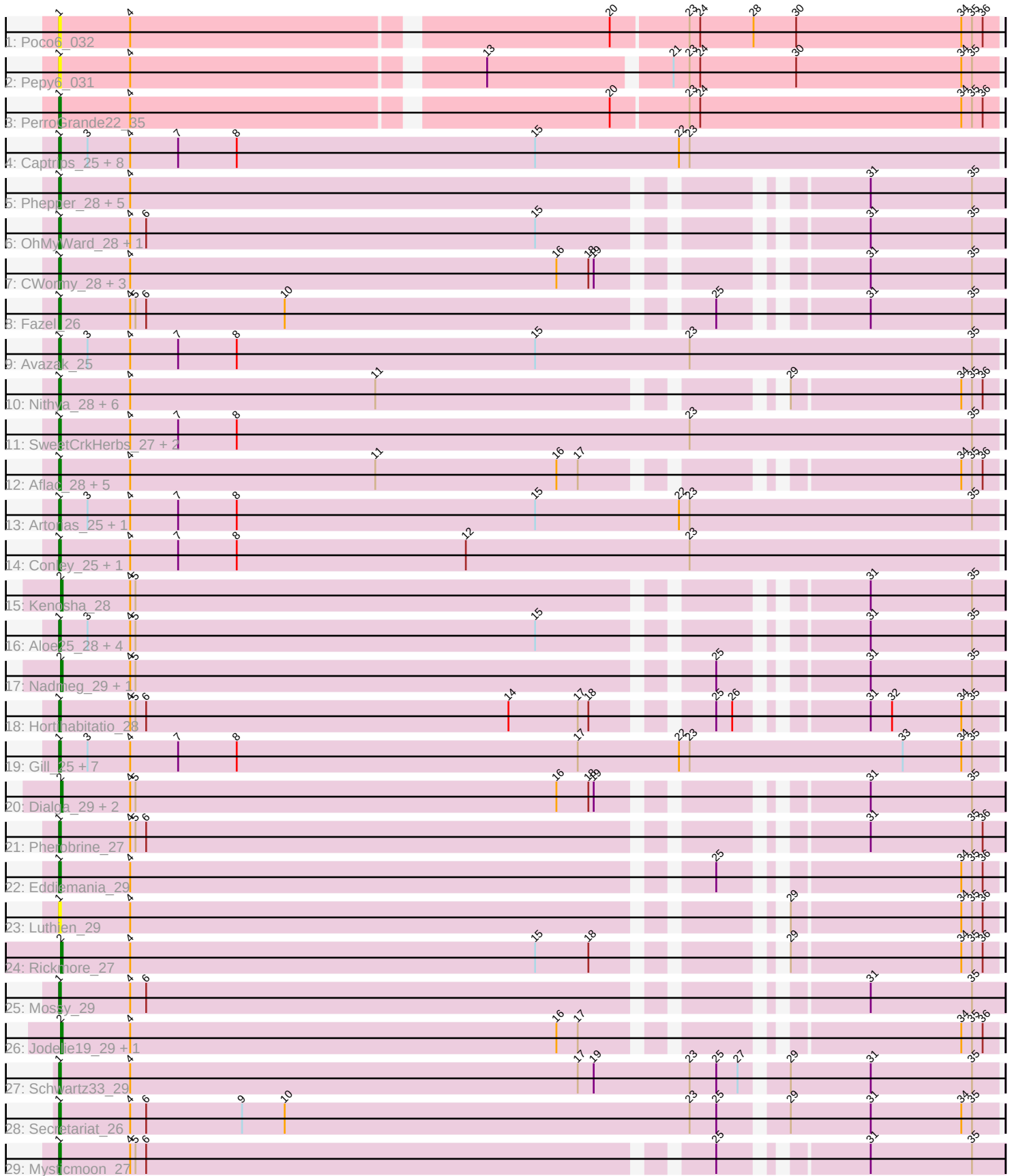


Pham 315384



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 315384 Report

This analysis was run 09/05/26 on database version 662.

Pham number 315384 has 76 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Poco6_032
- Track 2 : Pepy6_031
- Track 3 : PerroGrande22_35
- Track 4 : Captrips_25, NoPickles_25, Football_26, Tairn4Wing_27, Dancer_25, ChickyNuggy_26, JulesRay_25, Trufflozitus_25, Bugg_26
- Track 5 : Phepper_28, Burley_28, Runhaar_28, Zeph_29, Vardy_28, Hydrus_29
- Track 6 : OhMyWard_28, Blanky_28
- Track 7 : CWormy_28, Arataki_27, Demure_27, Madvan_28
- Track 8 : Fazel_26
- Track 9 : Avazak_25
- Track 10 : Nithya_28, AlainaMarie_28, Citrus_27, Glintora_28, Duffington_28, Chickenjars_28, EndAve_28
- Track 11 : SweetCrkHerbs_27, Perkunas_27, Talon44_26
- Track 12 : Aflac_28, BluerMoon_28, Figliar_28, MajinBuu_28, OlgasClover_28, Tonaltzin_28
- Track 13 : Artorias_25, FortCran_25
- Track 14 : Conley_25, Petite_26
- Track 15 : Kenosha_28
- Track 16 : Aloe25_28, Gusicorn_28, PestoPenguin_28, BetterYeti_28, ShaggyRogers_28
- Track 17 : Nadmeg_29, ArtetaBall_29
- Track 18 : Hortihabitatio_28
- Track 19 : Gill_25, Tanis_25, Odesza_25, Magel_25, Gravy_25, Capybara_25, Kerry_25, Roney_25
- Track 20 : Dialga_29, Crocheter_28, Untouchable_28
- Track 21 : Pherobrine_27
- Track 22 : Eddiemania_29
- Track 23 : Luthien_29
- Track 24 : Rickmore_27
- Track 25 : Mossy_29
- Track 26 : Jodelie19_29, TenaciousP_29
- Track 27 : Schwartz33_29
- Track 28 : Secretariat_26
- Track 29 : Mysticmoon_27

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 55 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aflac_28, AlainaMarie_28, Aloe25_28, Arataki_27, Artorias_25, Avazak_25, BetterYeti_28, Blanky_28, BluerMoon_28, Bugg_26, Burley_28, CWormy_28, Captrips_25, Cappybara_25, ChickyNuggy_26, Chickenjars_28, Citrus_27, Conley_25, Dancer_25, Demure_27, Duffington_28, Eddiemania_29, EndAve_28, Fazel_26, Figliar_28, Football_26, FortCran_25, Gill_25, Glintora_28, Gravy_25, Gusicorn_28, Hortihabitatio_28, Hydrus_29, JulesRay_25, Kerry_25, Luthien_29, Madvan_28, Magel_25, MajinBuu_28, Mossy_29, Mysticmoon_27, Nithya_28, NoPickles_25, Odesza_25, OhMyWard_28, OlgasClover_28, Pepy6_031, Perkunas_27, PerroGrande22_35, PestoPenguin_28, Petito_26, Phepper_28, Pherobrine_27, Poco6_032, Roney_25, Runhaar_28, Schwartz33_29, Secretariat_26, ShaggyRogers_28, SweetCrkHerbs_27, Tairn4Wing_27, Talon44_26, Tanis_25, Tonaltzin_28, Trufflozitus_25, Vardy_28, Zeph_29,

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

-

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

- ArtetaBall_29, Crocheter_28, Dialga_29, Jodelie19_29, Kenosha_28, Nadmeg_29, Rickmore_27, TenaciousP_29, Untouchable_28,

Summary by start number:

Start 1:

- Found in 67 of 76 (88.2%) of genes in pham
- Manual Annotations of this start: 55 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aflac_28 (DJ), AlainaMarie_28 (DJ), Aloe25_28 (DJ), Arataki_27 (DJ), Artorias_25 (DJ), Avazak_25 (DJ), BetterYeti_28 (DJ), Blanky_28 (DJ), BluerMoon_28 (DJ), Bugg_26 (DJ), Burley_28 (DJ), CWormy_28 (DJ), Captrips_25 (DJ), Cappybara_25 (DJ), ChickyNuggy_26 (DJ), Chickenjars_28 (DJ), Citrus_27 (DJ), Conley_25 (DJ), Dancer_25 (DJ), Demure_27 (DJ), Duffington_28 (DJ), Eddiemania_29 (DJ), EndAve_28 (DJ), Fazel_26 (DJ), Figliar_28 (DJ), Football_26 (DJ), FortCran_25 (DJ), Gill_25 (DJ), Glintora_28 (DJ), Gravy_25 (DJ), Gusicorn_28 (DJ), Hortihabitatio_28 (DJ), Hydrus_29 (DJ), JulesRay_25 (DJ), Kerry_25 (DJ), Luthien_29 (DJ), Madvan_28 (DJ), Magel_25 (DJ), MajinBuu_28 (DJ), Mossy_29 (DJ), Mysticmoon_27 (DJ), Nithya_28 (DJ), NoPickles_25 (DJ), Odesza_25 (DJ), OhMyWard_28 (DJ), OlgasClover_28 (DJ), Pepy6_031 (CC), Perkunas_27 (DJ), PerroGrande22_35 (CC), PestoPenguin_28 (DJ), Petito_26 (DJ), Phepper_28 (DJ), Pherobrine_27 (DJ), Poco6_032 (CC), Roney_25 (DJ), Runhaar_28 (DJ), Schwartz33_29 (DJ), Secretariat_26 (DJ), ShaggyRogers_28 (DJ), SweetCrkHerbs_27 (DJ), Tairn4Wing_27 (DJ), Talon44_26 (DJ), Tanis_25 (DJ), Tonaltzin_28 (DJ), Trufflozitus_25 (DJ), Vardy_28 (DJ), Zeph_29 (DJ),

Start 2:

- Found in 9 of 76 (11.8%) of genes in pham

- Manual Annotations of this start: 7 of 62
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArtetaBall_29 (DJ), Crocheter_28 (DJ), Dialga_29 (DJ), Jodelie19_29 (DJ), Kenosha_28 (DJ), Nadmeg_29 (DJ), Rickmore_27 (DJ), TenaciousP_29 (DJ), Untouchable_28 (DJ),

Summary by clusters:

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

Info for manual annotations of cluster CC:

- Start number 1 was manually annotated 1 time for cluster CC.

Info for manual annotations of cluster DJ:

- Start number 1 was manually annotated 54 times for cluster DJ.
- Start number 2 was manually annotated 7 times for cluster DJ.

Gene Information:

Gene: Aflac_28 Start: 20773, Stop: 21261, Start Num: 1

Candidate Starts for Aflac_28:

(Start: 1 @20773 has 55 MA's), (4, 20812), (11, 20950), (16, 21052), (17, 21064), (34, 21241), (35, 21247), (36, 21253),

Gene: AlainaMarie_28 Start: 20760, Stop: 21248, Start Num: 1

Candidate Starts for AlainaMarie_28:

(Start: 1 @20760 has 55 MA's), (4, 20799), (11, 20937), (29, 21135), (34, 21228), (35, 21234), (36, 21240),

Gene: Aloe25_28 Start: 20552, Stop: 21043, Start Num: 1

Candidate Starts for Aloe25_28:

(Start: 1 @20552 has 55 MA's), (3, 20567), (4, 20591), (5, 20594), (15, 20819), (31, 20969), (35, 21026),

Gene: Arataki_27 Start: 19868, Stop: 20359, Start Num: 1

Candidate Starts for Arataki_27:

(Start: 1 @19868 has 55 MA's), (4, 19907), (16, 20147), (18, 20165), (19, 20168), (31, 20285), (35, 20342),

Gene: ArtetaBall_29 Start: 20904, Stop: 21395, Start Num: 2

Candidate Starts for ArtetaBall_29:

(Start: 2 @20904 has 7 MA's), (4, 20943), (5, 20946), (25, 21255), (31, 21321), (35, 21378),

Gene: Artorias_25 Start: 18123, Stop: 18650, Start Num: 1

Candidate Starts for Artorias_25:

(Start: 1 @18123 has 55 MA's), (3, 18138), (4, 18162), (7, 18189), (8, 18222), (15, 18390), (22, 18471), (23, 18477), (35, 18636),

Gene: Avazak_25 Start: 18130, Stop: 18657, Start Num: 1

Candidate Starts for Avazak_25:

(Start: 1 @18130 has 55 MA's), (3, 18145), (4, 18169), (7, 18196), (8, 18229), (15, 18397), (23, 18484), (35, 18643),

Gene: BetterYeti_28 Start: 20552, Stop: 21043, Start Num: 1

Candidate Starts for BetterYeti_28:

(Start: 1 @20552 has 55 MA's), (3, 20567), (4, 20591), (5, 20594), (15, 20819), (31, 20969), (35, 21026),

Gene: Blanky_28 Start: 21764, Stop: 22255, Start Num: 1

Candidate Starts for Blanky_28:

(Start: 1 @21764 has 55 MA's), (4, 21803), (6, 21812), (15, 22031), (31, 22181), (35, 22238),

Gene: BluerMoon_28 Start: 20767, Stop: 21255, Start Num: 1

Candidate Starts for BluerMoon_28:

(Start: 1 @20767 has 55 MA's), (4, 20806), (11, 20944), (16, 21046), (17, 21058), (34, 21235), (35, 21241), (36, 21247),

Gene: Bugg_26 Start: 18137, Stop: 18664, Start Num: 1

Candidate Starts for Bugg_26:

(Start: 1 @18137 has 55 MA's), (3, 18152), (4, 18176), (7, 18203), (8, 18236), (15, 18404), (22, 18485), (23, 18491),

Gene: Burley_28 Start: 20513, Stop: 21004, Start Num: 1

Candidate Starts for Burley_28:

(Start: 1 @20513 has 55 MA's), (4, 20552), (31, 20930), (35, 20987),

Gene: CWormy_28 Start: 20212, Stop: 20703, Start Num: 1

Candidate Starts for CWormy_28:

(Start: 1 @20212 has 55 MA's), (4, 20251), (16, 20491), (18, 20509), (19, 20512), (31, 20629), (35, 20686),

Gene: Captrips_25 Start: 18130, Stop: 18657, Start Num: 1

Candidate Starts for Captrips_25:

(Start: 1 @18130 has 55 MA's), (3, 18145), (4, 18169), (7, 18196), (8, 18229), (15, 18397), (22, 18478), (23, 18484),

Gene: Capybara_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for Capybara_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (17, 18140), (22, 18197), (23, 18203), (33, 18323), (34, 18356), (35, 18362),

Gene: ChickyNuggy_26 Start: 17842, Stop: 18369, Start Num: 1

Candidate Starts for ChickyNuggy_26:

(Start: 1 @17842 has 55 MA's), (3, 17857), (4, 17881), (7, 17908), (8, 17941), (15, 18109), (22, 18190), (23, 18196),

Gene: Chickenjars_28 Start: 20763, Stop: 21251, Start Num: 1

Candidate Starts for Chickenjars_28:

(Start: 1 @20763 has 55 MA's), (4, 20802), (11, 20940), (29, 21138), (34, 21231), (35, 21237), (36, 21243),

Gene: Citrus_27 Start: 20767, Stop: 21255, Start Num: 1

Candidate Starts for Citrus_27:

(Start: 1 @20767 has 55 MA's), (4, 20806), (11, 20944), (29, 21142), (34, 21235), (35, 21241), (36, 21247),

Gene: Conley_25 Start: 18148, Stop: 18675, Start Num: 1

Candidate Starts for Conley_25:

(Start: 1 @18148 has 55 MA's), (4, 18187), (7, 18214), (8, 18247), (12, 18376), (23, 18502),

Gene: Crocheter_28 Start: 20904, Stop: 21395, Start Num: 2

Candidate Starts for Crocheter_28:

(Start: 2 @20904 has 7 MA's), (4, 20943), (5, 20946), (16, 21183), (18, 21201), (19, 21204), (31, 21321), (35, 21378),

Gene: Dancer_25 Start: 17830, Stop: 18357, Start Num: 1

Candidate Starts for Dancer_25:

(Start: 1 @17830 has 55 MA's), (3, 17845), (4, 17869), (7, 17896), (8, 17929), (15, 18097), (22, 18178), (23, 18184),

Gene: Demure_27 Start: 19868, Stop: 20359, Start Num: 1

Candidate Starts for Demure_27:

(Start: 1 @19868 has 55 MA's), (4, 19907), (16, 20147), (18, 20165), (19, 20168), (31, 20285), (35, 20342),

Gene: Dialga_29 Start: 20926, Stop: 21417, Start Num: 2

Candidate Starts for Dialga_29:

(Start: 2 @20926 has 7 MA's), (4, 20965), (5, 20968), (16, 21205), (18, 21223), (19, 21226), (31, 21343), (35, 21400),

Gene: Duffington_28 Start: 20748, Stop: 21236, Start Num: 1

Candidate Starts for Duffington_28:

(Start: 1 @20748 has 55 MA's), (4, 20787), (11, 20925), (29, 21123), (34, 21216), (35, 21222), (36, 21228),

Gene: Eddiemania_29 Start: 21410, Stop: 21898, Start Num: 1

Candidate Starts for Eddiemania_29:

(Start: 1 @21410 has 55 MA's), (4, 21449), (25, 21761), (34, 21878), (35, 21884), (36, 21890),

Gene: EndAve_28 Start: 20763, Stop: 21251, Start Num: 1

Candidate Starts for EndAve_28:

(Start: 1 @20763 has 55 MA's), (4, 20802), (11, 20940), (29, 21138), (34, 21231), (35, 21237), (36, 21243),

Gene: Fazel_26 Start: 19799, Stop: 20290, Start Num: 1

Candidate Starts for Fazel_26:

(Start: 1 @19799 has 55 MA's), (4, 19838), (5, 19841), (6, 19847), (10, 19925), (25, 20150), (31, 20216), (35, 20273),

Gene: Figliar_28 Start: 20773, Stop: 21261, Start Num: 1

Candidate Starts for Figliar_28:

(Start: 1 @20773 has 55 MA's), (4, 20812), (11, 20950), (16, 21052), (17, 21064), (34, 21241), (35, 21247), (36, 21253),

Gene: Football_26 Start: 17842, Stop: 18369, Start Num: 1

Candidate Starts for Football_26:

(Start: 1 @17842 has 55 MA's), (3, 17857), (4, 17881), (7, 17908), (8, 17941), (15, 18109), (22, 18190), (23, 18196),

Gene: FortCran_25 Start: 18123, Stop: 18650, Start Num: 1

Candidate Starts for FortCran_25:

(Start: 1 @18123 has 55 MA's), (3, 18138), (4, 18162), (7, 18189), (8, 18222), (15, 18390), (22, 18471), (23, 18477), (35, 18636),

Gene: Gill_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for Gill_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (17, 18140), (22, 18197), (23, 18203), (33, 18323), (34, 18356), (35, 18362),

Gene: Glintora_28 Start: 20733, Stop: 21221, Start Num: 1

Candidate Starts for Glintora_28:

(Start: 1 @20733 has 55 MA's), (4, 20772), (11, 20910), (29, 21108), (34, 21201), (35, 21207), (36, 21213),

Gene: Gravy_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for Gravy_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (17, 18140), (22, 18197), (23, 18203), (33, 18323), (34, 18356), (35, 18362),

Gene: Gusicorn_28 Start: 20552, Stop: 21043, Start Num: 1

Candidate Starts for Gusicorn_28:

(Start: 1 @20552 has 55 MA's), (3, 20567), (4, 20591), (5, 20594), (15, 20819), (31, 20969), (35, 21026),

Gene: Hortihabitatio_28 Start: 20183, Stop: 20671, Start Num: 1

Candidate Starts for Hortihabitatio_28:

(Start: 1 @20183 has 55 MA's), (4, 20222), (5, 20225), (6, 20231), (14, 20435), (17, 20474), (18, 20480), (25, 20534), (26, 20543), (31, 20600), (32, 20612), (34, 20651), (35, 20657),

Gene: Hydrus_29 Start: 21280, Stop: 21771, Start Num: 1

Candidate Starts for Hydrus_29:

(Start: 1 @21280 has 55 MA's), (4, 21319), (31, 21697), (35, 21754),

Gene: Jodelie19_29 Start: 22197, Stop: 22685, Start Num: 2

Candidate Starts for Jodelie19_29:

(Start: 2 @22197 has 7 MA's), (4, 22236), (16, 22476), (17, 22488), (34, 22665), (35, 22671), (36, 22677),

Gene: JulesRay_25 Start: 18124, Stop: 18651, Start Num: 1

Candidate Starts for JulesRay_25:

(Start: 1 @18124 has 55 MA's), (3, 18139), (4, 18163), (7, 18190), (8, 18223), (15, 18391), (22, 18472), (23, 18478),

Gene: Kenosha_28 Start: 21315, Stop: 21806, Start Num: 2

Candidate Starts for Kenosha_28:

(Start: 2 @21315 has 7 MA's), (4, 21354), (5, 21357), (31, 21732), (35, 21789),

Gene: Kerry_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for Kerry_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (17, 18140), (22, 18197), (23, 18203), (33, 18323), (34, 18356), (35, 18362),

Gene: Luthien_29 Start: 20761, Stop: 21249, Start Num: 1

Candidate Starts for Luthien_29:

(Start: 1 @20761 has 55 MA's), (4, 20800), (29, 21136), (34, 21229), (35, 21235), (36, 21241),

Gene: Madvan_28 Start: 20546, Stop: 21037, Start Num: 1

Candidate Starts for Madvan_28:

(Start: 1 @20546 has 55 MA's), (4, 20585), (16, 20825), (18, 20843), (19, 20846), (31, 20963), (35, 21020),

Gene: Magel_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for Magel_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (17, 18140), (22, 18197), (23, 18203), (33, 18323), (34, 18356), (35, 18362),

Gene: MajinBuu_28 Start: 20768, Stop: 21256, Start Num: 1

Candidate Starts for MajinBuu_28:

(Start: 1 @20768 has 55 MA's), (4, 20807), (11, 20945), (16, 21047), (17, 21059), (34, 21236), (35, 21242), (36, 21248),

Gene: Mossy_29 Start: 21979, Stop: 22470, Start Num: 1

Candidate Starts for Mossy_29:

(Start: 1 @21979 has 55 MA's), (4, 22018), (6, 22027), (31, 22396), (35, 22453),

Gene: Mysticmoon_27 Start: 20579, Stop: 21070, Start Num: 1

Candidate Starts for Mysticmoon_27:

(Start: 1 @20579 has 55 MA's), (4, 20618), (5, 20621), (6, 20627), (25, 20930), (31, 20996), (35, 21053),

Gene: Nadmeg_29 Start: 21978, Stop: 22469, Start Num: 2

Candidate Starts for Nadmeg_29:

(Start: 2 @21978 has 7 MA's), (4, 22017), (5, 22020), (25, 22329), (31, 22395), (35, 22452),

Gene: Nithya_28 Start: 20760, Stop: 21248, Start Num: 1

Candidate Starts for Nithya_28:

(Start: 1 @20760 has 55 MA's), (4, 20799), (11, 20937), (29, 21135), (34, 21228), (35, 21234), (36, 21240),

Gene: NoPickles_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for NoPickles_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (15, 18116), (22, 18197), (23, 18203),

Gene: Odesza_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for Odesza_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (17, 18140), (22, 18197), (23, 18203), (33, 18323), (34, 18356), (35, 18362),

Gene: OhMyWard_28 Start: 21319, Stop: 21810, Start Num: 1

Candidate Starts for OhMyWard_28:

(Start: 1 @21319 has 55 MA's), (4, 21358), (6, 21367), (15, 21586), (31, 21736), (35, 21793),

Gene: OlgasClover_28 Start: 21496, Stop: 21984, Start Num: 1

Candidate Starts for OlgasClover_28:

(Start: 1 @21496 has 55 MA's), (4, 21535), (11, 21673), (16, 21775), (17, 21787), (34, 21964), (35, 21970), (36, 21976),

Gene: Pepy6_031 Start: 27232, Stop: 27735, Start Num: 1

Candidate Starts for Pepy6_031:

(Start: 1 @27232 has 55 MA's), (4, 27271), (13, 27457), (21, 27553), (23, 27562), (24, 27568), (30, 27622), (34, 27715), (35, 27721),

Gene: Perkunas_27 Start: 18645, Stop: 19172, Start Num: 1

Candidate Starts for Perkunas_27:

(Start: 1 @18645 has 55 MA's), (4, 18684), (7, 18711), (8, 18744), (23, 18999), (35, 19158),

Gene: PerroGrande22_35 Start: 28552, Stop: 29061, Start Num: 1

Candidate Starts for PerroGrande22_35:

(Start: 1 @28552 has 55 MA's), (4, 28591), (20, 28846), (23, 28888), (24, 28894), (34, 29041), (35, 29047), (36, 29053),

Gene: PestoPenguin_28 Start: 20552, Stop: 21043, Start Num: 1

Candidate Starts for PestoPenguin_28:

(Start: 1 @20552 has 55 MA's), (3, 20567), (4, 20591), (5, 20594), (15, 20819), (31, 20969), (35, 21026),

Gene: Petito_26 Start: 18341, Stop: 18868, Start Num: 1

Candidate Starts for Petito_26:

(Start: 1 @18341 has 55 MA's), (4, 18380), (7, 18407), (8, 18440), (12, 18569), (23, 18695),

Gene: Phepper_28 Start: 20545, Stop: 21036, Start Num: 1

Candidate Starts for Phepper_28:

(Start: 1 @20545 has 55 MA's), (4, 20584), (31, 20962), (35, 21019),

Gene: Pherobrine_27 Start: 20577, Stop: 21068, Start Num: 1

Candidate Starts for Pherobrine_27:

(Start: 1 @20577 has 55 MA's), (4, 20616), (5, 20619), (6, 20625), (31, 20994), (35, 21051), (36, 21057),

Gene: Poco6_032 Start: 29245, Stop: 29754, Start Num: 1

Candidate Starts for Poco6_032:

(Start: 1 @29245 has 55 MA's), (4, 29284), (20, 29539), (23, 29581), (24, 29587), (28, 29617), (30, 29641), (34, 29734), (35, 29740), (36, 29746),

Gene: Rickmore_27 Start: 19194, Stop: 19682, Start Num: 2

Candidate Starts for Rickmore_27:

(Start: 2 @19194 has 7 MA's), (4, 19233), (15, 19461), (18, 19491), (29, 19569), (34, 19662), (35, 19668), (36, 19674),

Gene: Roney_25 Start: 17849, Stop: 18376, Start Num: 1

Candidate Starts for Roney_25:

(Start: 1 @17849 has 55 MA's), (3, 17864), (4, 17888), (7, 17915), (8, 17948), (17, 18140), (22, 18197), (23, 18203), (33, 18323), (34, 18356), (35, 18362),

Gene: Runhaar_28 Start: 20547, Stop: 21038, Start Num: 1
Candidate Starts for Runhaar_28:
(Start: 1 @20547 has 55 MA's), (4, 20586), (31, 20964), (35, 21021),

Gene: Schwartz33_29 Start: 20880, Stop: 21398, Start Num: 1
Candidate Starts for Schwartz33_29:
(Start: 1 @20880 has 55 MA's), (4, 20919), (17, 21171), (19, 21180), (23, 21234), (25, 21249), (27, 21261), (29, 21282), (31, 21327), (35, 21384),

Gene: Secretariat_26 Start: 19604, Stop: 20122, Start Num: 1
Candidate Starts for Secretariat_26:
(Start: 1 @19604 has 55 MA's), (4, 19643), (6, 19652), (9, 19706), (10, 19730), (23, 19958), (25, 19973), (29, 20006), (31, 20051), (34, 20102), (35, 20108),

Gene: ShaggyRogers_28 Start: 20551, Stop: 21042, Start Num: 1
Candidate Starts for ShaggyRogers_28:
(Start: 1 @20551 has 55 MA's), (3, 20566), (4, 20590), (5, 20593), (15, 20818), (31, 20968), (35, 21025),

Gene: SweetCrkHerbs_27 Start: 18318, Stop: 18845, Start Num: 1
Candidate Starts for SweetCrkHerbs_27:
(Start: 1 @18318 has 55 MA's), (4, 18357), (7, 18384), (8, 18417), (23, 18672), (35, 18831),

Gene: Tairn4Wing_27 Start: 18122, Stop: 18649, Start Num: 1
Candidate Starts for Tairn4Wing_27:
(Start: 1 @18122 has 55 MA's), (3, 18137), (4, 18161), (7, 18188), (8, 18221), (15, 18389), (22, 18470), (23, 18476),

Gene: Talon44_26 Start: 18318, Stop: 18845, Start Num: 1
Candidate Starts for Talon44_26:
(Start: 1 @18318 has 55 MA's), (4, 18357), (7, 18384), (8, 18417), (23, 18672), (35, 18831),

Gene: Tanis_25 Start: 17699, Stop: 18226, Start Num: 1
Candidate Starts for Tanis_25:
(Start: 1 @17699 has 55 MA's), (3, 17714), (4, 17738), (7, 17765), (8, 17798), (17, 17990), (22, 18047), (23, 18053), (33, 18173), (34, 18206), (35, 18212),

Gene: TenaciousP_29 Start: 22197, Stop: 22685, Start Num: 2
Candidate Starts for TenaciousP_29:
(Start: 2 @22197 has 7 MA's), (4, 22236), (16, 22476), (17, 22488), (34, 22665), (35, 22671), (36, 22677),

Gene: Tonaltzin_28 Start: 20767, Stop: 21255, Start Num: 1
Candidate Starts for Tonaltzin_28:
(Start: 1 @20767 has 55 MA's), (4, 20806), (11, 20944), (16, 21046), (17, 21058), (34, 21235), (35, 21241), (36, 21247),

Gene: Trufflozitus_25 Start: 18123, Stop: 18650, Start Num: 1
Candidate Starts for Trufflozitus_25:
(Start: 1 @18123 has 55 MA's), (3, 18138), (4, 18162), (7, 18189), (8, 18222), (15, 18390), (22, 18471), (23, 18477),

Gene: Untouchable_28 Start: 20903, Stop: 21394, Start Num: 2

Candidate Starts for Untouchable_28:

(Start: 2 @20903 has 7 MA's), (4, 20942), (5, 20945), (16, 21182), (18, 21200), (19, 21203), (31, 21320), (35, 21377),

Gene: Vardy_28 Start: 20512, Stop: 21003, Start Num: 1

Candidate Starts for Vardy_28:

(Start: 1 @20512 has 55 MA's), (4, 20551), (31, 20929), (35, 20986),

Gene: Zeph_29 Start: 21262, Stop: 21753, Start Num: 1

Candidate Starts for Zeph_29:

(Start: 1 @21262 has 55 MA's), (4, 21301), (31, 21679), (35, 21736),