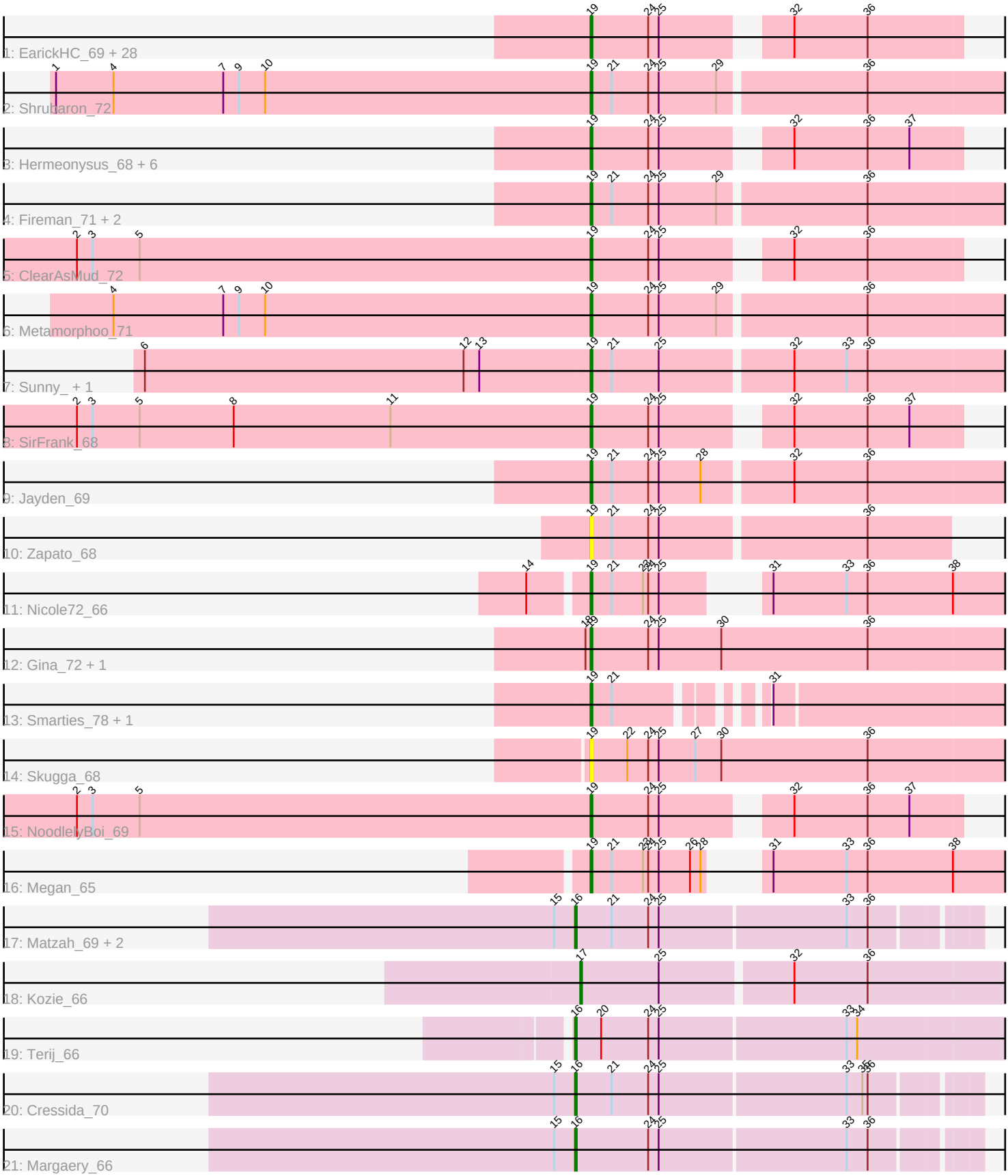
# Pham 347623


1: EarickHC_69 + 28
2: Shrubaron_72
3: Hermeonysus_68 + 6
4: Fireman_71 + 2
5: ClearAsMud_72
6: Metamorphoo_71
7: Sunny_ + 1
8: SirFrank_68
9: Jayden_69
10: Zapato_68
11: Nicole72_66
12: Gina_72 + 1
13: Smarties_78 + 1
14: Skugga_68
15: NoodlelyBoi_69
16: Megan_65
17: Matzah_69 + 2
18: Kozie_66
19: Terij_66
20: Cressida_70
21: Margaery_66

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 347623 Report

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

Pham number 347623 has 62 members, 6 are drafts.

Phages represented in each track:
• Track 1 : EarickHC_69, Pulchra_70, Quhwah_72, Shotgun_68, PhedwardCullen_67, Paschalis_68, Busephilis_67, Savannah_67, Ganandorf_67, PierreOrion_68, Phorgeous_68, Jefe_68, Selwyn23_69, Cranjis_69, Germa_70, BeagleBug_67, KaiHaiDragon_69, Piperis_69, Scumberland_70, BrazzalePHS_67, Jollipop_69, CrazyRich_67, Ramiel05_67, Glorp_69, Phrancesco_68, Lucretia_68, Kowalski_67, Antares_68, Crisis_69
• Track 2 : Shrubaron_72
• Track 3 : Hermeonysus_68, Yeti_70, LittleFortune_70, Onika_67, Rockwell_67, Honeyfin_69, PiperSansNom_69
• Track 4 : Fireman_71, Tyrumbra_67, RobsFeet_72
• Track 5 : ClearAsMud_72
• Track 6 : Metamorphoo_71
• Track 7 : Sunny_, Merry_
• Track 8 : SirFrank_68
• Track 9 : Jayden_69
• Track 10 : Zapato_68
• Track 11 : Nicole72_66
• Track 12 : Gina_72, Teamocil_72
• Track 13 : Smarties_78, Ariadne_78
• Track 14 : Skugga_68
• Track 15 : NoodlelyBoi_69
• Track 16 : Megan_65
• Track 17 : Matzah_69, MementoMori_68, Cinna_67
• Track 18 : Kozie_66
• Track 19 : Terij_66
• Track 20 : Cressida_70
• Track 21 : Margaery_66

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

The start number called the most often in the published annotations is 19, it was called in 49 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Antares_68, Ariadne_78, BeagleBug_67, BrazzalePHS_67, Busephilis_67, ClearAsMud_72, Cranjis_69, CrazyRich_67, Crisis_69, EarickHC_69, Fireman_71, Ganandorf_67, Germa_70, Gina_72, Glorp_69, Hermeonysus_68, Honeyfin_69, Jayden_69, Jefe_68, Jollipop_69, KaiHaiDragon_69, Kowalski_67, LittleFortune_70, Lucretia_68, Megan_65, Merry_, Metamorphoo_71, Nicole72_66, NoodlelyBoi_69, Onika_67, Paschalis_68, PhedwardCullen_67, Phorgeous_68, Phrancesco_68, PierreOrion_68, PiperSansNom_69, Piperis_69, Pulchra_70, Quhwah_72, Ramiel05_67, RobsFeet_72, Rockwell_67, Savannah_67, Scumberland_70, Selwyn23_69, Shotgun_68, Shrubaron_72, SirFrank_68, Skugga_68, Smarties_78, Sunny_, Teamocil_72, Tyrumbra_67, Yeti_70, Zapato_68,

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

Genes that do not have the "Most Annotated" start:
• Cinna_67, Cressida_70, Kozie_66, Margaery_66, Matzah_69, MementoMori_68, Terij_66,

**Summary by start number:**

Start 16:
• Found in 6 of 62 ( 9.7% ) of genes in pham
• Manual Annotations of this start: 6 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cinna_67 (EI), Cressida_70 (EI), Margaery_66 (EI), Matzah_69 (EI), MementoMori_68 (EI), Terij_66 (EI),

Start 17:
• Found in 1 of 62 ( 1.6% ) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kozie_66 (EI),

Start 19:
• Found in 55 of 62 ( 88.7% ) of genes in pham
• Manual Annotations of this start: 49 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Antares_68 (EC), Ariadne_78 (EC), BeagleBug_67 (EC), BrazzalePHS_67 (EC), Busephilis_67 (EC), ClearAsMud_72 (EC), Cranjis_69 (EC), CrazyRich_67 (EC), Crisis_69 (EC), EarickHC_69 (EC), Fireman_71 (EC), Ganandorf_67 (EC), Germa_70 (EC), Gina_72 (EC), Glorp_69 (EC), Hermeonysus_68 (EC), Honeyfin_69 (EC), Jayden_69 (EC), Jefe_68 (EC), Jollipop_69 (EC), KaiHaiDragon_69 (EC), Kowalski_67 (EC), LittleFortune_70 (EC), Lucretia_68 (EC), Megan_65 (EC), Merry_ (EC), Metamorphoo_71 (EC), Nicole72_66 (EC), NoodlelyBoi_69 (EC), Onika_67 (EC), Paschalis_68 (EC), PhedwardCullen_67 (EC), Phorgeous_68 (EC), Phrancesco_68 (EC), PierreOrion_68 (EC), PiperSansNom_69 (EC), Piperis_69 (EC), Pulchra_70 (EC), Quhwah_72 (EC), Ramiel05_67 (EC), RobsFeet_72 (EC), Rockwell_67 (EC), Savannah_67 (EC), Scumberland_70 (EC), Selwyn23_69 (EC), Shotgun_68 (EC), Shrubaron_72 (EC), SirFrank_68 (EC), Skugga_68 (EC), Smarties_78 (EC), Sunny_ (EC), Teamocil_72 (EC), Tyrumbra_67 (EC), Yeti_70 (EC), Zapato_68 (EC),

**Summary by clusters:**

There are 2 clusters represented in this pham: EI, EC,

Info for manual annotations of cluster EC:
•Start number 19 was manually annotated 49 times for cluster EC.

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

***Gene Information:***

Gene: Antares_68 Start: 42753, Stop: 42947, Start Num: 19
Candidate Starts for Antares_68:
(Start: 19 @42753 has 49 MA's), (24, 42786), (25, 42792), (32, 42852), (36, 42894),

Gene: Ariadne_78 Start: 44331, Stop: 44549, Start Num: 19
Candidate Starts for Ariadne_78:
(Start: 19 @44331 has 49 MA's), (21, 44343), (31, 44409),

Gene: BeagleBug_67 Start: 42533, Stop: 42727, Start Num: 19
Candidate Starts for BeagleBug_67:
(Start: 19 @42533 has 49 MA's), (24, 42566), (25, 42572), (32, 42632), (36, 42674),

Gene: BrazzalePHS_67 Start: 42521, Stop: 42715, Start Num: 19
Candidate Starts for BrazzalePHS_67:
(Start: 19 @42521 has 49 MA's), (24, 42554), (25, 42560), (32, 42620), (36, 42662),

Gene: Busephilis_67 Start: 42460, Stop: 42654, Start Num: 19
Candidate Starts for Busephilis_67:
(Start: 19 @42460 has 49 MA's), (24, 42493), (25, 42499), (32, 42559), (36, 42601),

Gene: Cinna_67 Start: 44120, Stop: 44341, Start Num: 16
Candidate Starts for Cinna_67:
(15, 44108), (Start: 16 @44120 has 6 MA's), (21, 44141), (24, 44162), (25, 44168), (33, 44273), (36, 44285),

Gene: ClearAsMud_72 Start: 43041, Stop: 43235, Start Num: 19
Candidate Starts for ClearAsMud_72:
(2, 42747), (3, 42756), (5, 42783), (Start: 19 @43041 has 49 MA's), (24, 43074), (25, 43080), (32, 43140), (36, 43182),

Gene: Cranjis_69 Start: 42708, Stop: 42902, Start Num: 19
Candidate Starts for Cranjis_69:
(Start: 19 @42708 has 49 MA's), (24, 42741), (25, 42747), (32, 42807), (36, 42849),

Gene: CrazyRich_67 Start: 42514, Stop: 42708, Start Num: 19
Candidate Starts for CrazyRich_67:
(Start: 19 @42514 has 49 MA's), (24, 42547), (25, 42553), (32, 42613), (36, 42655),

Gene: Cressida_70 Start: 43720, Stop: 43941, Start Num: 16

Candidate Starts for Cressida_70:
(15, 43708), (Start: 16 @43720 has 6 MA's), (21, 43741), (24, 43762), (25, 43768), (33, 43873), (35, 43882), (36, 43885),

Gene: Crisis_69 Start: 42523, Stop: 42717, Start Num: 19
Candidate Starts for Crisis_69:
(Start: 19 @42523 has 49 MA's), (24, 42556), (25, 42562), (32, 42622), (36, 42664),

Gene: EarickHC_69 Start: 42445, Stop: 42639, Start Num: 19
Candidate Starts for EarickHC_69:
(Start: 19 @42445 has 49 MA's), (24, 42478), (25, 42484), (32, 42544), (36, 42586),

Gene: Fireman_71 Start: 44449, Stop: 44691, Start Num: 19
Candidate Starts for Fireman_71:
(Start: 19 @44449 has 49 MA's), (21, 44461), (24, 44482), (25, 44488), (29, 44521), (36, 44602),

Gene: Ganandorf_67 Start: 42541, Stop: 42735, Start Num: 19
Candidate Starts for Ganandorf_67:
(Start: 19 @42541 has 49 MA's), (24, 42574), (25, 42580), (32, 42640), (36, 42682),

Gene: Germa_70 Start: 42371, Stop: 42565, Start Num: 19
Candidate Starts for Germa_70:
(Start: 19 @42371 has 49 MA's), (24, 42404), (25, 42410), (32, 42470), (36, 42512),

Gene: Gina_72 Start: 42545, Stop: 42793, Start Num: 19
Candidate Starts for Gina_72:
(18, 42542), (Start: 19 @42545 has 49 MA's), (24, 42578), (25, 42584), (30, 42620), (36, 42704),

Gene: Glorp_69 Start: 42505, Stop: 42699, Start Num: 19
Candidate Starts for Glorp_69:
(Start: 19 @42505 has 49 MA's), (24, 42538), (25, 42544), (32, 42604), (36, 42646),

Gene: Hermeonysus_68 Start: 42430, Stop: 42624, Start Num: 19
Candidate Starts for Hermeonysus_68:
(Start: 19 @42430 has 49 MA's), (24, 42463), (25, 42469), (32, 42529), (36, 42571), (37, 42595),

Gene: Honeyfin_69 Start: 42690, Stop: 42884, Start Num: 19
Candidate Starts for Honeyfin_69:
(Start: 19 @42690 has 49 MA's), (24, 42723), (25, 42729), (32, 42789), (36, 42831), (37, 42855),

Gene: Jayden_69 Start: 42907, Stop: 43149, Start Num: 19
Candidate Starts for Jayden_69:
(Start: 19 @42907 has 49 MA's), (21, 42919), (24, 42940), (25, 42946), (28, 42970), (32, 43018), (36, 43060),

Gene: Jefe_68 Start: 42491, Stop: 42685, Start Num: 19
Candidate Starts for Jefe_68:
(Start: 19 @42491 has 49 MA's), (24, 42524), (25, 42530), (32, 42590), (36, 42632),

Gene: Jollipop_69 Start: 42879, Stop: 43073, Start Num: 19
Candidate Starts for Jollipop_69:
(Start: 19 @42879 has 49 MA's), (24, 42912), (25, 42918), (32, 42978), (36, 43020),

Gene: KaiHaiDragon_69 Start: 42445, Stop: 42639, Start Num: 19
Candidate Starts for KaiHaiDragon_69:
(Start: 19 @42445 has 49 MA's), (24, 42478), (25, 42484), (32, 42544), (36, 42586),

Gene: Kowalski_67 Start: 42516, Stop: 42710, Start Num: 19
Candidate Starts for Kowalski_67:
(Start: 19 @42516 has 49 MA's), (24, 42549), (25, 42555), (32, 42615), (36, 42657),

Gene: Kozie_66 Start: 43163, Stop: 43441, Start Num: 17
Candidate Starts for Kozie_66:
(Start: 17 @43163 has 1 MA's), (25, 43208), (32, 43280), (36, 43322),

Gene: LittleFortune_70 Start: 42801, Stop: 42995, Start Num: 19
Candidate Starts for LittleFortune_70:
(Start: 19 @42801 has 49 MA's), (24, 42834), (25, 42840), (32, 42900), (36, 42942), (37, 42966),

Gene: Lucretia_68 Start: 42423, Stop: 42617, Start Num: 19
Candidate Starts for Lucretia_68:
(Start: 19 @42423 has 49 MA's), (24, 42456), (25, 42462), (32, 42522), (36, 42564),

Gene: Margaery_66 Start: 43326, Stop: 43547, Start Num: 16
Candidate Starts for Margaery_66:
(15, 43314), (Start: 16 @43326 has 6 MA's), (24, 43368), (25, 43374), (33, 43479), (36, 43491),

Gene: Matzah_69 Start: 44187, Stop: 44408, Start Num: 16
Candidate Starts for Matzah_69:
(15, 44175), (Start: 16 @44187 has 6 MA's), (21, 44208), (24, 44229), (25, 44235), (33, 44340), (36, 44352),

Gene: Megan_65 Start: 46534, Stop: 46785, Start Num: 19
Candidate Starts for Megan_65:
(Start: 19 @46534 has 49 MA's), (21, 46546), (23, 46564), (24, 46567), (25, 46573), (26, 46591), (28, 46597), (31, 46606), (33, 46648), (36, 46660), (38, 46708),

Gene: MementoMori_68 Start: 43782, Stop: 43997, Start Num: 16
Candidate Starts for MementoMori_68:
(15, 43770), (Start: 16 @43782 has 6 MA's), (21, 43803), (24, 43824), (25, 43830), (33, 43935), (36, 43947),

Gene: Merry_ Start: 44599, Stop: 44841, Start Num: 19
Candidate Starts for Merry_:
(6, 44344), (12, 44527), (13, 44536), (Start: 19 @44599 has 49 MA's), (21, 44611), (25, 44638), (32, 44710), (33, 44740), (36, 44752),

Gene: Metamorphoo_71 Start: 43743, Stop: 43985, Start Num: 19
Candidate Starts for Metamorphoo_71:
(4, 43470), (7, 43533), (9, 43542), (10, 43557), (Start: 19 @43743 has 49 MA's), (24, 43776), (25, 43782), (29, 43815), (36, 43896),

Gene: Nicole72_66 Start: 47032, Stop: 47283, Start Num: 19
Candidate Starts for Nicole72_66:
(14, 47002), (Start: 19 @47032 has 49 MA's), (21, 47044), (23, 47062), (24, 47065), (25, 47071), (31, 47104), (33, 47146), (36, 47158), (38, 47206),

Gene: NoodlelyBoi_69 Start: 43290, Stop: 43484, Start Num: 19
Candidate Starts for NoodlelyBoi_69:
(2, 42996), (3, 43005), (5, 43032), (Start: 19 @43290 has 49 MA's), (24, 43323), (25, 43329), (32, 43389), (36, 43431), (37, 43455),

Gene: Onika_67 Start: 42519, Stop: 42713, Start Num: 19
Candidate Starts for Onika_67:
(Start: 19 @42519 has 49 MA's), (24, 42552), (25, 42558), (32, 42618), (36, 42660), (37, 42684),

Gene: Paschalis_68 Start: 42544, Stop: 42738, Start Num: 19
Candidate Starts for Paschalis_68:
(Start: 19 @42544 has 49 MA's), (24, 42577), (25, 42583), (32, 42643), (36, 42685),

Gene: PhedwardCullen_67 Start: 42261, Stop: 42455, Start Num: 19
Candidate Starts for PhedwardCullen_67:
(Start: 19 @42261 has 49 MA's), (24, 42294), (25, 42300), (32, 42360), (36, 42402),

Gene: Phorgeous_68 Start: 42327, Stop: 42521, Start Num: 19
Candidate Starts for Phorgeous_68:
(Start: 19 @42327 has 49 MA's), (24, 42360), (25, 42366), (32, 42426), (36, 42468),

Gene: Phrancesco_68 Start: 42650, Stop: 42844, Start Num: 19
Candidate Starts for Phrancesco_68:
(Start: 19 @42650 has 49 MA's), (24, 42683), (25, 42689), (32, 42749), (36, 42791),

Gene: PierreOrion_68 Start: 42756, Stop: 42950, Start Num: 19
Candidate Starts for PierreOrion_68:
(Start: 19 @42756 has 49 MA's), (24, 42789), (25, 42795), (32, 42855), (36, 42897),

Gene: PiperSansNom_69 Start: 42829, Stop: 43023, Start Num: 19
Candidate Starts for PiperSansNom_69:
(Start: 19 @42829 has 49 MA's), (24, 42862), (25, 42868), (32, 42928), (36, 42970), (37, 42994),

Gene: Piperis_69 Start: 42452, Stop: 42646, Start Num: 19
Candidate Starts for Piperis_69:
(Start: 19 @42452 has 49 MA's), (24, 42485), (25, 42491), (32, 42551), (36, 42593),

Gene: Pulchra_70 Start: 42848, Stop: 43042, Start Num: 19
Candidate Starts for Pulchra_70:
(Start: 19 @42848 has 49 MA's), (24, 42881), (25, 42887), (32, 42947), (36, 42989),

Gene: Quhwah_72 Start: 43137, Stop: 43331, Start Num: 19
Candidate Starts for Quhwah_72:
(Start: 19 @43137 has 49 MA's), (24, 43170), (25, 43176), (32, 43236), (36, 43278),

Gene: Ramiel05_67 Start: 42516, Stop: 42710, Start Num: 19
Candidate Starts for Ramiel05_67:
(Start: 19 @42516 has 49 MA's), (24, 42549), (25, 42555), (32, 42615), (36, 42657),

Gene: RobsFeet_72 Start: 44029, Stop: 44271, Start Num: 19
Candidate Starts for RobsFeet_72:
(Start: 19 @44029 has 49 MA's), (21, 44041), (24, 44062), (25, 44068), (29, 44101), (36, 44182),

Gene: Rockwell_67 Start: 42540, Stop: 42734, Start Num: 19
Candidate Starts for Rockwell_67:
(Start: 19 @42540 has 49 MA's), (24, 42573), (25, 42579), (32, 42639), (36, 42681), (37, 42705),

Gene: Savannah_67 Start: 42567, Stop: 42761, Start Num: 19
Candidate Starts for Savannah_67:
(Start: 19 @42567 has 49 MA's), (24, 42600), (25, 42606), (32, 42666), (36, 42708),

Gene: Scumberland_70 Start: 42762, Stop: 42956, Start Num: 19
Candidate Starts for Scumberland_70:
(Start: 19 @42762 has 49 MA's), (24, 42795), (25, 42801), (32, 42861), (36, 42903),

Gene: Selwyn23_69 Start: 42679, Stop: 42873, Start Num: 19
Candidate Starts for Selwyn23_69:
(Start: 19 @42679 has 49 MA's), (24, 42712), (25, 42718), (32, 42778), (36, 42820),

Gene: Shotgun_68 Start: 42446, Stop: 42640, Start Num: 19
Candidate Starts for Shotgun_68:
(Start: 19 @42446 has 49 MA's), (24, 42479), (25, 42485), (32, 42545), (36, 42587),

Gene: Shrubaron_72 Start: 43624, Stop: 43866, Start Num: 19
Candidate Starts for Shrubaron_72:
(1, 43318), (4, 43351), (7, 43414), (9, 43423), (10, 43438), (Start: 19 @43624 has 49 MA's), (21, 43636), (24, 43657), (25, 43663), (29, 43696), (36, 43777),

Gene: SirFrank_68 Start: 42736, Stop: 42930, Start Num: 19
Candidate Starts for SirFrank_68:
(2, 42442), (3, 42451), (5, 42478), (8, 42532), (11, 42622), (Start: 19 @42736 has 49 MA's), (24, 42769), (25, 42775), (32, 42835), (36, 42877), (37, 42901),

Gene: Skugga_68 Start: 42934, Stop: 43182, Start Num: 19
Candidate Starts for Skugga_68:
(Start: 19 @42934 has 49 MA's), (22, 42955), (24, 42967), (25, 42973), (27, 42994), (30, 43009), (36, 43093),

Gene: Smarties_78 Start: 44331, Stop: 44549, Start Num: 19
Candidate Starts for Smarties_78:
(Start: 19 @44331 has 49 MA's), (21, 44343), (31, 44409),

Gene: Sunny_ Start: 44601, Stop: 44843, Start Num: 19
Candidate Starts for Sunny_:
(6, 44346), (12, 44529), (13, 44538), (Start: 19 @44601 has 49 MA's), (21, 44613), (25, 44640), (32, 44712), (33, 44742), (36, 44754),

Gene: Teamocil_72 Start: 42638, Stop: 42886, Start Num: 19
Candidate Starts for Teamocil_72:
(18, 42635), (Start: 19 @42638 has 49 MA's), (24, 42671), (25, 42677), (30, 42713), (36, 42797),

Gene: Terij_66 Start: 42367, Stop: 42636, Start Num: 16
Candidate Starts for Terij_66:
(Start: 16 @42367 has 6 MA's), (20, 42382), (24, 42409), (25, 42415), (33, 42520), (34, 42526),

Gene: Tyrumbra_67 Start: 43254, Stop: 43496, Start Num: 19
Candidate Starts for Tyrumbra_67:
(Start: 19 @43254 has 49 MA's), (21, 43266), (24, 43287), (25, 43293), (29, 43326), (36, 43407),

Gene: Yeti_70 Start: 42478, Stop: 42672, Start Num: 19
Candidate Starts for Yeti_70:
(Start: 19 @42478 has 49 MA's), (24, 42511), (25, 42517), (32, 42577), (36, 42619), (37, 42643),

Gene: Zapato_68 Start: 43209, Stop: 43409, Start Num: 19
Candidate Starts for Zapato_68:
(Start: 19 @43209 has 49 MA's), (21, 43221), (24, 43242), (25, 43248), (36, 43362),