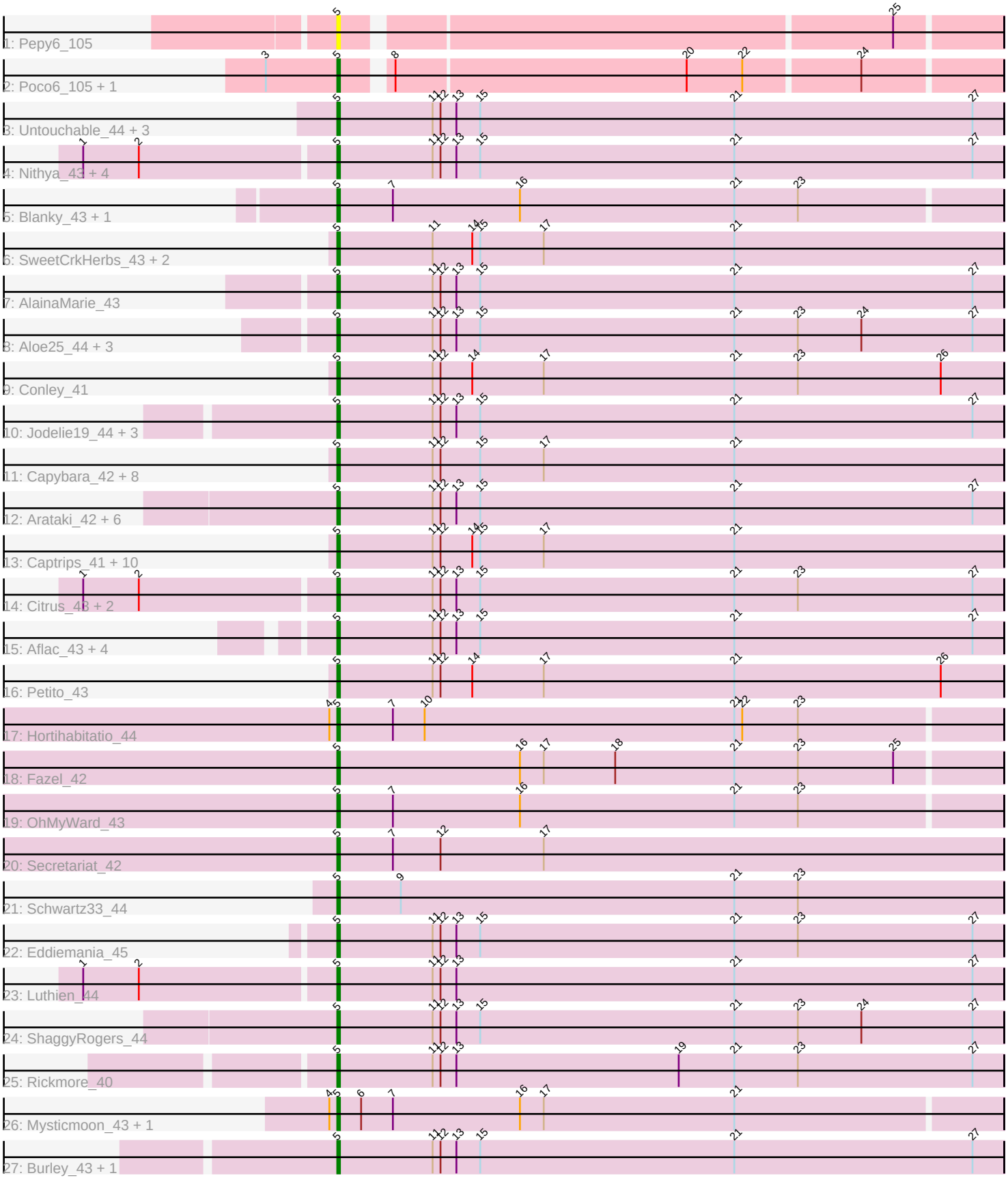
Pham 334755


1: Pepy6_105
2: Poco6_105 + 1
3: Untouchable_44 + 3
4: Nithya_43 + 4
5: Blanky_43 + 1
6: SweetCrkHerbs_43 + 2
7: AlainaMarie_43
8: Aloe25_44 + 3
9: Conley_41
10: Jodelie19_44 + 3
11: Capybara_42 + 8
12: Arataki_42 + 6
13: Captrips_41 + 10
14: Citrus_43 + 2
15: Aflac_43 + 4
16: Petito_43
17: Hortihabitatio_44
18: Fazel_42
19: OhMyWard_43
20: Secretariat_42
21: Schwartz33_44
22: Eddiemania_45
23: Luthien_44
24: ShaggyRogers_44
25: Rickmore_40
26: Mysticmoon_43 + 1
27: Burley_43 + 1

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 334755 Report

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

Pham number 334755 has 76 members, 12 are drafts.

Phages represented in each track:
• Track 1 : Pepy6_105
• Track 2 : Poco6_105, PerroGrande22_56
• Track 3 : Untouchable_44, Phepper_44, Hydrus_45, Zeph_45
• Track 4 : Nithya_43, CWormy_43, Duffington_42, Chikenjars_43, EndAve_44
• Track 5 : Blanky_43, Mossy_46
• Track 6 : SweetCrkHerbs_43, Perkunas_43, Talon44_43
• Track 7 : AlainaMarie_43
• Track 8 : Aloe25_44, Gusicorn_44, PestoPenguin_45, BetterYeti_44
• Track 9 : Conley_41
• Track 10 : Jodelie19_44, MajinBuu_43, Kenosha_43, Figliar_43
• Track 11 : Capybara_42, Gravy_41, Gill_42, NoPickles_41, Magel_43, Odesza_41, Roney_42, Tanis_42, Kerry_41
• Track 12 : Arataki_42, Nadmeg_44, Dialga_44, ArtetaBall_44, Madvan_43, Demure_42, Crocheter_43
• Track 13 : Captrips_41, Avazak_42, Artorias_41, Tairn4Wing_44, FortCran_41, Dancer_41, JulesRay_41, ChickyNuggy_43, Trufflozitus_42, Bugg_42, Football_43
• Track 14 : Citrus_43, Runhaar_44, Glintora_45
• Track 15 : Aflac_43, BluerMoon_43, Tonaltzin_43, OlgasClover_44, TenaciousP_44
• Track 16 : Petito_43
• Track 17 : Hortihabitatio_44
• Track 18 : Fazel_42
• Track 19 : OhMyWard_43
• Track 20 : Secretariat_42
• Track 21 : Schwartz33_44
• Track 22 : Eddiemania_45
• Track 23 : Luthien_44
• Track 24 : ShaggyRogers_44
• Track 25 : Rickmore_40
• Track 26 : Mysticmoon_43, Pherobrine_44
• Track 27 : Burley_43, Vardy_43

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

The start number called the most often in the published annotations is 5, it was called in 64 of the 64 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aflac_43, AlainaMarie_43, Aloe25_44, Arataki_42, ArtetaBall_44, Artorias_41, Avazak_42, BetterYeti_44, Blanky_43, BluerMoon_43, Bugg_42, Burley_43, CWormy_43, Captrips_41, Capybara_42, ChickyNuggy_43, Chikenjars_43, Citrus_43, Conley_41, Crocheter_43, Dancer_41, Demure_42, Dialga_44, Duffington_42, Eddiemania_45, EndAve_44, Fazel_42, Figliar_43, Football_43, FortCran_41, Gill_42, Glintora_45, Gravy_41, Gusicorn_44, Hortihabitatio_44, Hydrus_45, Jodelie19_44, JulesRay_41, Kenosha_43, Kerry_41, Luthien_44, Madvan_43, Magel_43, MajinBuu_43, Mossy_46, Mysticmoon_43, Nadmeg_44, Nithya_43, NoPickles_41, Odesza_41, OhMyWard_43, OlgasClover_44, Pepy6_105, Perkunas_43, PerroGrande22_56, PestoPenguin_45, Petito_43, Phepper_44, Pherobrine_44, Poco6_105, Rickmore_40, Roney_42, Runhaar_44, Schwartz33_44, Secretariat_42, ShaggyRogers_44, SweetCrkHerbs_43, Tairn4Wing_44, Talon44_43, Tanis_42, TenaciousP_44, Tonaltzin_43, Trufflozitus_42, Untouchable_44, Vardy_43, Zeph_45,

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 5:
• Found in 76 of 76 (100.0%) of genes in pham
• Manual Annotations of this start: 64 of 64
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aflac_43 (DJ), AlainaMarie_43 (DJ), Aloe25_44 (DJ), Arataki_42 (DJ), ArtetaBall_44 (DJ), Artorias_41 (DJ), Avazak_42 (DJ), BetterYeti_44 (DJ), Blanky_43 (DJ), BluerMoon_43 (DJ), Bugg_42 (DJ), Burley_43 (DJ), CWormy_43 (DJ), Captrips_41 (DJ), Capybara_42 (DJ), ChickyNuggy_43 (DJ), Chikenjars_43 (DJ), Citrus_43 (DJ), Conley_41 (DJ), Crocheter_43 (DJ), Dancer_41 (DJ), Demure_42 (DJ), Dialga_44 (DJ), Duffington_42 (DJ), Eddiemania_45 (DJ), EndAve_44 (DJ), Fazel_42 (DJ), Figliar_43 (DJ), Football_43 (DJ), FortCran_41 (DJ), Gill_42 (DJ), Glintora_45 (DJ), Gravy_41 (DJ), Gusicorn_44 (DJ), Hortihabitatio_44 (DJ), Hydrus_45 (DJ), Jodelie19_44 (DJ), JulesRay_41 (DJ), Kenosha_43 (DJ), Kerry_41 (DJ), Luthien_44 (DJ), Madvan_43 (DJ), Magel_43 (DJ), MajinBuu_43 (DJ), Mossy_46 (DJ), Mysticmoon_43 (DJ), Nadmeg_44 (DJ), Nithya_43 (DJ), NoPickles_41 (DJ), Odesza_41 (DJ), OhMyWard_43 (DJ), OlgasClover_44 (DJ), Pepy6_105 (CC), Perkunas_43 (DJ), PerroGrande22_56 (CC), PestoPenguin_45 (DJ), Petito_43 (DJ), Phepper_44 (DJ), Pherobrine_44 (DJ), Poco6_105 (CC), Rickmore_40 (DJ), Roney_42 (DJ), Runhaar_44 (DJ), Schwartz33_44 (DJ), Secretariat_42 (DJ), ShaggyRogers_44 (DJ), SweetCrkHerbs_43 (DJ), Tairn4Wing_44 (DJ), Talon44_43 (DJ), Tanis_42 (DJ), TenaciousP_44 (DJ), Tonaltzin_43 (DJ), Trufflozitus_42 (DJ), Untouchable_44 (DJ), Vardy_43 (DJ), Zeph_45 (DJ),

Summary by clusters:

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

Info for manual annotations of cluster CC:
•Start number 5 was manually annotated 1 time for cluster CC.

Info for manual annotations of cluster DJ:
•Start number 5 was manually annotated 63 times for cluster DJ.

Gene Information:

Gene: Aflac_43 Start: 33707, Stop: 33958, Start Num: 5
Candidate Starts for Aflac_43:
(Start: 5 @33707 has 64 MA's), (11, 33743), (12, 33746), (13, 33752), (15, 33761), (21, 33857), (27, 33947),

Gene: AlainaMarie_43 Start: 33692, Stop: 33943, Start Num: 5
Candidate Starts for AlainaMarie_43:
(Start: 5 @33692 has 64 MA's), (11, 33728), (12, 33731), (13, 33737), (15, 33746), (21, 33842), (27, 33932),

Gene: Aloe25_44 Start: 33761, Stop: 34012, Start Num: 5
Candidate Starts for Aloe25_44:
(Start: 5 @33761 has 64 MA's), (11, 33797), (12, 33800), (13, 33806), (15, 33815), (21, 33911), (23, 33935), (24, 33959), (27, 34001),

Gene: Arataki_42 Start: 32810, Stop: 33061, Start Num: 5
Candidate Starts for Arataki_42:
(Start: 5 @32810 has 64 MA's), (11, 32846), (12, 32849), (13, 32855), (15, 32864), (21, 32960), (27, 33050),

Gene: ArtetaBall_44 Start: 34010, Stop: 34261, Start Num: 5
Candidate Starts for ArtetaBall_44:
(Start: 5 @34010 has 64 MA's), (11, 34046), (12, 34049), (13, 34055), (15, 34064), (21, 34160), (27, 34250),

Gene: Artorias_41 Start: 31178, Stop: 31429, Start Num: 5
Candidate Starts for Artorias_41:
(Start: 5 @31178 has 64 MA's), (11, 31214), (12, 31217), (14, 31229), (15, 31232), (17, 31256), (21, 31328),

Gene: Avazak_42 Start: 31543, Stop: 31794, Start Num: 5
Candidate Starts for Avazak_42:
(Start: 5 @31543 has 64 MA's), (11, 31579), (12, 31582), (14, 31594), (15, 31597), (17, 31621), (21, 31693),

Gene: BetterYeti_44 Start: 33760, Stop: 34011, Start Num: 5
Candidate Starts for BetterYeti_44:
(Start: 5 @33760 has 64 MA's), (11, 33796), (12, 33799), (13, 33805), (15, 33814), (21, 33910), (23, 33934), (24, 33958), (27, 34000),

Gene: Blanky_43 Start: 35410, Stop: 35658, Start Num: 5

Candidate Starts for Blanky_43:
(Start: 5 @35410 has 64 MA's), (7, 35431), (16, 35479), (21, 35560), (23, 35584),

Gene: BluerMoon_43 Start: 33703, Stop: 33954, Start Num: 5
Candidate Starts for BluerMoon_43:
(Start: 5 @33703 has 64 MA's), (11, 33739), (12, 33742), (13, 33748), (15, 33757), (21, 33853), (27, 33943),

Gene: Bugg_42 Start: 31223, Stop: 31474, Start Num: 5
Candidate Starts for Bugg_42:
(Start: 5 @31223 has 64 MA's), (11, 31259), (12, 31262), (14, 31274), (15, 31277), (17, 31301), (21, 31373),

Gene: Burley_43 Start: 33465, Stop: 33716, Start Num: 5
Candidate Starts for Burley_43:
(Start: 5 @33465 has 64 MA's), (11, 33501), (12, 33504), (13, 33510), (15, 33519), (21, 33615), (27, 33705),

Gene: CWormy_43 Start: 33423, Stop: 33674, Start Num: 5
Candidate Starts for CWormy_43:
(1, 33330), (2, 33351), (Start: 5 @33423 has 64 MA's), (11, 33459), (12, 33462), (13, 33468), (15, 33477), (21, 33573), (27, 33663),

Gene: Captrips_41 Start: 31216, Stop: 31467, Start Num: 5
Candidate Starts for Captrips_41:
(Start: 5 @31216 has 64 MA's), (11, 31252), (12, 31255), (14, 31267), (15, 31270), (17, 31294), (21, 31366),

Gene: Capybara_42 Start: 31605, Stop: 31856, Start Num: 5
Candidate Starts for Capybara_42:
(Start: 5 @31605 has 64 MA's), (11, 31641), (12, 31644), (15, 31659), (17, 31683), (21, 31755),

Gene: ChickyNuggy_43 Start: 31285, Stop: 31536, Start Num: 5
Candidate Starts for ChickyNuggy_43:
(Start: 5 @31285 has 64 MA's), (11, 31321), (12, 31324), (14, 31336), (15, 31339), (17, 31363), (21, 31435),

Gene: Chikenjars_43 Start: 33703, Stop: 33954, Start Num: 5
Candidate Starts for Chikenjars_43:
(1, 33610), (2, 33631), (Start: 5 @33703 has 64 MA's), (11, 33739), (12, 33742), (13, 33748), (15, 33757), (21, 33853), (27, 33943),

Gene: Citrus_43 Start: 33982, Stop: 34233, Start Num: 5
Candidate Starts for Citrus_43:
(1, 33889), (2, 33910), (Start: 5 @33982 has 64 MA's), (11, 34018), (12, 34021), (13, 34027), (15, 34036), (21, 34132), (23, 34156), (27, 34222),

Gene: Conley_41 Start: 32155, Stop: 32406, Start Num: 5
Candidate Starts for Conley_41:
(Start: 5 @32155 has 64 MA's), (11, 32191), (12, 32194), (14, 32206), (17, 32233), (21, 32305), (23, 32329), (26, 32383),

Gene: Crocheter_43 Start: 33868, Stop: 34119, Start Num: 5

Candidate Starts for Crocheter_43:
(Start: 5 @33868 has 64 MA's), (11, 33904), (12, 33907), (13, 33913), (15, 33922), (21, 34018), (27, 34108),

Gene: Dancer_41 Start: 30916, Stop: 31167, Start Num: 5
Candidate Starts for Dancer_41:
(Start: 5 @30916 has 64 MA's), (11, 30952), (12, 30955), (14, 30967), (15, 30970), (17, 30994), (21, 31066),

Gene: Demure_42 Start: 32810, Stop: 33061, Start Num: 5
Candidate Starts for Demure_42:
(Start: 5 @32810 has 64 MA's), (11, 32846), (12, 32849), (13, 32855), (15, 32864), (21, 32960), (27, 33050),

Gene: Dialga_44 Start: 34029, Stop: 34280, Start Num: 5
Candidate Starts for Dialga_44:
(Start: 5 @34029 has 64 MA's), (11, 34065), (12, 34068), (13, 34074), (15, 34083), (21, 34179), (27, 34269),

Gene: Duffington_42 Start: 33365, Stop: 33616, Start Num: 5
Candidate Starts for Duffington_42:
(1, 33272), (2, 33293), (Start: 5 @33365 has 64 MA's), (11, 33401), (12, 33404), (13, 33410), (15, 33419), (21, 33515), (27, 33605),

Gene: Eddiemania_45 Start: 34627, Stop: 34878, Start Num: 5
Candidate Starts for Eddiemania_45:
(Start: 5 @34627 has 64 MA's), (11, 34663), (12, 34666), (13, 34672), (15, 34681), (21, 34777), (23, 34801), (27, 34867),

Gene: EndAve_44 Start: 33872, Stop: 34123, Start Num: 5
Candidate Starts for EndAve_44:
(1, 33779), (2, 33800), (Start: 5 @33872 has 64 MA's), (11, 33908), (12, 33911), (13, 33917), (15, 33926), (21, 34022), (27, 34112),

Gene: Fazel_42 Start: 33160, Stop: 33408, Start Num: 5
Candidate Starts for Fazel_42:
(Start: 5 @33160 has 64 MA's), (16, 33229), (17, 33238), (18, 33265), (21, 33310), (23, 33334), (25, 33370),

Gene: Figliar_43 Start: 33767, Stop: 34018, Start Num: 5
Candidate Starts for Figliar_43:
(Start: 5 @33767 has 64 MA's), (11, 33803), (12, 33806), (13, 33812), (15, 33821), (21, 33917), (27, 34007),

Gene: Football_43 Start: 30922, Stop: 31173, Start Num: 5
Candidate Starts for Football_43:
(Start: 5 @30922 has 64 MA's), (11, 30958), (12, 30961), (14, 30973), (15, 30976), (17, 31000), (21, 31072),

Gene: FortCran_41 Start: 31178, Stop: 31429, Start Num: 5
Candidate Starts for FortCran_41:
(Start: 5 @31178 has 64 MA's), (11, 31214), (12, 31217), (14, 31229), (15, 31232), (17, 31256), (21, 31328),

Gene: Gill_42 Start: 31622, Stop: 31873, Start Num: 5
Candidate Starts for Gill_42:
(Start: 5 @31622 has 64 MA's), (11, 31658), (12, 31661), (15, 31676), (17, 31700), (21, 31772),

Gene: Glintora_45 Start: 34337, Stop: 34588, Start Num: 5
Candidate Starts for Glintora_45:
(1, 34244), (2, 34265), (Start: 5 @34337 has 64 MA's), (11, 34373), (12, 34376), (13, 34382), (15, 34391), (21, 34487), (23, 34511), (27, 34577),

Gene: Gravy_41 Start: 31295, Stop: 31546, Start Num: 5
Candidate Starts for Gravy_41:
(Start: 5 @31295 has 64 MA's), (11, 31331), (12, 31334), (15, 31349), (17, 31373), (21, 31445),

Gene: Gusicorn_44 Start: 33761, Stop: 34012, Start Num: 5
Candidate Starts for Gusicorn_44:
(Start: 5 @33761 has 64 MA's), (11, 33797), (12, 33800), (13, 33806), (15, 33815), (21, 33911), (23, 33935), (24, 33959), (27, 34001),

Gene: Hortihabitatio_44 Start: 33607, Stop: 33855, Start Num: 5
Candidate Starts for Hortihabitatio_44:
(4, 33604), (Start: 5 @33607 has 64 MA's), (7, 33628), (10, 33640), (21, 33757), (22, 33760), (23, 33781),

Gene: Hydrus_45 Start: 34640, Stop: 34891, Start Num: 5
Candidate Starts for Hydrus_45:
(Start: 5 @34640 has 64 MA's), (11, 34676), (12, 34679), (13, 34685), (15, 34694), (21, 34790), (27, 34880),

Gene: Jodelie19_44 Start: 35222, Stop: 35473, Start Num: 5
Candidate Starts for Jodelie19_44:
(Start: 5 @35222 has 64 MA's), (11, 35258), (12, 35261), (13, 35267), (15, 35276), (21, 35372), (27, 35462),

Gene: JulesRay_41 Start: 31210, Stop: 31461, Start Num: 5
Candidate Starts for JulesRay_41:
(Start: 5 @31210 has 64 MA's), (11, 31246), (12, 31249), (14, 31261), (15, 31264), (17, 31288), (21, 31360),

Gene: Kenosha_43 Start: 34275, Stop: 34526, Start Num: 5
Candidate Starts for Kenosha_43:
(Start: 5 @34275 has 64 MA's), (11, 34311), (12, 34314), (13, 34320), (15, 34329), (21, 34425), (27, 34515),

Gene: Kerry_41 Start: 31295, Stop: 31546, Start Num: 5
Candidate Starts for Kerry_41:
(Start: 5 @31295 has 64 MA's), (11, 31331), (12, 31334), (15, 31349), (17, 31373), (21, 31445),

Gene: Luthien_44 Start: 33870, Stop: 34121, Start Num: 5
Candidate Starts for Luthien_44:
(1, 33777), (2, 33798), (Start: 5 @33870 has 64 MA's), (11, 33906), (12, 33909), (13, 33915), (21, 34020), (27, 34110),

Gene: Madvan_43 Start: 33509, Stop: 33760, Start Num: 5
Candidate Starts for Madvan_43:
(Start: 5 @33509 has 64 MA's), (11, 33545), (12, 33548), (13, 33554), (15, 33563), (21, 33659), (27, 33749),

Gene: Magel_43 Start: 31526, Stop: 31777, Start Num: 5
Candidate Starts for Magel_43:
(Start: 5 @31526 has 64 MA's), (11, 31562), (12, 31565), (15, 31580), (17, 31604), (21, 31676),

Gene: MajinBuu_43 Start: 33794, Stop: 34045, Start Num: 5
Candidate Starts for MajinBuu_43:
(Start: 5 @33794 has 64 MA's), (11, 33830), (12, 33833), (13, 33839), (15, 33848), (21, 33944), (27, 34034),

Gene: Mossy_46 Start: 35625, Stop: 35873, Start Num: 5
Candidate Starts for Mossy_46:
(Start: 5 @35625 has 64 MA's), (7, 35646), (16, 35694), (21, 35775), (23, 35799),

Gene: Mysticmoon_43 Start: 33900, Stop: 34148, Start Num: 5
Candidate Starts for Mysticmoon_43:
(4, 33897), (Start: 5 @33900 has 64 MA's), (6, 33909), (7, 33921), (16, 33969), (17, 33978), (21, 34050),

Gene: Nadmeg_44 Start: 34941, Stop: 35192, Start Num: 5
Candidate Starts for Nadmeg_44:
(Start: 5 @34941 has 64 MA's), (11, 34977), (12, 34980), (13, 34986), (15, 34995), (21, 35091), (27, 35181),

Gene: Nithya_43 Start: 33693, Stop: 33944, Start Num: 5
Candidate Starts for Nithya_43:
(1, 33600), (2, 33621), (Start: 5 @33693 has 64 MA's), (11, 33729), (12, 33732), (13, 33738), (15, 33747), (21, 33843), (27, 33933),

Gene: NoPickles_41 Start: 30927, Stop: 31178, Start Num: 5
Candidate Starts for NoPickles_41:
(Start: 5 @30927 has 64 MA's), (11, 30963), (12, 30966), (15, 30981), (17, 31005), (21, 31077),

Gene: Odesza_41 Start: 31296, Stop: 31547, Start Num: 5
Candidate Starts for Odesza_41:
(Start: 5 @31296 has 64 MA's), (11, 31332), (12, 31335), (15, 31350), (17, 31374), (21, 31446),

Gene: OhMyWard_43 Start: 34719, Stop: 34967, Start Num: 5
Candidate Starts for OhMyWard_43:
(Start: 5 @34719 has 64 MA's), (7, 34740), (16, 34788), (21, 34869), (23, 34893),

Gene: OlgasClover_44 Start: 34751, Stop: 35002, Start Num: 5
Candidate Starts for OlgasClover_44:
(Start: 5 @34751 has 64 MA's), (11, 34787), (12, 34790), (13, 34796), (15, 34805), (21, 34901), (27, 34991),

Gene: Pepy6_105 Start: 42303, Stop: 42539, Start Num: 5
Candidate Starts for Pepy6_105:
(Start: 5 @42303 has 64 MA's), (25, 42501),

Gene: Perkunas_43 Start: 31586, Stop: 31837, Start Num: 5
Candidate Starts for Perkunas_43:
(Start: 5 @31586 has 64 MA's), (11, 31622), (14, 31637), (15, 31640), (17, 31664), (21, 31736),

Gene: PerroGrande22_56 Start: 44633, Stop: 44869, Start Num: 5
Candidate Starts for PerroGrande22_56:
(3, 44606), (Start: 5 @44633 has 64 MA's), (8, 44648), (20, 44756), (22, 44777), (24, 44819),

Gene: PestoPenguin_45 Start: 33761, Stop: 34012, Start Num: 5
Candidate Starts for PestoPenguin_45:
(Start: 5 @33761 has 64 MA's), (11, 33797), (12, 33800), (13, 33806), (15, 33815), (21, 33911), (23, 33935), (24, 33959), (27, 34001),

Gene: Petito_43 Start: 32690, Stop: 32941, Start Num: 5
Candidate Starts for Petito_43:
(Start: 5 @32690 has 64 MA's), (11, 32726), (12, 32729), (14, 32741), (17, 32768), (21, 32840), (26, 32918),

Gene: Phepper_44 Start: 33762, Stop: 34013, Start Num: 5
Candidate Starts for Phepper_44:
(Start: 5 @33762 has 64 MA's), (11, 33798), (12, 33801), (13, 33807), (15, 33816), (21, 33912), (27, 34002),

Gene: Pherobrine_44 Start: 34201, Stop: 34449, Start Num: 5
Candidate Starts for Pherobrine_44:
(4, 34198), (Start: 5 @34201 has 64 MA's), (6, 34210), (7, 34222), (16, 34270), (17, 34279), (21, 34351),

Gene: Poco6_105 Start: 44097, Stop: 44333, Start Num: 5
Candidate Starts for Poco6_105:
(3, 44070), (Start: 5 @44097 has 64 MA's), (8, 44112), (20, 44220), (22, 44241), (24, 44283),

Gene: Rickmore_40 Start: 31557, Stop: 31808, Start Num: 5
Candidate Starts for Rickmore_40:
(Start: 5 @31557 has 64 MA's), (11, 31593), (12, 31596), (13, 31602), (19, 31686), (21, 31707), (23, 31731), (27, 31797),

Gene: Roney_42 Start: 31617, Stop: 31868, Start Num: 5
Candidate Starts for Roney_42:
(Start: 5 @31617 has 64 MA's), (11, 31653), (12, 31656), (15, 31671), (17, 31695), (21, 31767),

Gene: Runhaar_44 Start: 33756, Stop: 34007, Start Num: 5
Candidate Starts for Runhaar_44:
(1, 33663), (2, 33684), (Start: 5 @33756 has 64 MA's), (11, 33792), (12, 33795), (13, 33801), (15, 33810), (21, 33906), (23, 33930), (27, 33996),

Gene: Schwartz33_44 Start: 34023, Stop: 34274, Start Num: 5
Candidate Starts for Schwartz33_44:
(Start: 5 @34023 has 64 MA's), (9, 34047), (21, 34173), (23, 34197),

Gene: Secretariat_42 Start: 32934, Stop: 33185, Start Num: 5
Candidate Starts for Secretariat_42:

(Start: 5 @32934 has 64 MA's), (7, 32955), (12, 32973), (17, 33012),

Gene: ShaggyRogers_44 Start: 33511, Stop: 33762, Start Num: 5
Candidate Starts for ShaggyRogers_44:
(Start: 5 @33511 has 64 MA's), (11, 33547), (12, 33550), (13, 33556), (15, 33565), (21, 33661), (23, 33685), (24, 33709), (27, 33751),

Gene: SweetCrkHerbs_43 Start: 31259, Stop: 31510, Start Num: 5
Candidate Starts for SweetCrkHerbs_43:
(Start: 5 @31259 has 64 MA's), (11, 31295), (14, 31310), (15, 31313), (17, 31337), (21, 31409),

Gene: Tairn4Wing_44 Start: 31566, Stop: 31817, Start Num: 5
Candidate Starts for Tairn4Wing_44:
(Start: 5 @31566 has 64 MA's), (11, 31602), (12, 31605), (14, 31617), (15, 31620), (17, 31644), (21, 31716),

Gene: Talon44_43 Start: 31601, Stop: 31852, Start Num: 5
Candidate Starts for Talon44_43:
(Start: 5 @31601 has 64 MA's), (11, 31637), (14, 31652), (15, 31655), (17, 31679), (21, 31751),

Gene: Tanis_42 Start: 31468, Stop: 31719, Start Num: 5
Candidate Starts for Tanis_42:
(Start: 5 @31468 has 64 MA's), (11, 31504), (12, 31507), (15, 31522), (17, 31546), (21, 31618),

Gene: TenaciousP_44 Start: 35132, Stop: 35383, Start Num: 5
Candidate Starts for TenaciousP_44:
(Start: 5 @35132 has 64 MA's), (11, 35168), (12, 35171), (13, 35177), (15, 35186), (21, 35282), (27, 35372),

Gene: Tonaltzin_43 Start: 33702, Stop: 33953, Start Num: 5
Candidate Starts for Tonaltzin_43:
(Start: 5 @33702 has 64 MA's), (11, 33738), (12, 33741), (13, 33747), (15, 33756), (21, 33852), (27, 33942),

Gene: Trufflozitus_42 Start: 31567, Stop: 31818, Start Num: 5
Candidate Starts for Trufflozitus_42:
(Start: 5 @31567 has 64 MA's), (11, 31603), (12, 31606), (14, 31618), (15, 31621), (17, 31645), (21, 31717),

Gene: Untouchable_44 Start: 34122, Stop: 34373, Start Num: 5
Candidate Starts for Untouchable_44:
(Start: 5 @34122 has 64 MA's), (11, 34158), (12, 34161), (13, 34167), (15, 34176), (21, 34272), (27, 34362),

Gene: Vardy_43 Start: 33466, Stop: 33717, Start Num: 5
Candidate Starts for Vardy_43:
(Start: 5 @33466 has 64 MA's), (11, 33502), (12, 33505), (13, 33511), (15, 33520), (21, 33616), (27, 33706),

Gene: Zeph_45 Start: 34620, Stop: 34871, Start Num: 5
Candidate Starts for Zeph_45:
(Start: 5 @34620 has 64 MA's), (11, 34656), (12, 34659), (13, 34665), (15, 34674), (21, 34770), (27, 34860),