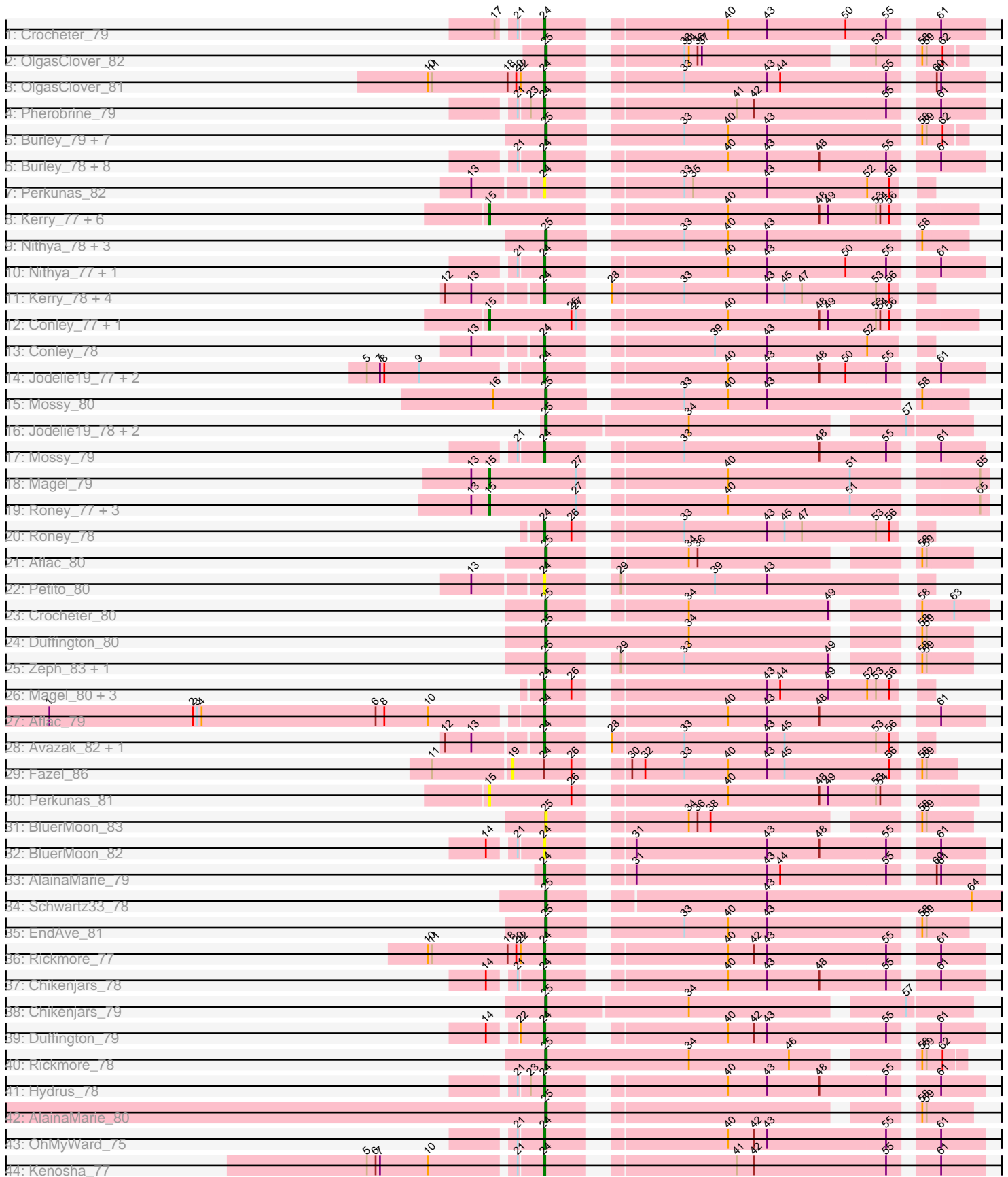


Pham 85490



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 85490 Report

This analysis was run 04/28/24 on database version 559.

Pham number 85490 has 86 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Crocheter_79
- Track 2 : OlgasClover_82
- Track 3 : OlgasClover_81
- Track 4 : Pherobrine_79
- Track 5 : Burley_79, Untouchable_81, Eddiemania_78, Nadmeg_79, Runhaar_78, Vardy_78, Madvan_78, Phepper_80
- Track 6 : Burley_78, Untouchable_80, Eddiemania_77, Zeph_82, Runhaar_77, Vardy_77, Madvan_77, EndAve_80, Phepper_79
- Track 7 : Perkunas_82
- Track 8 : Kerry_77, FortCran_85, Captrips_80, Avazak_81, Artorias_80, Gravy_77, Cappybara_79
- Track 9 : Nithya_78, Pherobrine_80, Kenosha_78, OhMyWard_76
- Track 10 : Nithya_77, Nadmeg_78
- Track 11 : Kerry_78, Cappybara_80, FortCran_86, Artorias_81, Gravy_78
- Track 12 : Conley_77, Petite_79
- Track 13 : Conley_78
- Track 14 : Jodelie19_77, Figliar_77, TenaciousP_84
- Track 15 : Mossy_80
- Track 16 : Jodelie19_78, Figliar_78, TenaciousP_85
- Track 17 : Mossy_79
- Track 18 : Magel_79
- Track 19 : Roney_77, Odesza_77, Tanis_78, Gill_78
- Track 20 : Roney_78
- Track 21 : Aflac_80
- Track 22 : Petite_80
- Track 23 : Crocheter_80
- Track 24 : Duffington_80
- Track 25 : Zeph_83, Hydrus_79
- Track 26 : Magel_80, Odesza_78, Tanis_79, Gill_79
- Track 27 : Aflac_79
- Track 28 : Avazak_82, Captrips_81
- Track 29 : Fazel_86
- Track 30 : Perkunas_81
- Track 31 : BluerMoon_83
- Track 32 : BluerMoon_82
- Track 33 : AlainaMarie_79
- Track 34 : Schwartz33_78

- Track 35 : EndAve_81
- Track 36 : Rickmore_77
- Track 37 : Chickenjars_78
- Track 38 : Chickenjars_79
- Track 39 : Duffington_79
- Track 40 : Rickmore_78
- Track 41 : Hydrus_78
- Track 42 : AlainaMarie_80
- Track 43 : OhMyWard_75
- Track 44 : Kenosha_77

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

The start number called the most often in the published annotations is 24, it was called in 32 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aflac_79, AlainaMarie_79, Artorias_81, Avazak_82, BluerMoon_82, Burley_78, Captrips_81, Cappybara_80, Chickenjars_78, Conley_78, Crocheter_79, Duffington_79, Eddiemania_77, EndAve_80, Figliar_77, FortCran_86, Gill_79, Gravy_78, Hydrus_78, Jodelie19_77, Kenosha_77, Kerry_78, Madvan_77, Magel_80, Mossy_79, Nadmeg_78, Nithya_77, Odesza_78, OhMyWard_75, OlgasClover_81, Perkunas_82, Petite_80, Phepper_79, Pherobrine_79, Rickmore_77, Roney_78, Runhaar_77, Tanis_79, TenaciousP_84, Untouchable_80, Vardy_77, Zeph_82,

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

- Fazel_86,

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

- Aflac_80, AlainaMarie_80, Artorias_80, Avazak_81, BluerMoon_83, Burley_79, Captrips_80, Cappybara_79, Chickenjars_79, Conley_77, Crocheter_80, Duffington_80, Eddiemania_78, EndAve_81, Figliar_78, FortCran_85, Gill_78, Gravy_77, Hydrus_79, Jodelie19_78, Kenosha_78, Kerry_77, Madvan_78, Magel_79, Mossy_80, Nadmeg_79, Nithya_78, Odesza_77, OhMyWard_76, OlgasClover_82, Perkunas_81, Petite_79, Phepper_80, Pherobrine_80, Rickmore_78, Roney_77, Runhaar_78, Schwartz33_78, Tanis_78, TenaciousP_85, Untouchable_81, Vardy_78, Zeph_83,

Summary by start number:

Start 15:

- Found in 15 of 86 (17.4%) of genes in pham
- Manual Annotations of this start: 10 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artorias_80 (DJ), Avazak_81 (DJ), Captrips_80 (DJ), Cappybara_79 (DJ), Conley_77 (DJ), FortCran_85 (DJ), Gill_78 (DJ), Gravy_77 (DJ), Kerry_77 (DJ), Magel_79 (DJ), Odesza_77 (DJ), Perkunas_81 (DJ), Petite_79 (DJ), Roney_77 (DJ), Tanis_78 (DJ),

Start 19:

- Found in 1 of 86 (1.2%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fazel_86 (DJ),

Start 24:

- Found in 43 of 86 (50.0%) of genes in pham
- Manual Annotations of this start: 32 of 65
- Called 97.7% of time when present
- Phage (with cluster) where this start called: Aflac_79 (DJ), AlainaMarie_79 (DJ), Artorias_81 (DJ), Avazak_82 (DJ), BluerMoon_82 (DJ), Burley_78 (DJ), Captrips_81 (DJ), Cappybara_80 (DJ), Chikenjars_78 (DJ), Conley_78 (DJ), Crocheter_79 (DJ), Duffington_79 (DJ), Eddiemania_77 (DJ), EndAve_80 (DJ), Figliar_77 (DJ), FortCran_86 (DJ), Gill_79 (DJ), Gravy_78 (DJ), Hydrus_78 (DJ), Jodelie19_77 (DJ), Kenosha_77 (DJ), Kerry_78 (DJ), Madvan_77 (DJ), Magel_80 (DJ), Mossy_79 (DJ), Nadmeg_78 (DJ), Nithya_77 (DJ), Odesza_78 (DJ), OhMyWard_75 (DJ), OlgasClover_81 (DJ), Perkunas_82 (DJ), Petite_80 (DJ), Phepper_79 (DJ), Pherobrine_79 (DJ), Rickmore_77 (DJ), Roney_78 (DJ), Runhaar_77 (DJ), Tanis_79 (DJ), TenaciousP_84 (DJ), Untouchable_80 (DJ), Vardy_77 (DJ), Zeph_82 (DJ),

Start 25:

- Found in 28 of 86 (32.6%) of genes in pham
- Manual Annotations of this start: 23 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aflac_80 (DJ), AlainaMarie_80 (DJ), BluerMoon_83 (DJ), Burley_79 (DJ), Chikenjars_79 (DJ), Crocheter_80 (DJ), Duffington_80 (DJ), Eddiemania_78 (DJ), EndAve_81 (DJ), Figliar_78 (DJ), Hydrus_79 (DJ), Jodelie19_78 (DJ), Kenosha_78 (DJ), Madvan_78 (DJ), Mossy_80 (DJ), Nadmeg_79 (DJ), Nithya_78 (DJ), OhMyWard_76 (DJ), OlgasClover_82 (DJ), Phepper_80 (DJ), Pherobrine_80 (DJ), Rickmore_78 (DJ), Runhaar_78 (DJ), Schwartz33_78 (DJ), TenaciousP_85 (DJ), Untouchable_81 (DJ), Vardy_78 (DJ), Zeph_83 (DJ),

Summary by clusters:

There is one cluster represented in this pham: DJ

Info for manual annotations of cluster DJ:

- Start number 15 was manually annotated 10 times for cluster DJ.
- Start number 24 was manually annotated 32 times for cluster DJ.
- Start number 25 was manually annotated 23 times for cluster DJ.

Gene Information:

Gene: Aflac_80 Start: 52431, Stop: 52676, Start Num: 25

Candidate Starts for Aflac_80:

(Start: 25 @52431 has 23 MA's), (34, 52509), (36, 52515), (58, 52644), (59, 52647),

Gene: Aflac_79 Start: 52180, Stop: 52449, Start Num: 24

Candidate Starts for Aflac_79:

(1, 51850), (2, 51949), (3, 51952), (4, 51955), (6, 52075), (8, 52081), (10, 52111), (Start: 24 @52180 has 32 MA's), (40, 52285), (43, 52312), (48, 52348), (61, 52420),

Gene: AlainaMarie_79 Start: 52225, Stop: 52494, Start Num: 24

Candidate Starts for AlainaMarie_79:

(Start: 24 @52225 has 32 MA's), (31, 52267), (43, 52357), (44, 52366), (55, 52438), (60, 52462), (61, 52465),

Gene: AlainaMarie_80 Start: 52476, Stop: 52721, Start Num: 25

Candidate Starts for AlainaMarie_80:

(Start: 25 @52476 has 23 MA's), (58, 52689), (59, 52692),

Gene: Artorias_80 Start: 51390, Stop: 51692, Start Num: 15

Candidate Starts for Artorias_80:

(Start: 15 @51390 has 10 MA's), (40, 51534), (48, 51597), (49, 51603), (53, 51636), (54, 51639), (56, 51645),

Gene: Artorias_81 Start: 51703, Stop: 51936, Start Num: 24

Candidate Starts for Artorias_81:

(12, 51643), (13, 51661), (Start: 24 @51703 has 32 MA's), (28, 51730), (33, 51778), (43, 51835), (45, 51847), (47, 51859), (53, 51910), (56, 51919),

Gene: Avazak_81 Start: 52072, Stop: 52374, Start Num: 15

Candidate Starts for Avazak_81:

(Start: 15 @52072 has 10 MA's), (40, 52216), (48, 52279), (49, 52285), (53, 52318), (54, 52321), (56, 52327),

Gene: Avazak_82 Start: 52385, Stop: 52618, Start Num: 24

Candidate Starts for Avazak_82:

(12, 52325), (13, 52343), (Start: 24 @52385 has 32 MA's), (28, 52412), (33, 52460), (43, 52517), (45, 52529), (53, 52592), (56, 52601),

Gene: BluerMoon_83 Start: 52383, Stop: 52628, Start Num: 25

Candidate Starts for BluerMoon_83:

(Start: 25 @52383 has 23 MA's), (34, 52461), (36, 52467), (38, 52476), (58, 52596), (59, 52599),

Gene: BluerMoon_82 Start: 52132, Stop: 52401, Start Num: 24

Candidate Starts for BluerMoon_82:

(14, 52102), (21, 52117), (Start: 24 @52132 has 32 MA's), (31, 52174), (43, 52264), (48, 52300), (55, 52345), (61, 52372),

Gene: Burley_79 Start: 51488, Stop: 51745, Start Num: 25

Candidate Starts for Burley_79:

(Start: 25 @51488 has 23 MA's), (33, 51566), (40, 51596), (43, 51623), (58, 51719), (59, 51722), (62, 51731),

Gene: Burley_78 Start: 51237, Stop: 51506, Start Num: 24

Candidate Starts for Burley_78:

(21, 51222), (Start: 24 @51237 has 32 MA's), (40, 51342), (43, 51369), (48, 51405), (55, 51450), (61, 51477),

Gene: Captrips_80 Start: 51220, Stop: 51522, Start Num: 15

Candidate Starts for Captrips_80:

(Start: 15 @51220 has 10 MA's), (40, 51364), (48, 51427), (49, 51433), (53, 51466), (54, 51469), (56, 51475),

Gene: Captrips_81 Start: 51533, Stop: 51766, Start Num: 24

Candidate Starts for Captrips_81:

(12, 51473), (13, 51491), (Start: 24 @51533 has 32 MA's), (28, 51560), (33, 51608), (43, 51665), (45, 51677), (53, 51740), (56, 51749),

Gene: Capybara_80 Start: 51370, Stop: 51603, Start Num: 24

Candidate Starts for Capybara_80:

(12, 51310), (13, 51328), (Start: 24 @51370 has 32 MA's), (28, 51397), (33, 51445), (43, 51502), (45, 51514), (47, 51526), (53, 51577), (56, 51586),

Gene: Capybara_79 Start: 51057, Stop: 51359, Start Num: 15

Candidate Starts for Capybara_79:

(Start: 15 @51057 has 10 MA's), (40, 51201), (48, 51264), (49, 51270), (53, 51303), (54, 51306), (56, 51312),

Gene: Chikenjars_78 Start: 52191, Stop: 52460, Start Num: 24

Candidate Starts for Chikenjars_78:

(14, 52161), (21, 52176), (Start: 24 @52191 has 32 MA's), (40, 52296), (43, 52323), (48, 52359), (55, 52404), (61, 52431),

Gene: Chikenjars_79 Start: 52442, Stop: 52714, Start Num: 25

Candidate Starts for Chikenjars_79:

(Start: 25 @52442 has 23 MA's), (34, 52538), (57, 52673),

Gene: Conley_77 Start: 51521, Stop: 51823, Start Num: 15

Candidate Starts for Conley_77:

(Start: 15 @51521 has 10 MA's), (26, 51578), (27, 51581), (40, 51665), (48, 51728), (49, 51734), (53, 51767), (54, 51770), (56, 51776),

Gene: Conley_78 Start: 51834, Stop: 52067, Start Num: 24

Candidate Starts for Conley_78:

(13, 51792), (Start: 24 @51834 has 32 MA's), (39, 51930), (43, 51966), (52, 52035),

Gene: Crocheter_79 Start: 51698, Stop: 51967, Start Num: 24

Candidate Starts for Crocheter_79:

(17, 51674), (21, 51683), (Start: 24 @51698 has 32 MA's), (40, 51803), (43, 51830), (50, 51884), (55, 51911), (61, 51938),

Gene: Crocheter_80 Start: 51949, Stop: 52206, Start Num: 25

Candidate Starts for Crocheter_80:

(Start: 25 @51949 has 23 MA's), (34, 52027), (49, 52123), (58, 52162), (63, 52183),

Gene: Duffington_80 Start: 52412, Stop: 52678, Start Num: 25

Candidate Starts for Duffington_80:

(Start: 25 @52412 has 23 MA's), (34, 52511), (58, 52646), (59, 52649),

Gene: Duffington_79 Start: 52161, Stop: 52430, Start Num: 24

Candidate Starts for Duffington_79:

(14, 52131), (22, 52146), (Start: 24 @52161 has 32 MA's), (40, 52266), (42, 52284), (43, 52293), (55, 52374), (61, 52401),

Gene: Eddiemania_77 Start: 52277, Stop: 52546, Start Num: 24

Candidate Starts for Eddiemania_77:

(21, 52262), (Start: 24 @52277 has 32 MA's), (40, 52382), (43, 52409), (48, 52445), (55, 52490), (61, 52517),

Gene: Eddiemania_78 Start: 52528, Stop: 52785, Start Num: 25

Candidate Starts for Eddiemania_78:

(Start: 25 @52528 has 23 MA's), (33, 52606), (40, 52636), (43, 52663), (58, 52759), (59, 52762), (62, 52771),

Gene: EndAve_80 Start: 52135, Stop: 52404, Start Num: 24

Candidate Starts for EndAve_80:

(21, 52120), (Start: 24 @52135 has 32 MA's), (40, 52240), (43, 52267), (48, 52303), (55, 52348), (61, 52375),

Gene: EndAve_81 Start: 52386, Stop: 52646, Start Num: 25

Candidate Starts for EndAve_81:

(Start: 25 @52386 has 23 MA's), (33, 52464), (40, 52494), (43, 52521), (58, 52617), (59, 52620),

Gene: Fazel_86 Start: 52164, Stop: 52436, Start Num: 19

Candidate Starts for Fazel_86:

(11, 52113), (19, 52164), (Start: 24 @52185 has 32 MA's), (26, 52203), (30, 52224), (32, 52233), (33, 52260), (40, 52290), (43, 52317), (45, 52329), (56, 52401), (58, 52413), (59, 52416),

Gene: Figliar_78 Start: 52211, Stop: 52483, Start Num: 25

Candidate Starts for Figliar_78:

(Start: 25 @52211 has 23 MA's), (34, 52307), (57, 52442),

Gene: Figliar_77 Start: 51960, Stop: 52229, Start Num: 24

Candidate Starts for Figliar_77:

(5, 51849), (7, 51858), (8, 51861), (9, 51885), (Start: 24 @51960 has 32 MA's), (40, 52065), (43, 52092), (48, 52128), (50, 52146), (55, 52173), (61, 52200),

Gene: FortCran_85 Start: 51390, Stop: 51692, Start Num: 15

Candidate Starts for FortCran_85:

(Start: 15 @51390 has 10 MA's), (40, 51534), (48, 51597), (49, 51603), (53, 51636), (54, 51639), (56, 51645),

Gene: FortCran_86 Start: 51703, Stop: 51936, Start Num: 24

Candidate Starts for FortCran_86:

(12, 51643), (13, 51661), (Start: 24 @51703 has 32 MA's), (28, 51730), (33, 51778), (43, 51835), (45, 51847), (47, 51859), (53, 51910), (56, 51919),

Gene: Gill_78 Start: 51084, Stop: 51395, Start Num: 15

Candidate Starts for Gill_78:

(13, 51072), (Start: 15 @51084 has 10 MA's), (27, 51144), (40, 51228), (51, 51312), (65, 51390),

Gene: Gill_79 Start: 51397, Stop: 51630, Start Num: 24

Candidate Starts for Gill_79:

(Start: 24 @51397 has 32 MA's), (26, 51415), (43, 51529), (44, 51538), (49, 51571), (52, 51598), (53, 51604), (56, 51613),

Gene: Gravy_77 Start: 50747, Stop: 51049, Start Num: 15

Candidate Starts for Gravy_77:

(Start: 15 @50747 has 10 MA's), (40, 50891), (48, 50954), (49, 50960), (53, 50993), (54, 50996), (56, 51002),

Gene: Gravy_78 Start: 51060, Stop: 51293, Start Num: 24

Candidate Starts for Gravy_78:

(12, 51000), (13, 51018), (Start: 24 @51060 has 32 MA's), (28, 51087), (33, 51135), (43, 51192), (45, 51204), (47, 51216), (53, 51267), (56, 51276),

Gene: Hydrus_79 Start: 52247, Stop: 52492, Start Num: 25

Candidate Starts for Hydrus_79:

(Start: 25 @52247 has 23 MA's), (29, 52280), (33, 52322), (49, 52421), (58, 52460), (59, 52463),

Gene: Hydrus_78 Start: 51996, Stop: 52265, Start Num: 24

Candidate Starts for Hydrus_78:

(21, 51981), (23, 51987), (Start: 24 @51996 has 32 MA's), (40, 52101), (43, 52128), (48, 52164), (55, 52209), (61, 52236),

Gene: Jodelie19_77 Start: 53127, Stop: 53396, Start Num: 24

Candidate Starts for Jodelie19_77:

(5, 53016), (7, 53025), (8, 53028), (9, 53052), (Start: 24 @53127 has 32 MA's), (40, 53232), (43, 53259), (48, 53295), (50, 53313), (55, 53340), (61, 53367),

Gene: Jodelie19_78 Start: 53378, Stop: 53650, Start Num: 25

Candidate Starts for Jodelie19_78:

(Start: 25 @53378 has 23 MA's), (34, 53474), (57, 53609),

Gene: Kenosha_78 Start: 52077, Stop: 52337, Start Num: 25

Candidate Starts for Kenosha_78:

(Start: 25 @52077 has 23 MA's), (33, 52155), (40, 52185), (43, 52212), (58, 52308),

Gene: Kenosha_77 Start: 51826, Stop: 52095, Start Num: 24

Candidate Starts for Kenosha_77:

(5, 51715), (6, 51721), (7, 51724), (10, 51757), (21, 51811), (Start: 24 @51826 has 32 MA's), (41, 51937), (42, 51949), (55, 52039), (61, 52066),

Gene: Kerry_77 Start: 50810, Stop: 51112, Start Num: 15

Candidate Starts for Kerry_77:

(Start: 15 @50810 has 10 MA's), (40, 50954), (48, 51017), (49, 51023), (53, 51056), (54, 51059), (56, 51065),

Gene: Kerry_78 Start: 51123, Stop: 51356, Start Num: 24

Candidate Starts for Kerry_78:

(12, 51063), (13, 51081), (Start: 24 @51123 has 32 MA's), (28, 51150), (33, 51198), (43, 51255), (45, 51267), (47, 51279), (53, 51330), (56, 51339),

Gene: Madvan_78 Start: 51544, Stop: 51801, Start Num: 25

Candidate Starts for Madvan_78:

(Start: 25 @51544 has 23 MA's), (33, 51622), (40, 51652), (43, 51679), (58, 51775), (59, 51778), (62, 51787),

Gene: Madvan_77 Start: 51293, Stop: 51562, Start Num: 24

Candidate Starts for Madvan_77:

(21, 51278), (Start: 24 @51293 has 32 MA's), (40, 51398), (43, 51425), (48, 51461), (55, 51506), (61, 51533),

Gene: Magel_79 Start: 50999, Stop: 51310, Start Num: 15

Candidate Starts for Magel_79:

(13, 50987), (Start: 15 @50999 has 10 MA's), (27, 51059), (40, 51143), (51, 51227), (65, 51305),

Gene: Magel_80 Start: 51312, Stop: 51545, Start Num: 24

Candidate Starts for Magel_80:

(Start: 24 @51312 has 32 MA's), (26, 51330), (43, 51444), (44, 51453), (49, 51486), (52, 51513), (53, 51519), (56, 51528),

Gene: Mossy_80 Start: 53129, Stop: 53389, Start Num: 25

Candidate Starts for Mossy_80:

(16, 53093), (Start: 25 @53129 has 23 MA's), (33, 53207), (40, 53237), (43, 53264), (58, 53360),

Gene: Mossy_79 Start: 52878, Stop: 53147, Start Num: 24

Candidate Starts for Mossy_79:

(21, 52863), (Start: 24 @52878 has 32 MA's), (33, 52953), (48, 53046), (55, 53091), (61, 53118),

Gene: Nadmeg_78 Start: 52296, Stop: 52565, Start Num: 24

Candidate Starts for Nadmeg_78:

(21, 52281), (Start: 24 @52296 has 32 MA's), (40, 52401), (43, 52428), (50, 52482), (55, 52509), (61, 52536),

Gene: Nadmeg_79 Start: 52547, Stop: 52804, Start Num: 25

Candidate Starts for Nadmeg_79:

(Start: 25 @52547 has 23 MA's), (33, 52625), (40, 52655), (43, 52682), (58, 52778), (59, 52781), (62, 52790),

Gene: Nithya_78 Start: 51930, Stop: 52190, Start Num: 25

Candidate Starts for Nithya_78:

(Start: 25 @51930 has 23 MA's), (33, 52008), (40, 52038), (43, 52065), (58, 52161),

Gene: Nithya_77 Start: 51679, Stop: 51948, Start Num: 24

Candidate Starts for Nithya_77:

(21, 51664), (Start: 24 @51679 has 32 MA's), (40, 51784), (43, 51811), (50, 51865), (55, 51892), (61, 51919),

Gene: Odesza_77 Start: 50946, Stop: 51257, Start Num: 15

Candidate Starts for Odesza_77:

(13, 50934), (Start: 15 @50946 has 10 MA's), (27, 51006), (40, 51090), (51, 51174), (65, 51252),

Gene: Odesza_78 Start: 51259, Stop: 51492, Start Num: 24

Candidate Starts for Odesza_78:

(Start: 24 @51259 has 32 MA's), (26, 51277), (43, 51391), (44, 51400), (49, 51433), (52, 51460), (53, 51466), (56, 51475),

Gene: OhMyWard_75 Start: 52637, Stop: 52906, Start Num: 24

Candidate Starts for OhMyWard_75:

(21, 52622), (Start: 24 @52637 has 32 MA's), (40, 52742), (42, 52760), (43, 52769), (55, 52850), (61, 52877),

Gene: OhMyWard_76 Start: 52888, Stop: 53148, Start Num: 25

Candidate Starts for OhMyWard_76:

(Start: 25 @52888 has 23 MA's), (33, 52966), (40, 52996), (43, 53023), (58, 53119),

Gene: OlgasClover_82 Start: 53301, Stop: 53540, Start Num: 25

Candidate Starts for OlgasClover_82:

(Start: 25 @53301 has 23 MA's), (33, 53376), (34, 53379), (36, 53385), (37, 53388), (53, 53493), (58, 53514), (59, 53517), (62, 53526),

Gene: OlgasClover_81 Start: 53050, Stop: 53319, Start Num: 24

Candidate Starts for OlgasClover_81:

(10, 52972), (11, 52975), (18, 53026), (20, 53032), (22, 53035), (Start: 24 @53050 has 32 MA's), (33, 53125), (43, 53182), (44, 53191), (55, 53263), (60, 53287), (61, 53290),

Gene: Perkunas_82 Start: 51320, Stop: 51553, Start Num: 24

Candidate Starts for Perkunas_82:

(13, 51278), (Start: 24 @51320 has 32 MA's), (33, 51395), (35, 51401), (43, 51452), (52, 51521), (56, 51536),

Gene: Perkunas_81 Start: 51007, Stop: 51309, Start Num: 15

Candidate Starts for Perkunas_81:

(Start: 15 @51007 has 10 MA's), (26, 51064), (40, 51151), (48, 51214), (49, 51220), (53, 51253), (54, 51256),

Gene: Petito_80 Start: 52786, Stop: 53019, Start Num: 24

Candidate Starts for Petito_80:

(13, 52744), (Start: 24 @52786 has 32 MA's), (29, 52819), (39, 52882), (43, 52918),

Gene: Petito_79 Start: 52473, Stop: 52775, Start Num: 15

Candidate Starts for Petito_79:

(Start: 15 @52473 has 10 MA's), (26, 52530), (27, 52533), (40, 52617), (48, 52680), (49, 52686), (53, 52719), (54, 52722), (56, 52728),

Gene: Phepper_79 Start: 51535, Stop: 51804, Start Num: 24

Candidate Starts for Phepper_79:

(21, 51520), (Start: 24 @51535 has 32 MA's), (40, 51640), (43, 51667), (48, 51703), (55, 51748), (61, 51775),

Gene: Phepper_80 Start: 51786, Stop: 52043, Start Num: 25

Candidate Starts for Phepper_80:

(Start: 25 @51786 has 23 MA's), (33, 51864), (40, 51894), (43, 51921), (58, 52017), (59, 52020), (62, 52029),

Gene: Pherobrine_79 Start: 52575, Stop: 52844, Start Num: 24

Candidate Starts for Pherobrine_79:

(21, 52560), (23, 52566), (Start: 24 @52575 has 32 MA's), (41, 52686), (42, 52698), (55, 52788), (61, 52815),

Gene: Pherobrine_80 Start: 52826, Stop: 53086, Start Num: 25

Candidate Starts for Pherobrine_80:

(Start: 25 @52826 has 23 MA's), (33, 52904), (40, 52934), (43, 52961), (58, 53057),

Gene: Rickmore_77 Start: 50651, Stop: 50920, Start Num: 24

Candidate Starts for Rickmore_77:

(10, 50573), (11, 50576), (18, 50627), (20, 50633), (22, 50636), (Start: 24 @50651 has 32 MA's), (40, 50756), (42, 50774), (43, 50783), (55, 50864), (61, 50891),

Gene: Rickmore_78 Start: 50902, Stop: 51162, Start Num: 25

Candidate Starts for Rickmore_78:

(Start: 25 @50902 has 23 MA's), (34, 51001), (46, 51070), (58, 51136), (59, 51139), (62, 51148),

Gene: Roney_77 Start: 51109, Stop: 51420, Start Num: 15

Candidate Starts for Roney_77:

(13, 51097), (Start: 15 @51109 has 10 MA's), (27, 51169), (40, 51253), (51, 51337), (65, 51415),

Gene: Roney_78 Start: 51422, Stop: 51655, Start Num: 24

Candidate Starts for Roney_78:

(Start: 24 @51422 has 32 MA's), (26, 51440), (33, 51497), (43, 51554), (45, 51566), (47, 51578), (53, 51629), (56, 51638),

Gene: Runhaar_77 Start: 51344, Stop: 51613, Start Num: 24

Candidate Starts for Runhaar_77:

(21, 51329), (Start: 24 @51344 has 32 MA's), (40, 51449), (43, 51476), (48, 51512), (55, 51557), (61, 51584),

Gene: Runhaar_78 Start: 51595, Stop: 51852, Start Num: 25

Candidate Starts for Runhaar_78:

(Start: 25 @51595 has 23 MA's), (33, 51673), (40, 51703), (43, 51730), (58, 51826), (59, 51829), (62, 51838),

Gene: Schwartz33_78 Start: 51355, Stop: 51648, Start Num: 25

Candidate Starts for Schwartz33_78:

(Start: 25 @51355 has 23 MA's), (43, 51487), (64, 51628),

Gene: Tanis_78 Start: 50929, Stop: 51240, Start Num: 15

Candidate Starts for Tanis_78:

(13, 50917), (Start: 15 @50929 has 10 MA's), (27, 50989), (40, 51073), (51, 51157), (65, 51235),

Gene: Tanis_79 Start: 51242, Stop: 51475, Start Num: 24

Candidate Starts for Tanis_79:

(Start: 24 @51242 has 32 MA's), (26, 51260), (43, 51374), (44, 51383), (49, 51416), (52, 51443), (53, 51449), (56, 51458),

Gene: TenaciousP_84 Start: 53089, Stop: 53358, Start Num: 24

Candidate Starts for TenaciousP_84:

(5, 52978), (7, 52987), (8, 52990), (9, 53014), (Start: 24 @53089 has 32 MA's), (40, 53194), (43, 53221), (48, 53257), (50, 53275), (55, 53302), (61, 53329),

Gene: TenaciousP_85 Start: 53340, Stop: 53612, Start Num: 25

Candidate Starts for TenaciousP_85:

(Start: 25 @53340 has 23 MA's), (34, 53436), (57, 53571),

Gene: Untouchable_80 Start: 52532, Stop: 52801, Start Num: 24

Candidate Starts for Untouchable_80:

(21, 52517), (Start: 24 @52532 has 32 MA's), (40, 52637), (43, 52664), (48, 52700), (55, 52745), (61, 52772),

Gene: Untouchable_81 Start: 52783, Stop: 53040, Start Num: 25

Candidate Starts for Untouchable_81:

(Start: 25 @52783 has 23 MA's), (33, 52861), (40, 52891), (43, 52918), (58, 53014), (59, 53017), (62, 53026),

Gene: Vardy_78 Start: 51482, Stop: 51739, Start Num: 25

Candidate Starts for Vardy_78:

(Start: 25 @51482 has 23 MA's), (33, 51560), (40, 51590), (43, 51617), (58, 51713), (59, 51716), (62, 51725),

Gene: Vardy_77 Start: 51231, Stop: 51500, Start Num: 24

Candidate Starts for Vardy_77:

(21, 51216), (Start: 24 @51231 has 32 MA's), (40, 51336), (43, 51363), (48, 51399), (55, 51444), (61, 51471),

Gene: Zeph_82 Start: 52369, Stop: 52638, Start Num: 24

Candidate Starts for Zeph_82:

(21, 52354), (Start: 24 @52369 has 32 MA's), (40, 52474), (43, 52501), (48, 52537), (55, 52582), (61, 52609),

Gene: Zeph_83 Start: 52620, Stop: 52865, Start Num: 25

Candidate Starts for Zeph_83:

(Start: 25 @52620 has 23 MA's), (29, 52653), (33, 52695), (49, 52794), (58, 52833), (59, 52836),