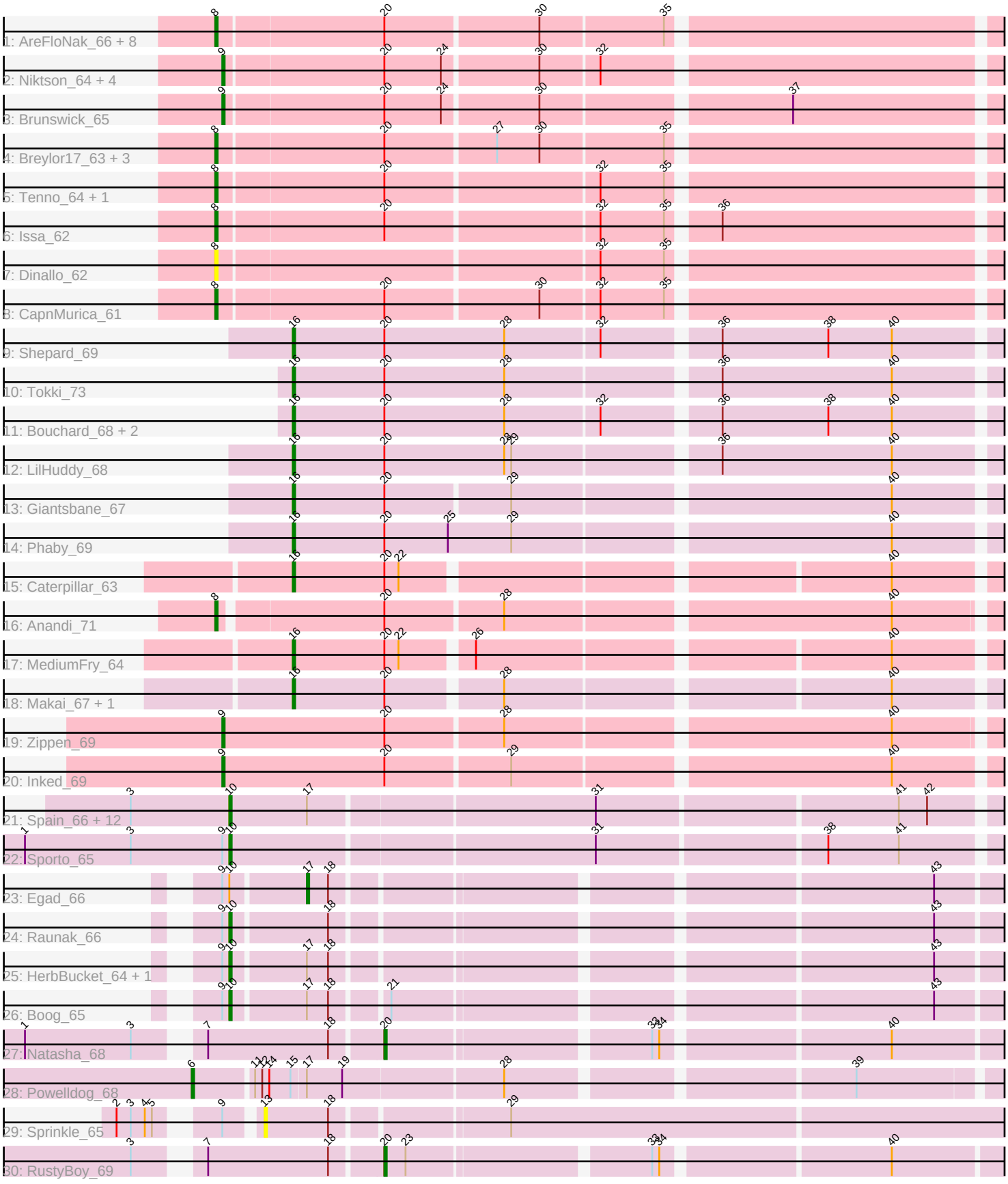
Pham 347629


1: AreFloNak_66 + 8
2: Niktson_64 + 4
3: Brunswick_65
4: Breylor17_63 + 3
5: Tenno_64 + 1
6: Issa_62
7: Dinallo_62
8: CapnMurica_61
9: Shepard_69
10: Tokki_73
11: Bouchard_68 + 2
12: LilHuddy_68
13: Giantsbane_67
14: Phaby_69
15: Caterpillar_63
16: Anandi_71
17: MediumFry_64
18: Makai_67 + 1
19: Zippen_69
20: Inked_69
21: Spain_66 + 12
22: Sporto_65
23: Egad_66
24: Raunak_66
25: HerbBucket_64 + 1
26: Boog_65
27: Natasha_68
28: Powelldog_68
29: Sprinkle_65
30: RustyBoy_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 347629 Report

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

Pham number 347629 has 62 members, 7 are drafts.

Phages represented in each track:
• Track 1 : AreFloNak_66, Westerlin_63, Gordon_61, DevitoJr_63, Darby_62, Nivinsha_66, Tatanka_59, Synepsis_62, ScienceWizSam_64
• Track 2 : Niktson_64, ElephantMan_64, Teacup_65, Acai_64, LucySwiss_64
• Track 3 : Brunswick_65
• Track 4 : Breylor17_63, Trustiboi_63, Nightmare_65, CastorTray_67
• Track 5 : Tenno_64, MiniBagel_63
• Track 6 : Issa_62
• Track 7 : Dinallo_62
• Track 8 : CapnMurica_61
• Track 9 : Shepard_69
• Track 10 : Tokki_73
• Track 11 : Bouchard_68, Tipton_69, Chlochlo_68
• Track 12 : LilHuddy_68
• Track 13 : Giantsbane_67
• Track 14 : Phaby_69
• Track 15 : Caterpillar_63
• Track 16 : Anandi_71
• Track 17 : MediumFry_64
• Track 18 : Makai_67, Truckee_65
• Track 19 : Zippen_69
• Track 20 : Inked_69
• Track 21 : Spain_66, Salk_66, BronxBay_66, Sloopyjoe_66, Stayer_66, Linda_66, Michelle_66, StarLord_66, Jeremy4pt0_65, Shiba_65, MrAaronian_66, DoctorPepper_65, Djungelskog_65
• Track 22 : Sporto_65
• Track 23 : Egad_66
• Track 24 : Raunak_66
• Track 25 : HerbBucket_64, ProfFrink_66
• Track 26 : Boog_65
• Track 27 : Natasha_68
• Track 28 : Powelldog_68
• Track 29 : Sprinkle_65
• Track 30 : RustyBoy_69

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

The start number called the most often in the published annotations is 10, it was called in 16 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Boog_65, BronxBay_66, Djungelskog_65, DoctorPepper_65, HerbBucket_64, Jeremy4pt0_65, Linda_66, Michelle_66, MrAaronian_66, ProfFrink_66, Raunak_66, Salk_66, Shiba_65, Sloopyjoe_66, Spain_66, Sporto_65, StarLord_66, Stayer_66,

Genes that have the "Most Annotated" start but do not call it:
• Egad_66,

Genes that do not have the "Most Annotated" start:
• Acai_64, Anandi_71, AreFloNak_66, Bouchard_68, Breylor17_63, Brunswick_65, CapnMurica_61, CastorTray_67, Caterpillar_63, Chlochlo_68, Darby_62, DevitoJr_63, Dinallo_62, ElephantMan_64, Giantsbane_67, Gordon_61, Inked_69, Issa_62, LilHuddy_68, LucySwiss_64, Makai_67, MediumFry_64, MiniBagel_63, Natasha_68, Nightmare_65, Niktson_64, Nivinsha_66, Phaby_69, Powelldog_68, RustyBoy_69, ScienceWizSam_64, Shepard_69, Sprinkle_65, Synepsis_62, Tatanka_59, Teacup_65, Tenno_64, Tipton_69, Tokki_73, Truckee_65, Trustiboi_63, Westerlin_63, Zippen_69,

Summary by start number:

Start 6:
• Found in 1 of 62 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 55
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Powelldog_68 (AW),

Start 8:
• Found in 19 of 62 (30.6%) of genes in pham
• Manual Annotations of this start: 15 of 55
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anandi_71 (AU4), AreFloNak_66 (AU1), Breylor17_63 (AU1), CapnMurica_61 (AU1), CastorTray_67 (AU1), Darby_62 (AU1), DevitoJr_63 (AU1), Dinallo_62 (AU1), Gordon_61 (AU1), Issa_62 (AU1), MiniBagel_63 (AU1), Nightmare_65 (AU1), Nivinsha_66 (AU1), ScienceWizSam_64 (AU1), Synepsis_62 (AU1), Tatanka_59 (AU1), Tenno_64 (AU1), Trustiboi_63 (AU1), Westerlin_63 (AU1),

Start 9:
• Found in 15 of 62 (24.2%) of genes in pham
• Manual Annotations of this start: 8 of 55
• Called 53.3% of time when present
• Phage (with cluster) where this start called: Acai_64 (AU1), Brunswick_65 (AU1), ElephantMan_64 (AU1), Inked_69 (AU7), LucySwiss_64 (AU1), Niktson_64 (AU1), Teacup_65 (AU1), Zippen_69 (AU7),

Start 10:
• Found in 19 of 62 (30.6%) of genes in pham
• Manual Annotations of this start: 16 of 55
• Called 94.7% of time when present

• Phage (with cluster) where this start called: Boog_65 (AW), BronxBay_66 (AW), Djungelskog_65 (AW), DoctorPepper_65 (AW), HerbBucket_64 (AW), Jeremy4pt0_65 (AW), Linda_66 (AW), Michelle_66 (AW), MrAaronian_66 (AW), ProfFrink_66 (AW), Raunak_66 (AW), Salk_66 (AW), Shiba_65 (AW), Sloopyjoe_66 (AW), Spain_66 (AW), Sporto_65 (AW), StarLord_66 (AW), Stayer_66 (AW),

Start 13:
• Found in 1 of 62 (1.6%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sprinkle_65 (AW),

Start 16:
• Found in 12 of 62 (19.4%) of genes in pham
• Manual Annotations of this start: 12 of 55
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bouchard_68 (AU2), Caterpillar_63 (AU4), Chlochlo_68 (AU2), Giantsbane_67 (AU2), LilHuddy_68 (AU2), Makai_67 (AU5), MediumFry_64 (AU4), Phaby_69 (AU2), Shepard_69 (AU2), Tipton_69 (AU2), Tokki_73 (AU2), Truckee_65 (AU5),

Start 17:
• Found in 18 of 62 (29.0%) of genes in pham
• Manual Annotations of this start: 1 of 55
• Called 5.6% of time when present
• Phage (with cluster) where this start called: Egad_66 (AW),

Start 20:
• Found in 40 of 62 (64.5%) of genes in pham
• Manual Annotations of this start: 2 of 55
• Called 5.0% of time when present
• Phage (with cluster) where this start called: Natasha_68 (AW), RustyBoy_69 (AW),

Summary by clusters:

There are 6 clusters represented in this pham: AW, AU1, AU2, AU5, AU4, AU7,

Info for manual annotations of cluster AU1:
•Start number 8 was manually annotated 14 times for cluster AU1.
•Start number 9 was manually annotated 6 times for cluster AU1.

Info for manual annotations of cluster AU2:
•Start number 16 was manually annotated 8 times for cluster AU2.

Info for manual annotations of cluster AU4:
•Start number 8 was manually annotated 1 time for cluster AU4.
•Start number 16 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:
•Start number 16 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU7:
•Start number 9 was manually annotated 2 times for cluster AU7.

Info for manual annotations of cluster AW:
•Start number 6 was manually annotated 1 time for cluster AW.
•Start number 10 was manually annotated 16 times for cluster AW.
•Start number 17 was manually annotated 1 time for cluster AW.
•Start number 20 was manually annotated 2 times for cluster AW.

Gene Information:

Gene: Acai_64 Start: 44756, Stop: 45067, Start Num: 9
Candidate Starts for Acai_64:
(Start: 9 @44756 has 8 MA's), (Start: 20 @44822 has 2 MA's), (24, 44846), (30, 44885), (32, 44909),

Gene: Anandi_71 Start: 45261, Stop: 45578, Start Num: 8
Candidate Starts for Anandi_71:
(Start: 8 @45261 has 15 MA's), (Start: 20 @45327 has 2 MA's), (28, 45375), (40, 45531),

Gene: AreFloNak_66 Start: 44576, Stop: 44890, Start Num: 8
Candidate Starts for AreFloNak_66:
(Start: 8 @44576 has 15 MA's), (Start: 20 @44645 has 2 MA's), (30, 44708), (35, 44759),

Gene: Boog_65 Start: 42487, Stop: 42786, Start Num: 10
Candidate Starts for Boog_65:
(Start: 9 @42484 has 8 MA's), (Start: 10 @42487 has 16 MA's), (Start: 17 @42517 has 1 MA's), (18, 42526), (21, 42547), (43, 42760),

Gene: Bouchard_68 Start: 45451, Stop: 45738, Start Num: 16
Candidate Starts for Bouchard_68:
(Start: 16 @45451 has 12 MA's), (Start: 20 @45490 has 2 MA's), (28, 45541), (32, 45580), (36, 45625), (38, 45670), (40, 45697),

Gene: Breylor17_63 Start: 45151, Stop: 45465, Start Num: 8
Candidate Starts for Breylor17_63:
(Start: 8 @45151 has 15 MA's), (Start: 20 @45220 has 2 MA's), (27, 45265), (30, 45283), (35, 45334),

Gene: BronxBay_66 Start: 42743, Stop: 43054, Start Num: 10
Candidate Starts for BronxBay_66:
(3, 42701), (Start: 10 @42743 has 16 MA's), (Start: 17 @42776 has 1 MA's), (31, 42893), (41, 43016), (42, 43028),

Gene: Brunswick_65 Start: 44599, Stop: 44910, Start Num: 9
Candidate Starts for Brunswick_65:
(Start: 9 @44599 has 8 MA's), (Start: 20 @44665 has 2 MA's), (24, 44689), (30, 44728), (37, 44827),

Gene: CapnMurica_61 Start: 45337, Stop: 45651, Start Num: 8
Candidate Starts for CapnMurica_61:
(Start: 8 @45337 has 15 MA's), (Start: 20 @45406 has 2 MA's), (30, 45469), (32, 45493), (35, 45520),

Gene: CastorTray_67 Start: 45340, Stop: 45654, Start Num: 8
Candidate Starts for CastorTray_67:
(Start: 8 @45340 has 15 MA's), (Start: 20 @45409 has 2 MA's), (27, 45454), (30, 45472), (35, 45523),

Gene: Caterpillar_63 Start: 44268, Stop: 44546, Start Num: 16
Candidate Starts for Caterpillar_63:
(Start: 16 @44268 has 12 MA's), (Start: 20 @44307 has 2 MA's), (22, 44313), (40, 44505),

Gene: Chlochlo_68 Start: 44978, Stop: 45265, Start Num: 16
Candidate Starts for Chlochlo_68:
(Start: 16 @44978 has 12 MA's), (Start: 20 @45017 has 2 MA's), (28, 45068), (32, 45107), (36, 45152), (38, 45197), (40, 45224),

Gene: Darby_62 Start: 44386, Stop: 44700, Start Num: 8
Candidate Starts for Darby_62:
(Start: 8 @44386 has 15 MA's), (Start: 20 @44455 has 2 MA's), (30, 44518), (35, 44569),

Gene: DevitoJr_63 Start: 44772, Stop: 45086, Start Num: 8
Candidate Starts for DevitoJr_63:
(Start: 8 @44772 has 15 MA's), (Start: 20 @44841 has 2 MA's), (30, 44904), (35, 44955),

Gene: Dinallo_62 Start: 45647, Stop: 45961, Start Num: 8
Candidate Starts for Dinallo_62:
(Start: 8 @45647 has 15 MA's), (32, 45803), (35, 45830),

Gene: Djungelskog_65 Start: 42742, Stop: 43056, Start Num: 10
Candidate Starts for Djungelskog_65:
(3, 42700), (Start: 10 @42742 has 16 MA's), (Start: 17 @42775 has 1 MA's), (31, 42895), (41, 43018), (42, 43030),

Gene: DoctorPepper_65 Start: 42447, Stop: 42758, Start Num: 10
Candidate Starts for DoctorPepper_65:
(3, 42405), (Start: 10 @42447 has 16 MA's), (Start: 17 @42480 has 1 MA's), (31, 42597), (41, 42720), (42, 42732),

Gene: Egad_66 Start: 42768, Stop: 43037, Start Num: 17
Candidate Starts for Egad_66:
(Start: 9 @42735 has 8 MA's), (Start: 10 @42738 has 16 MA's), (Start: 17 @42768 has 1 MA's), (18, 42777), (43, 43011),

Gene: ElephantMan_64 Start: 45229, Stop: 45540, Start Num: 9
Candidate Starts for ElephantMan_64:
(Start: 9 @45229 has 8 MA's), (Start: 20 @45295 has 2 MA's), (24, 45319), (30, 45358), (32, 45382),

Gene: Giantsbane_67 Start: 43961, Stop: 44245, Start Num: 16
Candidate Starts for Giantsbane_67:
(Start: 16 @43961 has 12 MA's), (Start: 20 @44000 has 2 MA's), (29, 44051), (40, 44204),

Gene: Gordon_61 Start: 45264, Stop: 45578, Start Num: 8
Candidate Starts for Gordon_61:
(Start: 8 @45264 has 15 MA's), (Start: 20 @45333 has 2 MA's), (30, 45396), (35, 45447),

Gene: HerbBucket_64 Start: 42469, Stop: 42768, Start Num: 10
Candidate Starts for HerbBucket_64:
(Start: 9 @42466 has 8 MA's), (Start: 10 @42469 has 16 MA's), (Start: 17 @42499 has 1 MA's), (18, 42508), (43, 42742),

Gene: Inked_69 Start: 45815, Stop: 46129, Start Num: 9
Candidate Starts for Inked_69:
(Start: 9 @45815 has 8 MA's), (Start: 20 @45884 has 2 MA's), (29, 45935), (40, 46088),

Gene: Issa_62 Start: 44432, Stop: 44746, Start Num: 8
Candidate Starts for Issa_62:
(Start: 8 @44432 has 15 MA's), (Start: 20 @44501 has 2 MA's), (32, 44588), (35, 44615), (36, 44633),

Gene: Jeremy4pt0_65 Start: 42442, Stop: 42753, Start Num: 10
Candidate Starts for Jeremy4pt0_65:
(3, 42400), (Start: 10 @42442 has 16 MA's), (Start: 17 @42475 has 1 MA's), (31, 42592), (41, 42715), (42, 42727),

Gene: LilHuddy_68 Start: 45074, Stop: 45361, Start Num: 16
Candidate Starts for LilHuddy_68:
(Start: 16 @45074 has 12 MA's), (Start: 20 @45113 has 2 MA's), (28, 45164), (29, 45167), (36, 45248), (40, 45320),

Gene: Linda_66 Start: 42740, Stop: 43051, Start Num: 10
Candidate Starts for Linda_66:
(3, 42698), (Start: 10 @42740 has 16 MA's), (Start: 17 @42773 has 1 MA's), (31, 42890), (41, 43013), (42, 43025),

Gene: LucySwiss_64 Start: 44380, Stop: 44691, Start Num: 9
Candidate Starts for LucySwiss_64:
(Start: 9 @44380 has 8 MA's), (Start: 20 @44446 has 2 MA's), (24, 44470), (30, 44509), (32, 44533),

Gene: Makai_67 Start: 45228, Stop: 45506, Start Num: 16
Candidate Starts for Makai_67:
(Start: 16 @45228 has 12 MA's), (Start: 20 @45267 has 2 MA's), (28, 45312), (40, 45465),

Gene: MediumFry_64 Start: 44564, Stop: 44842, Start Num: 16
Candidate Starts for MediumFry_64:
(Start: 16 @44564 has 12 MA's), (Start: 20 @44603 has 2 MA's), (22, 44609), (26, 44636), (40, 44801),

Gene: Michelle_66 Start: 42742, Stop: 43053, Start Num: 10
Candidate Starts for Michelle_66:
(3, 42700), (Start: 10 @42742 has 16 MA's), (Start: 17 @42775 has 1 MA's), (31, 42892), (41, 43015), (42, 43027),

Gene: MiniBagel_63 Start: 45328, Stop: 45642, Start Num: 8
Candidate Starts for MiniBagel_63:
(Start: 8 @45328 has 15 MA's), (Start: 20 @45397 has 2 MA's), (32, 45484), (35, 45511),

Gene: MrAaronian_66 Start: 42742, Stop: 43053, Start Num: 10
Candidate Starts for MrAaronian_66:
(3, 42700), (Start: 10 @42742 has 16 MA's), (Start: 17 @42775 has 1 MA's), (31, 42892), (41, 43015), (42, 43027),

Gene: Natasha_68 Start: 42740, Stop: 42982, Start Num: 20
Candidate Starts for Natasha_68:

(1, 42605), (3, 42650), (7, 42671), (18, 42722), (Start: 20 @42740 has 2 MA's), (33, 42845), (34, 42848), (40, 42938),

Gene: Nightmare_65 Start: 45626, Stop: 45940, Start Num: 8
Candidate Starts for Nightmare_65:
(Start: 8 @45626 has 15 MA's), (Start: 20 @45695 has 2 MA's), (27, 45740), (30, 45758), (35, 45809),

Gene: Niktson_64 Start: 45229, Stop: 45540, Start Num: 9
Candidate Starts for Niktson_64:
(Start: 9 @45229 has 8 MA's), (Start: 20 @45295 has 2 MA's), (24, 45319), (30, 45358), (32, 45382),

Gene: Nivinsha_66 Start: 44576, Stop: 44890, Start Num: 8
Candidate Starts for Nivinsha_66:
(Start: 8 @44576 has 15 MA's), (Start: 20 @44645 has 2 MA's), (30, 44708), (35, 44759),

Gene: Phaby_69 Start: 45635, Stop: 45922, Start Num: 16
Candidate Starts for Phaby_69:
(Start: 16 @45635 has 12 MA's), (Start: 20 @45674 has 2 MA's), (25, 45701), (29, 45728), (40, 45881),

Gene: Powelldog_68 Start: 43177, Stop: 43494, Start Num: 6
Candidate Starts for Powelldog_68:
(Start: 6 @43177 has 1 MA's), (11, 43201), (12, 43204), (14, 43207), (15, 43216), (Start: 17 @43222 has 1 MA's), (19, 43237), (28, 43303), (39, 43438),

Gene: ProfFrink_66 Start: 42737, Stop: 43036, Start Num: 10
Candidate Starts for ProfFrink_66:
(Start: 9 @42734 has 8 MA's), (Start: 10 @42737 has 16 MA's), (Start: 17 @42767 has 1 MA's), (18, 42776), (43, 43010),

Gene: Raunak_66 Start: 42398, Stop: 42697, Start Num: 10
Candidate Starts for Raunak_66:
(Start: 9 @42395 has 8 MA's), (Start: 10 @42398 has 16 MA's), (18, 42437), (43, 42671),

Gene: RustyBoy_69 Start: 42939, Stop: 43181, Start Num: 20
Candidate Starts for RustyBoy_69:
(3, 42849), (7, 42870), (18, 42921), (Start: 20 @42939 has 2 MA's), (23, 42948), (33, 43044), (34, 43047), (40, 43137),

Gene: Salk_66 Start: 42740, Stop: 43051, Start Num: 10
Candidate Starts for Salk_66:
(3, 42698), (Start: 10 @42740 has 16 MA's), (Start: 17 @42773 has 1 MA's), (31, 42890), (41, 43013), (42, 43025),

Gene: ScienceWizSam_64 Start: 44738, Stop: 45052, Start Num: 8
Candidate Starts for ScienceWizSam_64:
(Start: 8 @44738 has 15 MA's), (Start: 20 @44807 has 2 MA's), (30, 44870), (35, 44921),

Gene: Shepard_69 Start: 44933, Stop: 45220, Start Num: 16
Candidate Starts for Shepard_69:
(Start: 16 @44933 has 12 MA's), (Start: 20 @44972 has 2 MA's), (28, 45023), (32, 45062), (36, 45107), (38, 45152), (40, 45179),

Gene: Shiba_65 Start: 42398, Stop: 42709, Start Num: 10

Candidate Starts for Shiba_65:
(3, 42356), (Start: 10 @42398 has 16 MA's), (Start: 17 @42431 has 1 MA's), (31, 42548), (41, 42671), (42, 42683),

Gene: Sloopyjoe_66 Start: 42744, Stop: 43055, Start Num: 10
Candidate Starts for Sloopyjoe_66:
(3, 42702), (Start: 10 @42744 has 16 MA's), (Start: 17 @42777 has 1 MA's), (31, 42894), (41, 43017), (42, 43029),

Gene: Spain_66 Start: 42742, Stop: 43053, Start Num: 10
Candidate Starts for Spain_66:
(3, 42700), (Start: 10 @42742 has 16 MA's), (Start: 17 @42775 has 1 MA's), (31, 42892), (41, 43015), (42, 43027),

Gene: Sporto_65 Start: 43859, Stop: 44170, Start Num: 10
Candidate Starts for Sporto_65:
(1, 43772), (3, 43817), (Start: 9 @43856 has 8 MA's), (Start: 10 @43859 has 16 MA's), (31, 44009), (38, 44102), (41, 44132),

Gene: Sprinkle_65 Start: 42929, Stop: 43231, Start Num: 13
Candidate Starts for Sprinkle_65:
(2, 42884), (3, 42890), (4, 42896), (5, 42899), (Start: 9 @42917 has 8 MA's), (13, 42929), (18, 42956), (29, 43025),

Gene: StarLord_66 Start: 42737, Stop: 43048, Start Num: 10
Candidate Starts for StarLord_66:
(3, 42695), (Start: 10 @42737 has 16 MA's), (Start: 17 @42770 has 1 MA's), (31, 42887), (41, 43010), (42, 43022),

Gene: Stayer_66 Start: 42740, Stop: 43051, Start Num: 10
Candidate Starts for Stayer_66:
(3, 42698), (Start: 10 @42740 has 16 MA's), (Start: 17 @42773 has 1 MA's), (31, 42890), (41, 43013), (42, 43025),

Gene: Synepsis_62 Start: 44739, Stop: 45053, Start Num: 8
Candidate Starts for Synepsis_62:
(Start: 8 @44739 has 15 MA's), (Start: 20 @44808 has 2 MA's), (30, 44871), (35, 44922),

Gene: Tatanka_59 Start: 44875, Stop: 45189, Start Num: 8
Candidate Starts for Tatanka_59:
(Start: 8 @44875 has 15 MA's), (Start: 20 @44944 has 2 MA's), (30, 45007), (35, 45058),

Gene: Teacup_65 Start: 45308, Stop: 45619, Start Num: 9
Candidate Starts for Teacup_65:
(Start: 9 @45308 has 8 MA's), (Start: 20 @45374 has 2 MA's), (24, 45398), (30, 45437), (32, 45461),

Gene: Tenno_64 Start: 45392, Stop: 45706, Start Num: 8
Candidate Starts for Tenno_64:
(Start: 8 @45392 has 15 MA's), (Start: 20 @45461 has 2 MA's), (32, 45548), (35, 45575),

Gene: Tipton_69 Start: 45472, Stop: 45759, Start Num: 16
Candidate Starts for Tipton_69:

(Start: 16 @45472 has 12 MA's), (Start: 20 @45511 has 2 MA's), (28, 45562), (32, 45601), (36, 45646), (38, 45691), (40, 45718),

Gene: Tokki_73 Start: 45503, Stop: 45790, Start Num: 16
Candidate Starts for Tokki_73:
(Start: 16 @45503 has 12 MA's), (Start: 20 @45542 has 2 MA's), (28, 45593), (36, 45677), (40, 45749),

Gene: Truckee_65 Start: 45012, Stop: 45290, Start Num: 16
Candidate Starts for Truckee_65:
(Start: 16 @45012 has 12 MA's), (Start: 20 @45051 has 2 MA's), (28, 45096), (40, 45249),

Gene: Trustiboi_63 Start: 44994, Stop: 45308, Start Num: 8
Candidate Starts for Trustiboi_63:
(Start: 8 @44994 has 15 MA's), (Start: 20 @45063 has 2 MA's), (27, 45108), (30, 45126), (35, 45177),

Gene: Westerlin_63 Start: 46083, Stop: 46397, Start Num: 8
Candidate Starts for Westerlin_63:
(Start: 8 @46083 has 15 MA's), (Start: 20 @46152 has 2 MA's), (30, 46215), (35, 46266),

Gene: Zippen_69 Start: 45683, Stop: 46003, Start Num: 9
Candidate Starts for Zippen_69:
(Start: 9 @45683 has 8 MA's), (Start: 20 @45752 has 2 MA's), (28, 45800), (40, 45956),