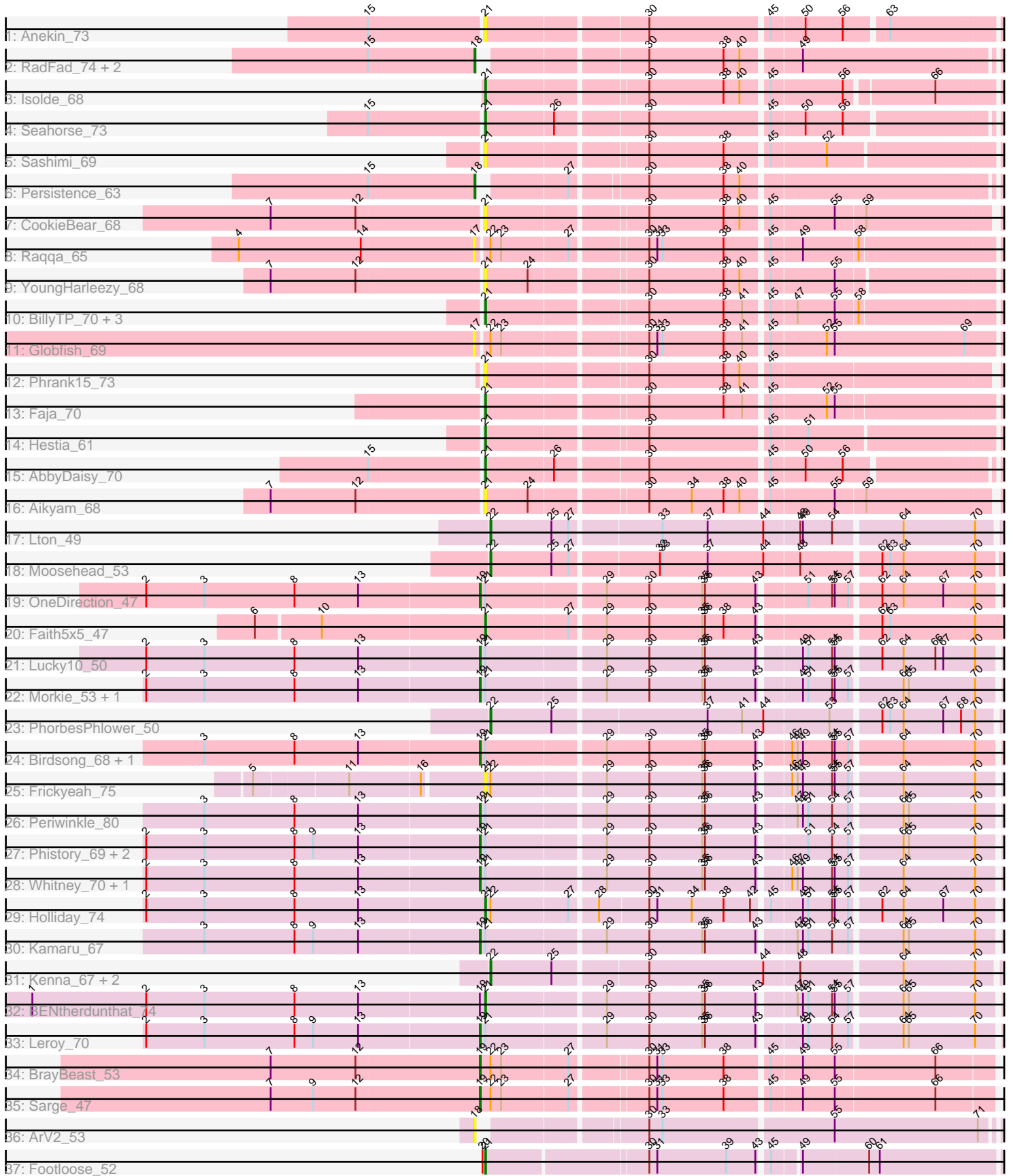


Pham 171544



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 171544 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171544 has 49 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Anekin_73
- Track 2 : RadFad_74, Hillester_74, MidnightRain_72
- Track 3 : Isolde_68
- Track 4 : Seahorse_73
- Track 5 : Sashimi_69
- Track 6 : Persistence_63
- Track 7 : CookieBear_68
- Track 8 : Raqqa_65
- Track 9 : YoungHarleezy_68
- Track 10 : BillyTP_70, Richie_72, BenchScraper_67, Raphaella_69
- Track 11 : Globfish_69
- Track 12 : Phrank15_73
- Track 13 : Faja_70
- Track 14 : Hestia_61
- Track 15 : AbbyDaisy_70
- Track 16 : Aikyam_68
- Track 17 : Lton_49
- Track 18 : Moosehead_53
- Track 19 : OneDirection_47
- Track 20 : Faith5x5_47
- Track 21 : Lucky10_50
- Track 22 : Morkie_53, Pepperoni_49
- Track 23 : PhorbesPhlower_50
- Track 24 : Birdsong_68, Asapag_69
- Track 25 : Frickyeah_75
- Track 26 : Periwinkle_80
- Track 27 : Phistory_69, Crater_70, Apricot_70
- Track 28 : Whitney_70, Budski_75
- Track 29 : Holliday_74
- Track 30 : Kamaru_67
- Track 31 : Kenna_67, Getalong_73, Lutum_73
- Track 32 : BENtherdunthat_74
- Track 33 : Leroy_70
- Track 34 : BrayBeast_53
- Track 35 : Sarge_47
- Track 36 : ArV2_53
- Track 37 : Footloose_52

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 15 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apricot_70, Asapag_69, Birdsong_68, BrayBeast_53, Budski_75, Crater_70, Kamaru_67, Leroy_70, Lucky10_50, Morkie_53, OneDirection_47, Pepperoni_49, Periwinkle_80, Phistory_69, Sarge_47, Whitney_70,

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

- BENtherdunthat_74,

Genes that do not have the "Most Annotated" start:

- AbbyDaisy_70, Aikyam_68, Anekin_73, ArV2_53, BenchScraper_67, BillyTP_70, CookieBear_68, Faith5x5_47, Faja_70, Footloose_52, Frickyeah_75, Getalong_73, Globfish_69, Hestia_61, Hillester_74, Holliday_74, Isolde_68, Kenna_67, Lton_49, Lutum_73, MidnightRain_72, Moosehead_53, Persistence_63, PhorbesPhlower_50, Phrank15_73, RadFad_74, Raphaella_69, Raqqa_65, Richie_72, Sashimi_69, Seahorse_73, YoungHarleezy_68,

Summary by start number:

Start 17:

- Found in 2 of 49 (4.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Globfish_69 (AY), Raqqa_65 (AY),

Start 18:

- Found in 5 of 49 (10.2%) of genes in pham
- Manual Annotations of this start: 3 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArV2_53 (singleton), Hillester_74 (AY), MidnightRain_72 (AY), Persistence_63 (AY), RadFad_74 (AY),

Start 19:

- Found in 17 of 49 (34.7%) of genes in pham
- Manual Annotations of this start: 15 of 35
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Apricot_70 (DN3), Asapag_69 (DN1), Birdsong_68 (DN), BrayBeast_53 (FB), Budski_75 (DN), Crater_70 (DN3), Kamaru_67 (DN1), Leroy_70 (DN1), Lucky10_50 (DH), Morkie_53 (DH), OneDirection_47 (CZ6), Pepperoni_49 (CZ), Periwinkle_80 (DN1), Phistory_69 (DN1), Sarge_47 (FB), Whitney_70 (DN1),

Start 21:

- Found in 34 of 49 (69.4%) of genes in pham
- Manual Annotations of this start: 11 of 35

- Called 58.8% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_70 (AY), Aikyam_68 (AY), Anekin_73 (AY), BENtherdunthat_74 (DN1), BenchScraper_67 (AY), BillyTP_70 (AY), CookieBear_68 (AY), Faith5x5_47 (CZ6), Faja_70 (AY), Footloose_52 (singleton), Frickyeah_75 (DN1), Hestia_61 (AY), Holliday_74 (DN1), Isolde_68 (AY), Phrank15_73 (AY), Raphaella_69 (AY), Richie_72 (AY), Sashimi_69 (AY), Seahorse_73 (AY), YoungHarleezy_68 (AY),

Start 22:

- Found in 12 of 49 (24.5%) of genes in pham
- Manual Annotations of this start: 6 of 35
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Getalong_73 (DN1), Kenna_67 (DN1), Lton_49 (CZ), Lutum_73 (DN1), Moosehead_53 (CZ6), PhorbesPhlower_50 (DH),

Summary by clusters:

There are 9 clusters represented in this pham: DN, singleton, DH, CZ6, CZ, FB, DN1, DN3, AY,

Info for manual annotations of cluster AY:

- Start number 18 was manually annotated 3 times for cluster AY.
- Start number 21 was manually annotated 7 times for cluster AY.

Info for manual annotations of cluster CZ:

- Start number 22 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ6:

- Start number 19 was manually annotated 1 time for cluster CZ6.
- Start number 21 was manually annotated 1 time for cluster CZ6.
- Start number 22 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DH:

- Start number 19 was manually annotated 2 times for cluster DH.
- Start number 22 was manually annotated 1 time for cluster DH.

Info for manual annotations of cluster DN:

- Start number 19 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 19 was manually annotated 6 times for cluster DN1.
- Start number 21 was manually annotated 2 times for cluster DN1.
- Start number 22 was manually annotated 3 times for cluster DN1.

Info for manual annotations of cluster DN3:

- Start number 19 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster FB:

- Start number 19 was manually annotated 2 times for cluster FB.

Gene Information:

Gene: AbbyDaisy_70 Start: 37654, Stop: 38199, Start Num: 21

Candidate Starts for AbbyDaisy_70:

(15, 37528), (Start: 21 @37654 has 11 MA's), (26, 37729), (30, 37825), (45, 37954), (50, 37990), (56, 38032),

Gene: Aikyam_68 Start: 34815, Stop: 35363, Start Num: 21

Candidate Starts for Aikyam_68:

(7, 34581), (12, 34677), (Start: 21 @34815 has 11 MA's), (24, 34863), (30, 34983), (34, 35031), (38, 35067), (40, 35085), (45, 35112), (55, 35181), (59, 35214),

Gene: Anekin_73 Start: 37646, Stop: 38200, Start Num: 21

Candidate Starts for Anekin_73:

(15, 37520), (Start: 21 @37646 has 11 MA's), (30, 37817), (45, 37946), (50, 37982), (56, 38024), (63, 38069),

Gene: Apricot_70 Start: 41809, Stop: 42369, Start Num: 19

Candidate Starts for Apricot_70:

(2, 41443), (3, 41509), (8, 41611), (9, 41632), (13, 41680), (Start: 19 @41809 has 15 MA's), (Start: 21 @41815 has 11 MA's), (29, 41941), (30, 41989), (35, 42049), (36, 42052), (43, 42109), (51, 42157), (54, 42184), (57, 42202), (64, 42256), (65, 42262), (70, 42334),

Gene: ArV2_53 Start: 29854, Stop: 30420, Start Num: 18

Candidate Starts for ArV2_53:

(Start: 18 @29854 has 3 MA's), (30, 30016), (33, 30031), (55, 30217), (71, 30379),

Gene: Asapag_69 Start: 41803, Stop: 42363, Start Num: 19

Candidate Starts for Asapag_69:

(3, 41503), (8, 41605), (13, 41674), (Start: 19 @41803 has 15 MA's), (Start: 21 @41809 has 11 MA's), (29, 41935), (30, 41983), (35, 42043), (36, 42046), (43, 42103), (46, 42133), (47, 42139), (49, 42145), (54, 42178), (55, 42181), (57, 42196), (64, 42250), (70, 42328),

Gene: BENtherdunthat_74 Start: 43163, Stop: 43717, Start Num: 21

Candidate Starts for BENtherdunthat_74:

(1, 42662), (2, 42791), (3, 42857), (8, 42959), (13, 43028), (Start: 19 @43157 has 15 MA's), (Start: 21 @43163 has 11 MA's), (29, 43289), (30, 43337), (35, 43397), (36, 43400), (43, 43457), (47, 43493), (49, 43499), (51, 43505), (54, 43532), (55, 43535), (57, 43550), (64, 43604), (65, 43610), (70, 43682),

Gene: BenchScraper_67 Start: 36331, Stop: 36885, Start Num: 21

Candidate Starts for BenchScraper_67:

(Start: 21 @36331 has 11 MA's), (30, 36499), (38, 36583), (41, 36604), (45, 36628), (47, 36655), (55, 36697), (58, 36721),

Gene: BillyTP_70 Start: 38186, Stop: 38740, Start Num: 21

Candidate Starts for BillyTP_70:

(Start: 21 @38186 has 11 MA's), (30, 38354), (38, 38438), (41, 38459), (45, 38483), (47, 38510), (55, 38552), (58, 38576),

Gene: Birdsong_68 Start: 41539, Stop: 42099, Start Num: 19

Candidate Starts for Birdsong_68:

(3, 41239), (8, 41341), (13, 41410), (Start: 19 @41539 has 15 MA's), (Start: 21 @41545 has 11 MA's), (29, 41671), (30, 41719), (35, 41779), (36, 41782), (43, 41839), (46, 41869), (47, 41875), (49, 41881), (54, 41914), (55, 41917), (57, 41932), (64, 41986), (70, 42064),

Gene: BrayBeast_53 Start: 30531, Stop: 31082, Start Num: 19

Candidate Starts for BrayBeast_53:

(7, 30297), (12, 30393), (Start: 19 @30531 has 15 MA's), (Start: 22 @30543 has 6 MA's), (23, 30555), (27, 30627), (30, 30705), (31, 30714), (33, 30720), (38, 30789), (45, 30834), (49, 30867), (55, 30903), (66, 31014),

Gene: Budski_75 Start: 43660, Stop: 44220, Start Num: 19

Candidate Starts for Budski_75:

(2, 43294), (3, 43360), (8, 43462), (13, 43531), (Start: 19 @43660 has 15 MA's), (Start: 21 @43666 has 11 MA's), (29, 43792), (30, 43840), (35, 43900), (36, 43903), (43, 43960), (46, 43990), (47, 43996), (49, 44002), (54, 44035), (55, 44038), (57, 44053), (64, 44107), (70, 44185),

Gene: CookieBear_68 Start: 36246, Stop: 36794, Start Num: 21

Candidate Starts for CookieBear_68:

(7, 36012), (12, 36108), (Start: 21 @36246 has 11 MA's), (30, 36414), (38, 36498), (40, 36516), (45, 36543), (55, 36612), (59, 36645),

Gene: Crater_70 Start: 42204, Stop: 42764, Start Num: 19

Candidate Starts for Crater_70:

(2, 41838), (3, 41904), (8, 42006), (9, 42027), (13, 42075), (Start: 19 @42204 has 15 MA's), (Start: 21 @42210 has 11 MA's), (29, 42336), (30, 42384), (35, 42444), (36, 42447), (43, 42504), (51, 42552), (54, 42579), (57, 42597), (64, 42651), (65, 42657), (70, 42729),

Gene: Faith5x5_47 Start: 32247, Stop: 32810, Start Num: 21

Candidate Starts for Faith5x5_47:

(6, 32001), (10, 32070), (Start: 21 @32247 has 11 MA's), (27, 32337), (29, 32373), (30, 32421), (35, 32481), (36, 32484), (38, 32505), (43, 32541), (62, 32664), (63, 32673), (70, 32766),

Gene: Faja_70 Start: 37936, Stop: 38490, Start Num: 21

Candidate Starts for Faja_70:

(Start: 21 @37936 has 11 MA's), (30, 38104), (38, 38188), (41, 38209), (45, 38233), (52, 38293), (55, 38302),

Gene: Footloose_52 Start: 30290, Stop: 30850, Start Num: 21

Candidate Starts for Footloose_52:

(20, 30287), (Start: 21 @30290 has 11 MA's), (30, 30464), (31, 30473), (39, 30551), (43, 30584), (45, 30593), (49, 30620), (60, 30692), (61, 30704),

Gene: Frickyeah_75 Start: 42944, Stop: 43498, Start Num: 21

Candidate Starts for Frickyeah_75:

(5, 42710), (11, 42803), (16, 42878), (Start: 21 @42944 has 11 MA's), (Start: 22 @42950 has 6 MA's), (29, 43070), (30, 43118), (35, 43178), (36, 43181), (43, 43238), (46, 43268), (47, 43274), (49, 43280), (54, 43313), (55, 43316), (57, 43331), (64, 43385), (70, 43463),

Gene: Getalong_73 Start: 44401, Stop: 44958, Start Num: 22

Candidate Starts for Getalong_73:

(Start: 22 @44401 has 6 MA's), (25, 44470), (30, 44569), (44, 44698), (48, 44737), (64, 44845), (70, 44923),

Gene: Globfish_69 Start: 37028, Stop: 37594, Start Num: 17

Candidate Starts for Globfish_69:

(17, 37028), (Start: 22 @37040 has 6 MA's), (23, 37052), (30, 37202), (31, 37211), (33, 37217), (38, 37286), (41, 37307), (45, 37331), (52, 37391), (55, 37400), (69, 37544),

Gene: Hestia_61 Start: 34159, Stop: 34713, Start Num: 21
Candidate Starts for Hestia_61:
(Start: 21 @34159 has 11 MA's), (30, 34327), (45, 34456), (51, 34495),

Gene: Hillester_74 Start: 38114, Stop: 38662, Start Num: 18
Candidate Starts for Hillester_74:
(15, 37994), (Start: 18 @38114 has 3 MA's), (30, 38279), (38, 38363), (40, 38381), (49, 38441),

Gene: Holliday_74 Start: 45922, Stop: 46473, Start Num: 21
Candidate Starts for Holliday_74:
(2, 45550), (3, 45616), (8, 45718), (13, 45787), (Start: 21 @45922 has 11 MA's), (Start: 22 @45928 has 6 MA's), (27, 46012), (28, 46039), (30, 46093), (31, 46102), (34, 46141), (38, 46177), (42, 46207), (45, 46222), (49, 46255), (51, 46261), (54, 46288), (55, 46291), (57, 46306), (62, 46336), (64, 46360), (67, 46405), (70, 46438),

Gene: Isolde_68 Start: 36363, Stop: 36905, Start Num: 21
Candidate Starts for Isolde_68:
(Start: 21 @36363 has 11 MA's), (30, 36531), (38, 36615), (40, 36633), (45, 36660), (56, 36738), (66, 36831),

Gene: Kamaru_67 Start: 41724, Stop: 42284, Start Num: 19
Candidate Starts for Kamaru_67:
(3, 41424), (8, 41526), (9, 41547), (13, 41595), (Start: 19 @41724 has 15 MA's), (Start: 21 @41730 has 11 MA's), (29, 41856), (30, 41904), (35, 41964), (36, 41967), (43, 42024), (47, 42060), (49, 42066), (51, 42072), (54, 42099), (57, 42117), (64, 42171), (65, 42177), (70, 42249),

Gene: Kenna_67 Start: 41841, Stop: 42398, Start Num: 22
Candidate Starts for Kenna_67:
(Start: 22 @41841 has 6 MA's), (25, 41910), (30, 42009), (44, 42138), (48, 42177), (64, 42285), (70, 42363),

Gene: Leroy_70 Start: 42140, Stop: 42700, Start Num: 19
Candidate Starts for Leroy_70:
(2, 41774), (3, 41840), (8, 41942), (9, 41963), (13, 42011), (Start: 19 @42140 has 15 MA's), (Start: 21 @42146 has 11 MA's), (29, 42272), (30, 42320), (35, 42380), (36, 42383), (43, 42440), (49, 42482), (51, 42488), (54, 42515), (57, 42533), (64, 42587), (65, 42593), (70, 42665),

Gene: Lton_49 Start: 31623, Stop: 32180, Start Num: 22
Candidate Starts for Lton_49:
(Start: 22 @31623 has 6 MA's), (25, 31692), (27, 31710), (33, 31806), (37, 31857), (44, 31920), (48, 31959), (49, 31962), (54, 31995), (64, 32067), (70, 32145),

Gene: Lucky10_50 Start: 34323, Stop: 34883, Start Num: 19
Candidate Starts for Lucky10_50:
(2, 33957), (3, 34023), (8, 34125), (13, 34194), (Start: 19 @34323 has 15 MA's), (Start: 21 @34329 has 11 MA's), (29, 34455), (30, 34503), (35, 34563), (36, 34566), (43, 34623), (49, 34665), (51, 34671), (54, 34698), (55, 34701), (62, 34746), (64, 34770), (66, 34806), (67, 34815), (70, 34848),

Gene: Lutum_73 Start: 43004, Stop: 43561, Start Num: 22
Candidate Starts for Lutum_73:
(Start: 22 @43004 has 6 MA's), (25, 43073), (30, 43172), (44, 43301), (48, 43340), (64, 43448), (70, 43526),

Gene: MidnightRain_72 Start: 37900, Stop: 38448, Start Num: 18
Candidate Starts for MidnightRain_72:
(15, 37780), (Start: 18 @37900 has 3 MA's), (30, 38065), (38, 38149), (40, 38167), (49, 38227),

Gene: Moosehead_53 Start: 32750, Stop: 33310, Start Num: 22
Candidate Starts for Moosehead_53:
(Start: 22 @32750 has 6 MA's), (25, 32819), (27, 32837), (32, 32930), (33, 32933), (37, 32984), (44, 33047), (48, 33086), (62, 33170), (63, 33179), (64, 33194), (70, 33272),

Gene: Morkie_53 Start: 33852, Stop: 34412, Start Num: 19
Candidate Starts for Morkie_53:
(2, 33486), (3, 33552), (8, 33654), (13, 33723), (Start: 19 @33852 has 15 MA's), (Start: 21 @33858 has 11 MA's), (29, 33984), (30, 34032), (35, 34092), (36, 34095), (43, 34152), (49, 34194), (51, 34200), (54, 34227), (55, 34230), (57, 34245), (64, 34299), (65, 34305), (70, 34377),

Gene: OneDirection_47 Start: 31245, Stop: 31805, Start Num: 19
Candidate Starts for OneDirection_47:
(2, 30879), (3, 30945), (8, 31047), (13, 31116), (Start: 19 @31245 has 15 MA's), (Start: 21 @31251 has 11 MA's), (29, 31377), (30, 31425), (35, 31485), (36, 31488), (43, 31545), (51, 31593), (54, 31620), (55, 31623), (57, 31638), (62, 31668), (64, 31692), (67, 31737), (70, 31770),

Gene: Pepperoni_49 Start: 33008, Stop: 33568, Start Num: 19
Candidate Starts for Pepperoni_49:
(2, 32642), (3, 32708), (8, 32810), (13, 32879), (Start: 19 @33008 has 15 MA's), (Start: 21 @33014 has 11 MA's), (29, 33140), (30, 33188), (35, 33248), (36, 33251), (43, 33308), (49, 33350), (51, 33356), (54, 33383), (55, 33386), (57, 33401), (64, 33455), (65, 33461), (70, 33533),

Gene: Periwinkle_80 Start: 45304, Stop: 45864, Start Num: 19
Candidate Starts for Periwinkle_80:
(3, 45004), (8, 45106), (13, 45175), (Start: 19 @45304 has 15 MA's), (Start: 21 @45310 has 11 MA's), (29, 45436), (30, 45484), (35, 45544), (36, 45547), (43, 45604), (47, 45640), (49, 45646), (51, 45652), (54, 45679), (57, 45697), (64, 45751), (65, 45757), (70, 45829),

Gene: Persistence_63 Start: 35457, Stop: 36002, Start Num: 18
Candidate Starts for Persistence_63:
(15, 35337), (Start: 18 @35457 has 3 MA's), (27, 35541), (30, 35619), (38, 35703), (40, 35721),

Gene: Phistory_69 Start: 41369, Stop: 41929, Start Num: 19
Candidate Starts for Phistory_69:
(2, 41003), (3, 41069), (8, 41171), (9, 41192), (13, 41240), (Start: 19 @41369 has 15 MA's), (Start: 21 @41375 has 11 MA's), (29, 41501), (30, 41549), (35, 41609), (36, 41612), (43, 41669), (51, 41717), (54, 41744), (57, 41762), (64, 41816), (65, 41822), (70, 41894),

Gene: PhorbesPhlower_50 Start: 32807, Stop: 33364, Start Num: 22
Candidate Starts for PhorbesPhlower_50:
(Start: 22 @32807 has 6 MA's), (25, 32876), (37, 33041), (41, 33080), (44, 33104), (53, 33176), (62, 33227), (63, 33236), (64, 33251), (67, 33296), (68, 33314), (70, 33329),

Gene: Phrank15_73 Start: 37310, Stop: 37858, Start Num: 21
Candidate Starts for Phrank15_73:
(Start: 21 @37310 has 11 MA's), (30, 37478), (38, 37562), (40, 37580), (45, 37607),

Gene: RadFad_74 Start: 38114, Stop: 38662, Start Num: 18

Candidate Starts for RadFad_74:

(15, 37994), (Start: 18 @38114 has 3 MA's), (30, 38279), (38, 38363), (40, 38381), (49, 38441),

Gene: Raphaella_69 Start: 36429, Stop: 36983, Start Num: 21

Candidate Starts for Raphaella_69:

(Start: 21 @36429 has 11 MA's), (30, 36597), (38, 36681), (41, 36702), (45, 36726), (47, 36753), (55, 36795), (58, 36819),

Gene: Raqqa_65 Start: 34745, Stop: 35305, Start Num: 17

Candidate Starts for Raqqa_65:

(4, 34481), (14, 34619), (17, 34745), (Start: 22 @34757 has 6 MA's), (23, 34769), (27, 34841), (30, 34919), (31, 34928), (33, 34934), (38, 35003), (45, 35048), (49, 35081), (58, 35141),

Gene: Richie_72 Start: 38234, Stop: 38788, Start Num: 21

Candidate Starts for Richie_72:

(Start: 21 @38234 has 11 MA's), (30, 38402), (38, 38486), (41, 38507), (45, 38531), (47, 38558), (55, 38600), (58, 38624),

Gene: Sarge_47 Start: 28278, Stop: 28829, Start Num: 19

Candidate Starts for Sarge_47:

(7, 28044), (9, 28092), (12, 28140), (Start: 19 @28278 has 15 MA's), (Start: 22 @28290 has 6 MA's), (23, 28302), (27, 28374), (30, 28452), (31, 28461), (33, 28467), (38, 28536), (45, 28581), (49, 28614), (55, 28650), (66, 28761),

Gene: Sashimi_69 Start: 37351, Stop: 37905, Start Num: 21

Candidate Starts for Sashimi_69:

(Start: 21 @37351 has 11 MA's), (30, 37519), (38, 37603), (45, 37648), (52, 37708),

Gene: Seahorse_73 Start: 38791, Stop: 39336, Start Num: 21

Candidate Starts for Seahorse_73:

(15, 38665), (Start: 21 @38791 has 11 MA's), (26, 38866), (30, 38962), (45, 39091), (50, 39127), (56, 39169),

Gene: Whitney_70 Start: 43573, Stop: 44133, Start Num: 19

Candidate Starts for Whitney_70:

(2, 43207), (3, 43273), (8, 43375), (13, 43444), (Start: 19 @43573 has 15 MA's), (Start: 21 @43579 has 11 MA's), (29, 43705), (30, 43753), (35, 43813), (36, 43816), (43, 43873), (46, 43903), (47, 43909), (49, 43915), (54, 43948), (55, 43951), (57, 43966), (64, 44020), (70, 44098),

Gene: YoungHarleezy_68 Start: 36644, Stop: 37195, Start Num: 21

Candidate Starts for YoungHarleezy_68:

(7, 36410), (12, 36506), (Start: 21 @36644 has 11 MA's), (24, 36692), (30, 36812), (38, 36896), (40, 36914), (45, 36941), (55, 37010),