), (22, 41441), (26, 41513), (31, 41585), (32, 41609), (33, 41615), (34, 41618), (35, 41621), (36, 41630), (37, 41633), (39, 41735),

Gene: Glenn_60 Start: 42803, Stop: 43552, Start Num: 9
Candidate Starts for Glenn_60:
(Start: 9 @42803 has 22 MA's), (Start: 18 @42920 has 3 MA's), (20, 43010), (21, 43142), (22, 43214), (26, 43286), (31, 43358), (33, 43388), (36, 43403), (37, 43406), (38, 43448), (39, 43508),

Gene: Graynor_62 Start: 41834, Stop: 42592, Start Num: 12
Candidate Starts for Graynor_62:
(Start: 12 @41834 has 7 MA's), (20, 42032), (21, 42164), (22, 42236), (25, 42287), (28, 42350), (32, 42401), (36, 42422), (41, 42587),

Gene: GreenHearts_60 Start: 42770, Stop: 43534, Start Num: 10
Candidate Starts for GreenHearts_60:
(Start: 10 @42770 has 7 MA's), (Start: 17 @42872 has 1 MA's), (19, 42917), (20, 42971), (22, 43175), (27, 43268), (31, 43316), (32, 43340), (33, 43346), (36, 43361), (40, 43487), (41, 43526),

Gene: Greenhouse_60 Start: 42621, Stop: 43283, Start Num: 17
Candidate Starts for Greenhouse_60:
(Start: 10 @42519 has 7 MA's), (Start: 17 @42621 has 1 MA's), (19, 42666), (20, 42720), (22, 42924), (27, 43017), (31, 43065), (32, 43089), (33, 43095), (36, 43110), (40, 43236), (41, 43275),

Gene: HeadNerd_56 Start: 40759, Stop: 41508, Start Num: 8
Candidate Starts for HeadNerd_56:
(Start: 8 @40759 has 20 MA's), (Start: 17 @40867 has 1 MA's), (20, 40966), (21, 41098), (22, 41170), (26, 41242), (31, 41314), (32, 41338), (33, 41344), (36, 41359), (38, 41404), (39, 41464),

Gene: Herb_56 Start: 42004, Stop: 42747, Start Num: 7
Candidate Starts for Herb_56:
(Start: 7 @42004 has 6 MA's), (Start: 10 @42007 has 7 MA's), (11, 42010), (Start: 17 @42106 has 1 MA's), (20, 42205), (22, 42409), (23, 42430), (24, 42433), (33, 42580), (36, 42595),

Gene: Huckleberry_56 Start: 40763, Stop: 41512, Start Num: 8
Candidate Starts for Huckleberry_56:
(Start: 8 @40763 has 20 MA's), (Start: 17 @40871 has 1 MA's), (20, 40970), (21, 41102), (22, 41174), (26, 41246), (31, 41318), (32, 41342), (33, 41348), (36, 41363), (38, 41408), (39, 41468),

Gene: HunterDalle_55 Start: 41321, Stop: 41950, Start Num: 18
Candidate Starts for HunterDalle_55:
(Start: 18 @41321 has 3 MA's), (19, 41357), (20, 41411), (22, 41615), (23, 41636), (24, 41639), (32, 41780), (33, 41786), (36, 41801), (37, 41804),

Gene: Huntingdon_58 Start: 42287, Stop: 43039, Start Num: 14
Candidate Starts for Huntingdon_58:
(Start: 14 @42287 has 3 MA's), (Start: 17 @42380 has 1 MA's), (19, 42425), (20, 42479), (22, 42683), (27, 42776), (31, 42824), (32, 42848), (33, 42854), (36, 42869), (40, 42995), (41, 43034),

Gene: Immaculata_58 Start: 41981, Stop: 42727, Start Num: 9
Candidate Starts for Immaculata_58:
(Start: 9 @41981 has 22 MA's), (20, 42188), (21, 42320), (22, 42392), (26, 42464), (31, 42536), (33, 42566), (36, 42581), (37, 42584), (38, 42626), (39, 42686),

Gene: Joann_60 Start: 42521, Stop: 43285, Start Num: 10
Candidate Starts for Joann_60:
(Start: 10 @42521 has 7 MA's), (Start: 17 @42623 has 1 MA's), (19, 42668), (20, 42722), (22, 42926), (27, 43019), (31, 43067), (32, 43091), (33, 43097), (36, 43112), (40, 43238), (41, 43277),

Gene: Jumboset_59 Start: 42310, Stop: 43056, Start Num: 9
Candidate Starts for Jumboset_59:
(5, 42211), (Start: 9 @42310 has 22 MA's), (20, 42517), (21, 42649), (22, 42721), (26, 42793), (31, 42865), (32, 42889), (33, 42895), (36, 42910), (37, 42913), (38, 42955), (39, 43015),

Gene: Kalizoi_58 Start: 41838, Stop: 42584, Start Num: 9
Candidate Starts for Kalizoi_58:
(Start: 9 @41838 has 22 MA's), (20, 42045), (21, 42177), (22, 42249), (26, 42321), (31, 42393), (33, 42423), (36, 42438), (37, 42441), (38, 42483), (39, 42543),

Gene: Kittykat_60 Start: 41544, Stop: 42293, Start Num: 10
Candidate Starts for Kittykat_60:
(Start: 10 @41544 has 7 MA's), (Start: 18 @41661 has 3 MA's), (20, 41751), (21, 41883), (22, 41955), (26, 42027), (31, 42099), (32, 42123), (33, 42129), (36, 42144), (37, 42147), (39, 42249),

Gene: Korra_60 Start: 42077, Stop: 42826, Start Num: 9
Candidate Starts for Korra_60:

(Start: 9 @42077 has 22 MA's), (Start: 18 @42194 has 3 MA's), (20, 42284), (21, 42416), (22, 42488), (26, 42560), (31, 42632), (33, 42662), (36, 42677), (37, 42680), (38, 42722), (39, 42782),

Gene: Lakshmi_59 Start: 42540, Stop: 43304, Start Num: 10
Candidate Starts for Lakshmi_59:
(Start: 10 @42540 has 7 MA's), (Start: 17 @42642 has 1 MA's), (19, 42687), (20, 42741), (22, 42945), (27, 43038), (31, 43086), (32, 43110), (33, 43116), (36, 43131), (40, 43257), (41, 43296),

Gene: Lasagna_55 Start: 40650, Stop: 41399, Start Num: 8
Candidate Starts for Lasagna_55:
(Start: 8 @40650 has 20 MA's), (Start: 17 @40758 has 1 MA's), (19, 40803), (20, 40857), (21, 40989), (22, 41061), (23, 41082), (26, 41133), (32, 41229), (33, 41235), (36, 41250), (37, 41253), (38, 41295), (39, 41355),

Gene: Lennox_57 Start: 41135, Stop: 41884, Start Num: 8
Candidate Starts for Lennox_57:
(Start: 8 @41135 has 20 MA's), (19, 41288), (20, 41342), (21, 41474), (22, 41546), (23, 41567), (26, 41618), (32, 41714), (33, 41720), (36, 41735), (37, 41738), (38, 41780), (39, 41840),

Gene: LilStuart_56 Start: 40998, Stop: 41747, Start Num: 8
Candidate Starts for LilStuart_56:
(Start: 8 @40998 has 20 MA's), (Start: 17 @41106 has 1 MA's), (19, 41151), (20, 41205), (21, 41337), (22, 41409), (23, 41430), (26, 41481), (32, 41577), (33, 41583), (36, 41598), (37, 41601), (38, 41643), (39, 41703),

Gene: Litotes_58 Start: 41796, Stop: 42566, Start Num: 12
Candidate Starts for Litotes_58:
(Start: 12 @41796 has 7 MA's), (20, 41994), (21, 42126), (22, 42198), (28, 42312), (32, 42363), (36, 42384), (41, 42549), (42, 42558),

Gene: Lucy_56 Start: 40993, Stop: 41742, Start Num: 8
Candidate Starts for Lucy_56:
(Start: 8 @40993 has 20 MA's), (Start: 17 @41101 has 1 MA's), (19, 41146), (20, 41200), (21, 41332), (22, 41404), (23, 41425), (26, 41476), (32, 41572), (33, 41578), (36, 41593), (37, 41596), (38, 41638), (39, 41698),

Gene: Makoto_56 Start: 40891, Stop: 41640, Start Num: 8
Candidate Starts for Makoto_56:
(Start: 8 @40891 has 20 MA's), (Start: 17 @40999 has 1 MA's), (19, 41044), (20, 41098), (21, 41230), (22, 41302), (23, 41323), (26, 41374), (32, 41470), (33, 41476), (36, 41491), (37, 41494), (38, 41536), (39, 41596),

Gene: MamaPearl_57 Start: 41807, Stop: 42556, Start Num: 7
Candidate Starts for MamaPearl_57:
(Start: 7 @41807 has 6 MA's), (Start: 17 @41915 has 1 MA's), (20, 42014), (22, 42218), (24, 42242), (31, 42362), (33, 42392), (36, 42407), (39, 42512),

Gene: Maria1952_55 Start: 42004, Stop: 42747, Start Num: 7
Candidate Starts for Maria1952_55:
(Start: 7 @42004 has 6 MA's), (Start: 10 @42007 has 7 MA's), (11, 42010), (Start: 17 @42106 has 1 MA's), (20, 42205), (22, 42409), (23, 42430), (24, 42433), (33, 42580), (36, 42595),

Gene: MeganNoll_59 Start: 42579, Stop: 43325, Start Num: 9

Candidate Starts for MeganNoll_59:
(Start: 9 @42579 has 22 MA's), (Start: 17 @42687 has 1 MA's), (Start: 18 @42696 has 3 MA's), (20, 42786), (21, 42918), (22, 42990), (26, 43062), (31, 43134), (32, 43158), (33, 43164), (36, 43179), (37, 43182), (38, 43224), (39, 43284),

Gene: Misaeng_57 Start: 42213, Stop: 42965, Start Num: 14
Candidate Starts for Misaeng_57:
(Start: 14 @42213 has 3 MA's), (Start: 17 @42306 has 1 MA's), (19, 42351), (20, 42405), (22, 42609), (27, 42702), (31, 42750), (32, 42774), (33, 42780), (36, 42795), (40, 42921), (41, 42960),

Gene: Moki_56 Start: 40952, Stop: 41701, Start Num: 8
Candidate Starts for Moki_56:
(Start: 8 @40952 has 20 MA's), (Start: 18 @41069 has 3 MA's), (20, 41159), (21, 41291), (22, 41363), (25, 41414), (26, 41435), (31, 41507), (32, 41531), (33, 41537), (36, 41552), (38, 41597), (39, 41657),

Gene: MrBoss_61 Start: 41590, Stop: 42360, Start Num: 12
Candidate Starts for MrBoss_61:
(Start: 12 @41590 has 7 MA's), (20, 41788), (21, 41920), (22, 41992), (28, 42106), (32, 42157), (36, 42178), (41, 42343), (42, 42352),

Gene: MrGloopy_59 Start: 42231, Stop: 42977, Start Num: 9
Candidate Starts for MrGloopy_59:
(Start: 9 @42231 has 22 MA's), (20, 42438), (21, 42570), (22, 42642), (26, 42714), (31, 42786), (32, 42810), (33, 42816), (36, 42831), (37, 42834), (38, 42876), (39, 42936),

Gene: Nancia_57 Start: 41286, Stop: 42035, Start Num: 8
Candidate Starts for Nancia_57:
(Start: 8 @41286 has 20 MA's), (Start: 17 @41394 has 1 MA's), (19, 41439), (20, 41493), (21, 41625), (22, 41697), (23, 41718), (26, 41769), (32, 41865), (33, 41871), (36, 41886), (37, 41889), (38, 41931), (39, 41991),

Gene: Nubia_59 Start: 42383, Stop: 43147, Start Num: 10
Candidate Starts for Nubia_59:
(Start: 10 @42383 has 7 MA's), (Start: 17 @42485 has 1 MA's), (19, 42530), (20, 42584), (22, 42788), (27, 42881), (31, 42929), (32, 42953), (33, 42959), (36, 42974), (40, 43100), (41, 43139),

Gene: OurGirlNessie_55 Start: 40615, Stop: 41364, Start Num: 8
Candidate Starts for OurGirlNessie_55:
(Start: 8 @40615 has 20 MA's), (Start: 17 @40723 has 1 MA's), (19, 40768), (20, 40822), (21, 40954), (22, 41026), (23, 41047), (26, 41098), (32, 41194), (33, 41200), (36, 41215), (37, 41218), (38, 41260), (39, 41320),

Gene: Oxynfrius_59 Start: 42501, Stop: 43265, Start Num: 9
Candidate Starts for Oxynfrius_59:
(Start: 9 @42501 has 22 MA's), (Start: 17 @42603 has 1 MA's), (19, 42648), (20, 42702), (22, 42906), (27, 42999), (31, 43047), (32, 43071), (33, 43077), (36, 43092), (40, 43218), (41, 43257),

Gene: PartyCup_60 Start: 42444, Stop: 43214, Start Num: 12
Candidate Starts for PartyCup_60:
(Start: 12 @42444 has 7 MA's), (20, 42642), (21, 42774), (22, 42846), (28, 42960), (32, 43011), (36, 43032), (41, 43197), (42, 43206),

Gene: PinkFriday_56 Start: 41263, Stop: 41997, Start Num: 13

Candidate Starts for PinkFriday_56:
(Start: 13 @41263 has 1 MA's), (Start: 17 @41356 has 1 MA's), (20, 41455), (22, 41659), (23, 41680), (24, 41683), (29, 41779), (30, 41797), (33, 41830), (36, 41845),

Gene: PitaDog_57 Start: 41011, Stop: 41760, Start Num: 8
Candidate Starts for PitaDog_57:
(Start: 8 @41011 has 20 MA's), (Start: 17 @41119 has 1 MA's), (19, 41164), (20, 41218), (21, 41350), (22, 41422), (23, 41443), (26, 41494), (32, 41590), (33, 41596), (36, 41611), (37, 41614), (38, 41656), (39, 41716),

Gene: Potatoes_58 Start: 41981, Stop: 42727, Start Num: 9
Candidate Starts for Potatoes_58:
(Start: 9 @41981 has 22 MA's), (20, 42188), (21, 42320), (22, 42392), (26, 42464), (31, 42536), (33, 42566), (36, 42581), (37, 42584), (38, 42626), (39, 42686),

Gene: Preamble_58 Start: 41202, Stop: 41951, Start Num: 9
Candidate Starts for Preamble_58:
(Start: 9 @41202 has 22 MA's), (Start: 18 @41319 has 3 MA's), (20, 41409), (21, 41541), (22, 41613), (26, 41685), (31, 41757), (32, 41781), (33, 41787), (34, 41790), (36, 41802), (37, 41805), (39, 41907),

Gene: Pterodactyl_57 Start: 41252, Stop: 42001, Start Num: 8
Candidate Starts for Pterodactyl_57:
(Start: 8 @41252 has 20 MA's), (Start: 17 @41360 has 1 MA's), (Start: 18 @41369 has 3 MA's), (19, 41405), (20, 41459), (21, 41591), (22, 41663), (23, 41684), (26, 41735), (32, 41831), (33, 41837), (36, 41852), (37, 41855), (38, 41897), (39, 41957),

Gene: Pumancara_56 Start: 40927, Stop: 41661, Start Num: 15
Candidate Starts for Pumancara_56:
(Start: 15 @40927 has 1 MA's), (20, 41119), (22, 41323), (23, 41344), (24, 41347), (29, 41443), (30, 41461), (33, 41494), (36, 41509),

Gene: RAP15_60 Start: 42580, Stop: 43326, Start Num: 9
Candidate Starts for RAP15_60:
(Start: 9 @42580 has 22 MA's), (Start: 17 @42688 has 1 MA's), (Start: 18 @42697 has 3 MA's), (20, 42787), (21, 42919), (22, 42991), (26, 43063), (31, 43135), (32, 43159), (33, 43165), (36, 43180), (37, 43183), (38, 43225), (39, 43285),

Gene: RcigaStruga_58 Start: 42287, Stop: 43039, Start Num: 14
Candidate Starts for RcigaStruga_58:
(Start: 14 @42287 has 3 MA's), (Start: 17 @42380 has 1 MA's), (19, 42425), (20, 42479), (22, 42683), (27, 42776), (31, 42824), (32, 42848), (33, 42854), (36, 42869), (40, 42995), (41, 43034),

Gene: Riverdale_58 Start: 41921, Stop: 42667, Start Num: 6
Candidate Starts for Riverdale_58:
(Start: 6 @41921 has 3 MA's), (20, 42128), (21, 42260), (22, 42332), (26, 42404), (31, 42476), (32, 42500), (33, 42506), (36, 42521), (37, 42524), (38, 42566), (39, 42626),

Gene: Rozby_57 Start: 41725, Stop: 42471, Start Num: 6
Candidate Starts for Rozby_57:
(Start: 6 @41725 has 3 MA's), (20, 41932), (21, 42064), (22, 42136), (26, 42208), (31, 42280), (32, 42304), (33, 42310), (36, 42325), (37, 42328), (38, 42370), (39, 42430),

Gene: Savage2526_58 Start: 41948, Stop: 42694, Start Num: 6

Candidate Starts for Savage2526_58:
(Start: 6 @41948 has 3 MA's), (20, 42155), (21, 42287), (22, 42359), (26, 42431), (31, 42503), (32, 42527), (33, 42533), (36, 42548), (37, 42551), (38, 42593), (39, 42653),

Gene: Scuttle_58 Start: 42259, Stop: 43005, Start Num: 9
Candidate Starts for Scuttle_58:
(2, 41830), (3, 41959), (Start: 9 @42259 has 22 MA's), (20, 42466), (21, 42598), (22, 42670), (26, 42742), (31, 42814), (33, 42844), (36, 42859), (37, 42862), (38, 42904), (39, 42964),

Gene: Suppi_59 Start: 42249, Stop: 43019, Start Num: 12
Candidate Starts for Suppi_59:
(Start: 12 @42249 has 7 MA's), (20, 42447), (21, 42579), (22, 42651), (28, 42765), (32, 42816), (36, 42837), (41, 43002), (42, 43011),

Gene: TattModd_57 Start: 41866, Stop: 42612, Start Num: 9
Candidate Starts for TattModd_57:
(Start: 9 @41866 has 22 MA's), (20, 42073), (21, 42205), (22, 42277), (26, 42349), (31, 42421), (33, 42451), (36, 42466), (37, 42469), (38, 42511), (39, 42571),

Gene: Temper16_56 Start: 42005, Stop: 42748, Start Num: 7
Candidate Starts for Temper16_56:
(Start: 7 @42005 has 6 MA's), (Start: 10 @42008 has 7 MA's), (11, 42011), (Start: 17 @42107 has 1 MA's), (20, 42206), (22, 42410), (23, 42431), (24, 42434), (33, 42581), (36, 42596),

Gene: Urla_57 Start: 41952, Stop: 42701, Start Num: 8
Candidate Starts for Urla_57:
(Start: 8 @41952 has 20 MA's), (Start: 17 @42060 has 1 MA's), (20, 42159), (22, 42363), (33, 42537), (36, 42552), (39, 42657),

Gene: Vallejo_58 Start: 41928, Stop: 42674, Start Num: 9
Candidate Starts for Vallejo_58:
(5, 41829), (Start: 9 @41928 has 22 MA's), (20, 42135), (21, 42267), (22, 42339), (26, 42411), (31, 42483), (33, 42513), (36, 42528), (37, 42531), (38, 42573), (39, 42633),

Gene: Vulture_55 Start: 41321, Stop: 41950, Start Num: 18
Candidate Starts for Vulture_55:
(Start: 18 @41321 has 3 MA's), (19, 41357), (20, 41411), (22, 41615), (23, 41636), (24, 41639), (32, 41780), (33, 41786), (36, 41801), (37, 41804),

Gene: Wawa_58 Start: 42171, Stop: 42917, Start Num: 9
Candidate Starts for Wawa_58:
(5, 42072), (Start: 9 @42171 has 22 MA's), (20, 42378), (21, 42510), (22, 42582), (26, 42654), (31, 42726), (33, 42756), (36, 42771), (37, 42774), (38, 42816), (39, 42876),

Gene: Wayne_61 Start: 42706, Stop: 43476, Start Num: 12
Candidate Starts for Wayne_61:
(Start: 12 @42706 has 7 MA's), (20, 42904), (21, 43036), (22, 43108), (28, 43222), (32, 43273), (36, 43294), (41, 43459), (42, 43468),

Gene: WonderBoy_55 Start: 40719, Stop: 41468, Start Num: 10
Candidate Starts for WonderBoy_55:
(Start: 10 @40719 has 7 MA's), (Start: 17 @40827 has 1 MA's), (19, 40872), (20, 40926), (21, 41058), (22, 41130), (23, 41151), (26, 41202), (32, 41298), (33, 41304), (36, 41319), (37, 41322), (38, 41364),

(39, 41424),

Gene: Zorro_58 Start: 41884, Stop: 42630, Start Num: 9
Candidate Starts for Zorro_58:
(Start: 9 @41884 has 22 MA's), (20, 42091), (21, 42223), (22, 42295), (26, 42367), (31, 42439), (32, 42463), (33, 42469), (36, 42484), (37, 42487), (38, 42529), (39, 42589),