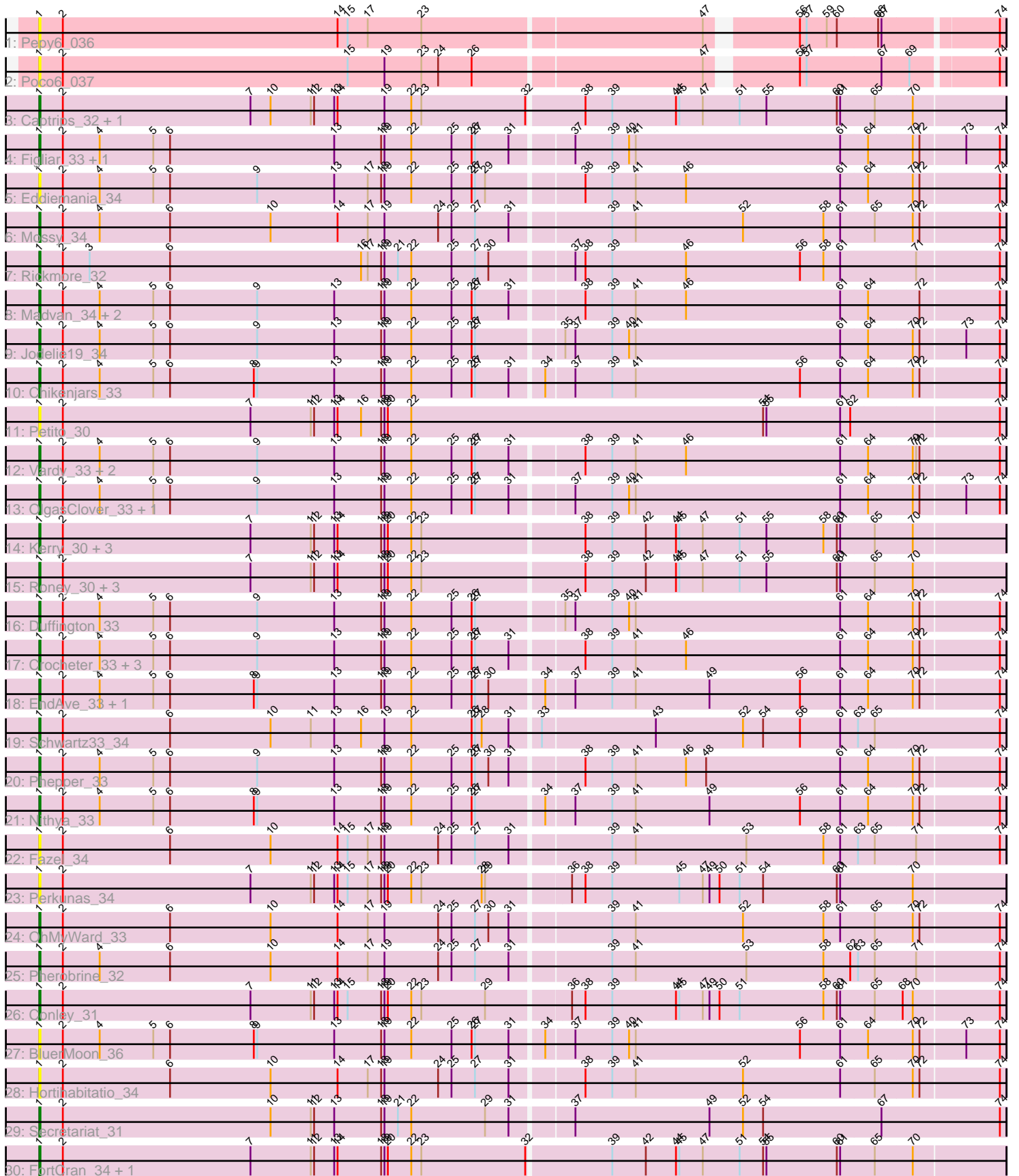


Pham 163685



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 163685 Report

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

Pham number 163685 has 48 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Pepy6_036
- Track 2 : Poco6_037
- Track 3 : Captrips_32, Avazak_30
- Track 4 : Figliar_33, Aflac_33
- Track 5 : Eddiemania_34
- Track 6 : Mossy_34
- Track 7 : Rickmore_32
- Track 8 : Madvan_34, Untouchable_33, Nadmeg_34
- Track 9 : Jodelie19_34
- Track 10 : Chikenjars_33
- Track 11 : Petite_30
- Track 12 : Vardy_33, Burley_33, Runhaar_33
- Track 13 : OlgasClover_33, TenaciousP_37
- Track 14 : Kerry_30, Tanis_30, Magel_31, Gravy_30
- Track 15 : Roney_30, Capybara_30, Odesza_30, Gill_30
- Track 16 : Duffington_33
- Track 17 : Crocheter_33, Hydrus_34, Kenosha_33, Zeph_35
- Track 18 : EndAve_33, AlainaMarie_33
- Track 19 : Schwartz33_34
- Track 20 : Phepper_33
- Track 21 : Nithya_33
- Track 22 : Fazel_34
- Track 23 : Perkunas_34
- Track 24 : OhMyWard_33
- Track 25 : Pherobrine_32
- Track 26 : Conley_31
- Track 27 : BluerMoon_36
- Track 28 : Hortihabitatio_34
- Track 29 : Secretariat_31
- Track 30 : FortCran_34, Artorias_30

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

The start number called the most often in the published annotations is 1, it was called in 34 of the 34 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aflac_33, AlainaMarie_33, Artorias_30, Avazak_30, BluerMoon_36, Burley_33, Captrips_32, Capybara_30, Chikenjars_33, Conley_31, Crocheter_33, Duffington_33, Eddiemania_34, EndAve_33, Fazel_34, Figliar_33, FortCran_34, Gill_30, Gravy_30, Hortihabitatio_34, Hydrus_34, Jodelie19_34, Kenosha_33, Kerry_30, Madvan_34, Magel_31, Mossy_34, Nadmeg_34, Nithya_33, Odesza_30, OhMyWard_33, OlgasClover_33, Pepy6_036, Perkunas_34, Petito_30, Phepper_33, Pherobrine_32, Poco6_037, Rickmore_32, Roney_30, Runhaar_33, Schwartz33_34, Secretariat_31, Tanis_30, TenaciousP_37, Untouchable_33, Vardy_33, Zeph_35,

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

-

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

-

Summary by start number:

Start 1:

- Found in 48 of 48 (100.0%) of genes in pham
- Manual Annotations of this start: 34 of 34
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aflac_33 (DJ), AlainaMarie_33 (DJ), Artorias_30 (DJ), Avazak_30 (DJ), BluerMoon_36 (DJ), Burley_33 (DJ), Captrips_32 (DJ), Capybara_30 (DJ), Chikenjars_33 (DJ), Conley_31 (DJ), Crocheter_33 (DJ), Duffington_33 (DJ), Eddiemania_34 (DJ), EndAve_33 (DJ), Fazel_34 (DJ), Figliar_33 (DJ), FortCran_34 (DJ), Gill_30 (DJ), Gravy_30 (DJ), Hortihabitatio_34 (DJ), Hydrus_34 (DJ), Jodelie19_34 (DJ), Kenosha_33 (DJ), Kerry_30 (DJ), Madvan_34 (DJ), Magel_31 (DJ), Mossy_34 (DJ), Nadmeg_34 (DJ), Nithya_33 (DJ), Odesza_30 (DJ), OhMyWard_33 (DJ), OlgasClover_33 (DJ), Pepy6_036 (CC), Perkunas_34 (DJ), Petito_30 (DJ), Phepper_33 (DJ), Pherobrine_32 (DJ), Poco6_037 (CC), Rickmore_32 (DJ), Roney_30 (DJ), Runhaar_33 (DJ), Schwartz33_34 (DJ), Secretariat_31 (DJ), Tanis_30 (DJ), TenaciousP_37 (DJ), Untouchable_33 (DJ), Vardy_33 (DJ), Zeph_35 (DJ),

Summary by clusters:

There are 2 clusters represented in this pham: CC, DJ,

Info for manual annotations of cluster DJ:

- Start number 1 was manually annotated 34 times for cluster DJ.

Gene Information:

Gene: Aflac_33 Start: 28623, Stop: 29474, Start Num: 1

Candidate Starts for Aflac_33:

(Start: 1 @28623 has 34 MA's), (2, 28644), (4, 28677), (5, 28725), (6, 28740), (13, 28887), (18, 28929), (19, 28932), (22, 28956), (25, 28992), (26, 29010), (27, 29013), (31, 29043), (37, 29094), (39, 29127), (40, 29142), (41, 29148), (61, 29331), (64, 29355), (70, 29394), (72, 29400), (73, 29439), (74, 29469),

Gene: AlainaMarie_33 Start: 28607, Stop: 29458, Start Num: 1

Candidate Starts for AlainaMarie_33:

(Start: 1 @28607 has 34 MA's), (2, 28628), (4, 28661), (5, 28709), (6, 28724), (8, 28799), (9, 28802), (13, 28871), (18, 28913), (19, 28916), (22, 28940), (25, 28976), (26, 28994), (27, 28997), (30, 29009), (34, 29054), (37, 29078), (39, 29111), (41, 29132), (49, 29198), (56, 29279), (61, 29315), (64, 29339), (70, 29378), (72, 29384), (74, 29453),

Gene: Artorias_30 Start: 25604, Stop: 26458, Start Num: 1

Candidate Starts for Artorias_30:

(Start: 1 @25604 has 34 MA's), (2, 25625), (7, 25793), (11, 25847), (12, 25850), (13, 25868), (14, 25871), (18, 25910), (19, 25913), (20, 25916), (22, 25937), (23, 25946), (32, 26039), (39, 26111), (42, 26141), (44, 26168), (45, 26171), (47, 26192), (51, 26225), (54, 26246), (55, 26249), (60, 26312), (61, 26315), (65, 26345), (70, 26378),

Gene: Avazak_30 Start: 25611, Stop: 26465, Start Num: 1

Candidate Starts for Avazak_30:

(Start: 1 @25611 has 34 MA's), (2, 25632), (7, 25800), (10, 25818), (11, 25854), (12, 25857), (13, 25875), (14, 25878), (19, 25920), (22, 25944), (23, 25953), (32, 26046), (38, 26094), (39, 26118), (44, 26175), (45, 26178), (47, 26199), (51, 26232), (55, 26256), (60, 26319), (61, 26322), (65, 26352), (70, 26385),

Gene: BluerMoon_36 Start: 28620, Stop: 29471, Start Num: 1

Candidate Starts for BluerMoon_36:

(Start: 1 @28620 has 34 MA's), (2, 28641), (4, 28674), (5, 28722), (6, 28737), (8, 28812), (9, 28815), (13, 28884), (18, 28926), (19, 28929), (22, 28953), (25, 28989), (26, 29007), (27, 29010), (31, 29040), (34, 29067), (37, 29091), (39, 29124), (40, 29139), (41, 29145), (56, 29292), (61, 29328), (64, 29352), (70, 29391), (72, 29397), (73, 29436), (74, 29466),

Gene: Burley_33 Start: 28358, Stop: 29209, Start Num: 1

Candidate Starts for Burley_33:

(Start: 1 @28358 has 34 MA's), (2, 28379), (4, 28412), (5, 28460), (6, 28475), (9, 28553), (13, 28622), (18, 28664), (19, 28667), (22, 28691), (25, 28727), (26, 28745), (27, 28748), (31, 28778), (38, 28838), (39, 28862), (41, 28883), (46, 28928), (61, 29066), (64, 29090), (70, 29129), (71, 29132), (72, 29135), (74, 29204),

Gene: Captrips_32 Start: 25640, Stop: 26494, Start Num: 1

Candidate Starts for Captrips_32:

(Start: 1 @25640 has 34 MA's), (2, 25661), (7, 25829), (10, 25847), (11, 25883), (12, 25886), (13, 25904), (14, 25907), (19, 25949), (22, 25973), (23, 25982), (32, 26075), (38, 26123), (39, 26147), (44, 26204), (45, 26207), (47, 26228), (51, 26261), (55, 26285), (60, 26348), (61, 26351), (65, 26381), (70, 26414),

Gene: Copybara_30 Start: 25715, Stop: 26569, Start Num: 1

Candidate Starts for Copybara_30:

(Start: 1 @25715 has 34 MA's), (2, 25736), (7, 25904), (11, 25958), (12, 25961), (13, 25979), (14, 25982), (18, 26021), (19, 26024), (20, 26027), (22, 26048), (23, 26057), (38, 26198), (39, 26222), (42, 26252), (44, 26279), (45, 26282), (47, 26303), (51, 26336), (55, 26360), (60, 26423), (61, 26426), (65, 26456), (70, 26489),

Gene: Chikenjars_33 Start: 28610, Stop: 29461, Start Num: 1

Candidate Starts for Chikenjars_33:

(Start: 1 @28610 has 34 MA's), (2, 28631), (4, 28664), (5, 28712), (6, 28727), (8, 28802), (9, 28805), (13, 28874), (18, 28916), (19, 28919), (22, 28943), (25, 28979), (26, 28997), (27, 29000), (31, 29030), (34, 29057), (37, 29081), (39, 29114), (41, 29135), (56, 29282), (61, 29318), (64, 29342), (70, 29381), (72, 29387), (74, 29456),

Gene: Conley_31 Start: 26684, Stop: 27535, Start Num: 1

Candidate Starts for Conley_31:

(Start: 1 @26684 has 34 MA's), (2, 26705), (7, 26873), (11, 26927), (12, 26930), (13, 26948), (14, 26951), (15, 26960), (18, 26990), (19, 26993), (20, 26996), (22, 27017), (23, 27026), (29, 27083), (36, 27152), (38, 27164), (39, 27188), (44, 27245), (45, 27248), (47, 27269), (49, 27275), (50, 27284), (51, 27302), (58, 27377), (60, 27389), (61, 27392), (65, 27422), (68, 27446), (70, 27455), (74, 27530),

Gene: Crocheter_33 Start: 28750, Stop: 29601, Start Num: 1

Candidate Starts for Crocheter_33:

(Start: 1 @28750 has 34 MA's), (2, 28771), (4, 28804), (5, 28852), (6, 28867), (9, 28945), (13, 29014), (18, 29056), (19, 29059), (22, 29083), (25, 29119), (26, 29137), (27, 29140), (31, 29170), (38, 29230), (39, 29254), (41, 29275), (46, 29320), (61, 29458), (64, 29482), (70, 29521), (72, 29527), (74, 29596),

Gene: Duffington_33 Start: 28598, Stop: 29449, Start Num: 1

Candidate Starts for Duffington_33:

(Start: 1 @28598 has 34 MA's), (2, 28619), (4, 28652), (5, 28700), (6, 28715), (9, 28793), (13, 28862), (18, 28904), (19, 28907), (22, 28931), (25, 28967), (26, 28985), (27, 28988), (35, 29060), (37, 29069), (39, 29102), (40, 29117), (41, 29123), (61, 29306), (64, 29330), (70, 29369), (72, 29375), (74, 29444),

Gene: Eddiemania_34 Start: 29259, Stop: 30110, Start Num: 1

Candidate Starts for Eddiemania_34:

(Start: 1 @29259 has 34 MA's), (2, 29280), (4, 29313), (5, 29361), (6, 29376), (9, 29454), (13, 29523), (17, 29553), (18, 29565), (19, 29568), (22, 29592), (25, 29628), (26, 29646), (27, 29649), (29, 29658), (38, 29739), (39, 29763), (41, 29784), (46, 29829), (61, 29967), (64, 29991), (70, 30030), (72, 30036), (74, 30105),

Gene: EndAve_33 Start: 28610, Stop: 29461, Start Num: 1

Candidate Starts for EndAve_33:

(Start: 1 @28610 has 34 MA's), (2, 28631), (4, 28664), (5, 28712), (6, 28727), (8, 28802), (9, 28805), (13, 28874), (18, 28916), (19, 28919), (22, 28943), (25, 28979), (26, 28997), (27, 29000), (30, 29012), (34, 29057), (37, 29081), (39, 29114), (41, 29135), (49, 29201), (56, 29282), (61, 29318), (64, 29342), (70, 29381), (72, 29387), (74, 29456),

Gene: Fazel_34 Start: 27635, Stop: 28486, Start Num: 1

Candidate Starts for Fazel_34:

(Start: 1 @27635 has 34 MA's), (2, 27656), (6, 27752), (10, 27842), (14, 27902), (15, 27911), (17, 27929), (18, 27941), (19, 27944), (24, 27992), (25, 28004), (27, 28025), (31, 28055), (39, 28139), (41, 28160), (53, 28259), (58, 28328), (61, 28343), (63, 28358), (65, 28373), (71, 28409), (74, 28481),

Gene: Figliar_33 Start: 28608, Stop: 29459, Start Num: 1

Candidate Starts for Figliar_33:

(Start: 1 @28608 has 34 MA's), (2, 28629), (4, 28662), (5, 28710), (6, 28725), (13, 28872), (18, 28914), (19, 28917), (22, 28941), (25, 28977), (26, 28995), (27, 28998), (31, 29028), (37, 29079), (39, 29112), (40, 29127), (41, 29133), (61, 29316), (64, 29340), (70, 29379), (72, 29385), (73, 29424), (74, 29454),

Gene: FortCran_34 Start: 25604, Stop: 26458, Start Num: 1

Candidate Starts for FortCran_34:

(Start: 1 @25604 has 34 MA's), (2, 25625), (7, 25793), (11, 25847), (12, 25850), (13, 25868), (14, 25871), (18, 25910), (19, 25913), (20, 25916), (22, 25937), (23, 25946), (32, 26039), (39, 26111), (42, 26141), (44, 26168), (45, 26171), (47, 26192), (51, 26225), (54, 26246), (55, 26249), (60, 26312), (61, 26315), (65, 26345), (70, 26378),

Gene: Gill_30 Start: 25727, Stop: 26581, Start Num: 1

Candidate Starts for Gill_30:

(Start: 1 @25727 has 34 MA's), (2, 25748), (7, 25916), (11, 25970), (12, 25973), (13, 25991), (14, 25994), (18, 26033), (19, 26036), (20, 26039), (22, 26060), (23, 26069), (38, 26210), (39, 26234), (42, 26264), (44, 26291), (45, 26294), (47, 26315), (51, 26348), (55, 26372), (60, 26435), (61, 26438), (65, 26468), (70, 26501),

Gene: Gravy_30 Start: 25727, Stop: 26581, Start Num: 1

Candidate Starts for Gravy_30:

(Start: 1 @25727 has 34 MA's), (2, 25748), (7, 25916), (11, 25970), (12, 25973), (13, 25991), (14, 25994), (18, 26033), (19, 26036), (20, 26039), (22, 26060), (23, 26069), (38, 26210), (39, 26234), (42, 26264), (44, 26291), (45, 26294), (47, 26315), (51, 26348), (55, 26372), (58, 26423), (60, 26435), (61, 26438), (65, 26468), (70, 26501),

Gene: Hortihabitatio_34 Start: 28027, Stop: 28878, Start Num: 1

Candidate Starts for Hortihabitatio_34:

(Start: 1 @28027 has 34 MA's), (2, 28048), (6, 28144), (10, 28234), (14, 28294), (17, 28321), (18, 28333), (19, 28336), (24, 28384), (25, 28396), (27, 28417), (31, 28447), (38, 28507), (39, 28531), (41, 28552), (52, 28648), (61, 28735), (65, 28765), (70, 28798), (72, 28804), (74, 28873),

Gene: Hydrus_34 Start: 29125, Stop: 29976, Start Num: 1

Candidate Starts for Hydrus_34:

(Start: 1 @29125 has 34 MA's), (2, 29146), (4, 29179), (5, 29227), (6, 29242), (9, 29320), (13, 29389), (18, 29431), (19, 29434), (22, 29458), (25, 29494), (26, 29512), (27, 29515), (31, 29545), (38, 29605), (39, 29629), (41, 29650), (46, 29695), (61, 29833), (64, 29857), (70, 29896), (72, 29902), (74, 29971),

Gene: Jodelie19_34 Start: 30047, Stop: 30898, Start Num: 1

Candidate Starts for Jodelie19_34:

(Start: 1 @30047 has 34 MA's), (2, 30068), (4, 30101), (5, 30149), (6, 30164), (9, 30242), (13, 30311), (18, 30353), (19, 30356), (22, 30380), (25, 30416), (26, 30434), (27, 30437), (35, 30509), (37, 30518), (39, 30551), (40, 30566), (41, 30572), (61, 30755), (64, 30779), (70, 30818), (72, 30824), (73, 30863), (74, 30893),

Gene: Kenosha_33 Start: 29160, Stop: 30011, Start Num: 1

Candidate Starts for Kenosha_33:

(Start: 1 @29160 has 34 MA's), (2, 29181), (4, 29214), (5, 29262), (6, 29277), (9, 29355), (13, 29424), (18, 29466), (19, 29469), (22, 29493), (25, 29529), (26, 29547), (27, 29550), (31, 29580), (38, 29640), (39, 29664), (41, 29685), (46, 29730), (61, 29868), (64, 29892), (70, 29931), (72, 29937), (74, 30006),

Gene: Kerry_30 Start: 25727, Stop: 26581, Start Num: 1

Candidate Starts for Kerry_30:

(Start: 1 @25727 has 34 MA's), (2, 25748), (7, 25916), (11, 25970), (12, 25973), (13, 25991), (14, 25994), (18, 26033), (19, 26036), (20, 26039), (22, 26060), (23, 26069), (38, 26210), (39, 26234), (42, 26264), (44, 26291), (45, 26294), (47, 26315), (51, 26348), (55, 26372), (58, 26423), (60, 26435), (61, 26438), (65, 26468), (70, 26501),

Gene: Madvan_34 Start: 28392, Stop: 29243, Start Num: 1

Candidate Starts for Madvan_34:

(Start: 1 @28392 has 34 MA's), (2, 28413), (4, 28446), (5, 28494), (6, 28509), (9, 28587), (13, 28656), (18, 28698), (19, 28701), (22, 28725), (25, 28761), (26, 28779), (27, 28782), (31, 28812), (38, 28872), (39, 28896), (41, 28917), (46, 28962), (61, 29100), (64, 29124), (72, 29169), (74, 29238),

Gene: Magel_31 Start: 25635, Stop: 26489, Start Num: 1

Candidate Starts for Magel_31:

(Start: 1 @25635 has 34 MA's), (2, 25656), (7, 25824), (11, 25878), (12, 25881), (13, 25899), (14, 25902), (18, 25941), (19, 25944), (20, 25947), (22, 25968), (23, 25977), (38, 26118), (39, 26142), (42, 26172), (44, 26199), (45, 26202), (47, 26223), (51, 26256), (55, 26280), (58, 26331), (60, 26343), (61, 26346), (65, 26376), (70, 26409),

Gene: Mossy_34 Start: 29805, Stop: 30656, Start Num: 1

Candidate Starts for Mossy_34:

(Start: 1 @29805 has 34 MA's), (2, 29826), (4, 29859), (6, 29922), (10, 30012), (14, 30072), (17, 30099), (19, 30114), (24, 30162), (25, 30174), (27, 30195), (31, 30225), (39, 30309), (41, 30330), (52, 30426), (58, 30498), (61, 30513), (65, 30543), (70, 30576), (72, 30582), (74, 30651),

Gene: Nadmeg_34 Start: 29823, Stop: 30674, Start Num: 1

Candidate Starts for Nadmeg_34:

(Start: 1 @29823 has 34 MA's), (2, 29844), (4, 29877), (5, 29925), (6, 29940), (9, 30018), (13, 30087), (18, 30129), (19, 30132), (22, 30156), (25, 30192), (26, 30210), (27, 30213), (31, 30243), (38, 30303), (39, 30327), (41, 30348), (46, 30393), (61, 30531), (64, 30555), (72, 30600), (74, 30669),

Gene: Nithya_33 Start: 28607, Stop: 29458, Start Num: 1

Candidate Starts for Nithya_33:

(Start: 1 @28607 has 34 MA's), (2, 28628), (4, 28661), (5, 28709), (6, 28724), (8, 28799), (9, 28802), (13, 28871), (18, 28913), (19, 28916), (22, 28940), (25, 28976), (26, 28994), (27, 28997), (34, 29054), (37, 29078), (39, 29111), (41, 29132), (49, 29198), (56, 29279), (61, 29315), (64, 29339), (70, 29378), (72, 29384), (74, 29453),

Gene: Odesza_30 Start: 25727, Stop: 26581, Start Num: 1

Candidate Starts for Odesza_30:

(Start: 1 @25727 has 34 MA's), (2, 25748), (7, 25916), (11, 25970), (12, 25973), (13, 25991), (14, 25994), (18, 26033), (19, 26036), (20, 26039), (22, 26060), (23, 26069), (38, 26210), (39, 26234), (42, 26264), (44, 26291), (45, 26294), (47, 26315), (51, 26348), (55, 26372), (60, 26435), (61, 26438), (65, 26468), (70, 26501),

Gene: OhMyWard_33 Start: 29145, Stop: 29996, Start Num: 1

Candidate Starts for OhMyWard_33:

(Start: 1 @29145 has 34 MA's), (2, 29166), (6, 29262), (10, 29352), (14, 29412), (17, 29439), (19, 29454), (24, 29502), (25, 29514), (27, 29535), (30, 29547), (31, 29565), (39, 29649), (41, 29670), (52, 29766), (58, 29838), (61, 29853), (65, 29883), (70, 29916), (72, 29922), (74, 29991),

Gene: OlgasClover_33 Start: 29331, Stop: 30182, Start Num: 1

Candidate Starts for OlgasClover_33:

(Start: 1 @29331 has 34 MA's), (2, 29352), (4, 29385), (5, 29433), (6, 29448), (9, 29526), (13, 29595), (18, 29637), (19, 29640), (22, 29664), (25, 29700), (26, 29718), (27, 29721), (31, 29751), (37, 29802), (39, 29835), (40, 29850), (41, 29856), (61, 30039), (64, 30063), (70, 30102), (72, 30108), (73, 30147), (74, 30177),

Gene: Pepy6_036 Start: 35866, Stop: 36693, Start Num: 1

Candidate Starts for Pepy6_036:

(Start: 1 @35866 has 34 MA's), (2, 35887), (14, 36133), (15, 36142), (17, 36160), (23, 36208), (47, 36451), (56, 36520), (57, 36526), (59, 36544), (60, 36553), (66, 36589), (67, 36592), (74, 36688),

Gene: Perkunas_34 Start: 26126, Stop: 26977, Start Num: 1

Candidate Starts for Perkunas_34:

(Start: 1 @26126 has 34 MA's), (2, 26147), (7, 26315), (11, 26369), (12, 26372), (13, 26390), (14, 26393), (15, 26402), (17, 26420), (18, 26432), (19, 26435), (20, 26438), (22, 26459), (23, 26468), (28, 26522), (29, 26525), (36, 26594), (38, 26606), (39, 26630), (45, 26690), (47, 26711), (49, 26717), (50, 26726), (51, 26744), (54, 26765), (60, 26831), (61, 26834), (70, 26897),

Gene: Petito_30 Start: 26881, Stop: 27741, Start Num: 1

Candidate Starts for Petito_30:

(Start: 1 @26881 has 34 MA's), (2, 26902), (7, 27070), (11, 27124), (12, 27127), (13, 27145), (14, 27148), (16, 27169), (18, 27187), (19, 27190), (20, 27193), (22, 27214), (54, 27529), (55, 27532), (61, 27598), (62, 27607), (74, 27736),

Gene: Phepper_33 Start: 28390, Stop: 29241, Start Num: 1

Candidate Starts for Phepper_33:

(Start: 1 @28390 has 34 MA's), (2, 28411), (4, 28444), (5, 28492), (6, 28507), (9, 28585), (13, 28654), (18, 28696), (19, 28699), (22, 28723), (25, 28759), (26, 28777), (27, 28780), (30, 28792), (31, 28810), (38, 28870), (39, 28894), (41, 28915), (46, 28960), (48, 28978), (61, 29098), (64, 29122), (70, 29161), (72, 29167), (74, 29236),

Gene: Pherobrine_32 Start: 28424, Stop: 29275, Start Num: 1

Candidate Starts for Pherobrine_32:

(Start: 1 @28424 has 34 MA's), (2, 28445), (4, 28478), (6, 28541), (10, 28631), (14, 28691), (17, 28718), (19, 28733), (24, 28781), (25, 28793), (27, 28814), (31, 28844), (39, 28928), (41, 28949), (53, 29048), (58, 29117), (62, 29141), (63, 29147), (65, 29162), (71, 29198), (74, 29270),

Gene: POCO6_037 Start: 37888, Stop: 38715, Start Num: 1

Candidate Starts for POCO6_037:

(Start: 1 @37888 has 34 MA's), (2, 37909), (15, 38164), (19, 38197), (23, 38230), (24, 38245), (26, 38275), (47, 38473), (56, 38542), (57, 38548), (67, 38614), (69, 38638), (74, 38710),

Gene: Rickmore_32 Start: 27041, Stop: 27892, Start Num: 1

Candidate Starts for Rickmore_32:

(Start: 1 @27041 has 34 MA's), (2, 27062), (3, 27086), (6, 27158), (16, 27329), (17, 27335), (18, 27347), (19, 27350), (21, 27362), (22, 27374), (25, 27410), (27, 27431), (30, 27443), (37, 27512), (38, 27521), (39, 27545), (46, 27611), (56, 27713), (58, 27734), (61, 27749), (71, 27815), (74, 27887),

Gene: Roney_30 Start: 25727, Stop: 26581, Start Num: 1

Candidate Starts for Roney_30:

(Start: 1 @25727 has 34 MA's), (2, 25748), (7, 25916), (11, 25970), (12, 25973), (13, 25991), (14, 25994), (18, 26033), (19, 26036), (20, 26039), (22, 26060), (23, 26069), (38, 26210), (39, 26234), (42, 26264), (44, 26291), (45, 26294), (47, 26315), (51, 26348), (55, 26372), (60, 26435), (61, 26438), (65, 26468), (70, 26501),

Gene: Runhaar_33 Start: 28393, Stop: 29244, Start Num: 1

Candidate Starts for Runhaar_33:

(Start: 1 @28393 has 34 MA's), (2, 28414), (4, 28447), (5, 28495), (6, 28510), (9, 28588), (13, 28657), (18, 28699), (19, 28702), (22, 28726), (25, 28762), (26, 28780), (27, 28783), (31, 28813), (38, 28873),

(39, 28897), (41, 28918), (46, 28963), (61, 29101), (64, 29125), (70, 29164), (71, 29167), (72, 29170), (74, 29239),

Gene: Schwartz33_34 Start: 28724, Stop: 29578, Start Num: 1

Candidate Starts for Schwartz33_34:

(Start: 1 @28724 has 34 MA's), (2, 28745), (6, 28841), (10, 28931), (11, 28967), (13, 28988), (16, 29012), (19, 29033), (22, 29057), (26, 29111), (27, 29114), (28, 29120), (31, 29144), (33, 29168), (43, 29267), (52, 29345), (54, 29363), (56, 29396), (61, 29432), (63, 29447), (65, 29462), (74, 29573),

Gene: Secretariat_31 Start: 27455, Stop: 28309, Start Num: 1

Candidate Starts for Secretariat_31:

(Start: 1 @27455 has 34 MA's), (2, 27476), (10, 27662), (11, 27698), (12, 27701), (13, 27719), (18, 27761), (19, 27764), (21, 27776), (22, 27788), (29, 27854), (31, 27875), (37, 27926), (49, 28046), (52, 28076), (54, 28094), (67, 28199), (74, 28304),

Gene: Tanis_30 Start: 25577, Stop: 26431, Start Num: 1

Candidate Starts for Tanis_30:

(Start: 1 @25577 has 34 MA's), (2, 25598), (7, 25766), (11, 25820), (12, 25823), (13, 25841), (14, 25844), (18, 25883), (19, 25886), (20, 25889), (22, 25910), (23, 25919), (38, 26060), (39, 26084), (42, 26114), (44, 26141), (45, 26144), (47, 26165), (51, 26198), (55, 26222), (58, 26273), (60, 26285), (61, 26288), (65, 26318), (70, 26351),

Gene: TenaciousP_37 Start: 30047, Stop: 30898, Start Num: 1

Candidate Starts for TenaciousP_37:

(Start: 1 @30047 has 34 MA's), (2, 30068), (4, 30101), (5, 30149), (6, 30164), (9, 30242), (13, 30311), (18, 30353), (19, 30356), (22, 30380), (25, 30416), (26, 30434), (27, 30437), (31, 30467), (37, 30518), (39, 30551), (40, 30566), (41, 30572), (61, 30755), (64, 30779), (70, 30818), (72, 30824), (73, 30863), (74, 30893),

Gene: Untouchable_33 Start: 28749, Stop: 29600, Start Num: 1

Candidate Starts for Untouchable_33:

(Start: 1 @28749 has 34 MA's), (2, 28770), (4, 28803), (5, 28851), (6, 28866), (9, 28944), (13, 29013), (18, 29055), (19, 29058), (22, 29082), (25, 29118), (26, 29136), (27, 29139), (31, 29169), (38, 29229), (39, 29253), (41, 29274), (46, 29319), (61, 29457), (64, 29481), (72, 29526), (74, 29595),

Gene: Vardy_33 Start: 28358, Stop: 29209, Start Num: 1

Candidate Starts for Vardy_33:

(Start: 1 @28358 has 34 MA's), (2, 28379), (4, 28412), (5, 28460), (6, 28475), (9, 28553), (13, 28622), (18, 28664), (19, 28667), (22, 28691), (25, 28727), (26, 28745), (27, 28748), (31, 28778), (38, 28838), (39, 28862), (41, 28883), (46, 28928), (61, 29066), (64, 29090), (70, 29129), (71, 29132), (72, 29135), (74, 29204),

Gene: Zeph_35 Start: 29107, Stop: 29958, Start Num: 1

Candidate Starts for Zeph_35:

(Start: 1 @29107 has 34 MA's), (2, 29128), (4, 29161), (5, 29209), (6, 29224), (9, 29302), (13, 29371), (18, 29413), (19, 29416), (22, 29440), (25, 29476), (26, 29494), (27, 29497), (31, 29527), (38, 29587), (39, 29611), (41, 29632), (46, 29677), (61, 29815), (64, 29839), (70, 29878), (72, 29884), (74, 29953),