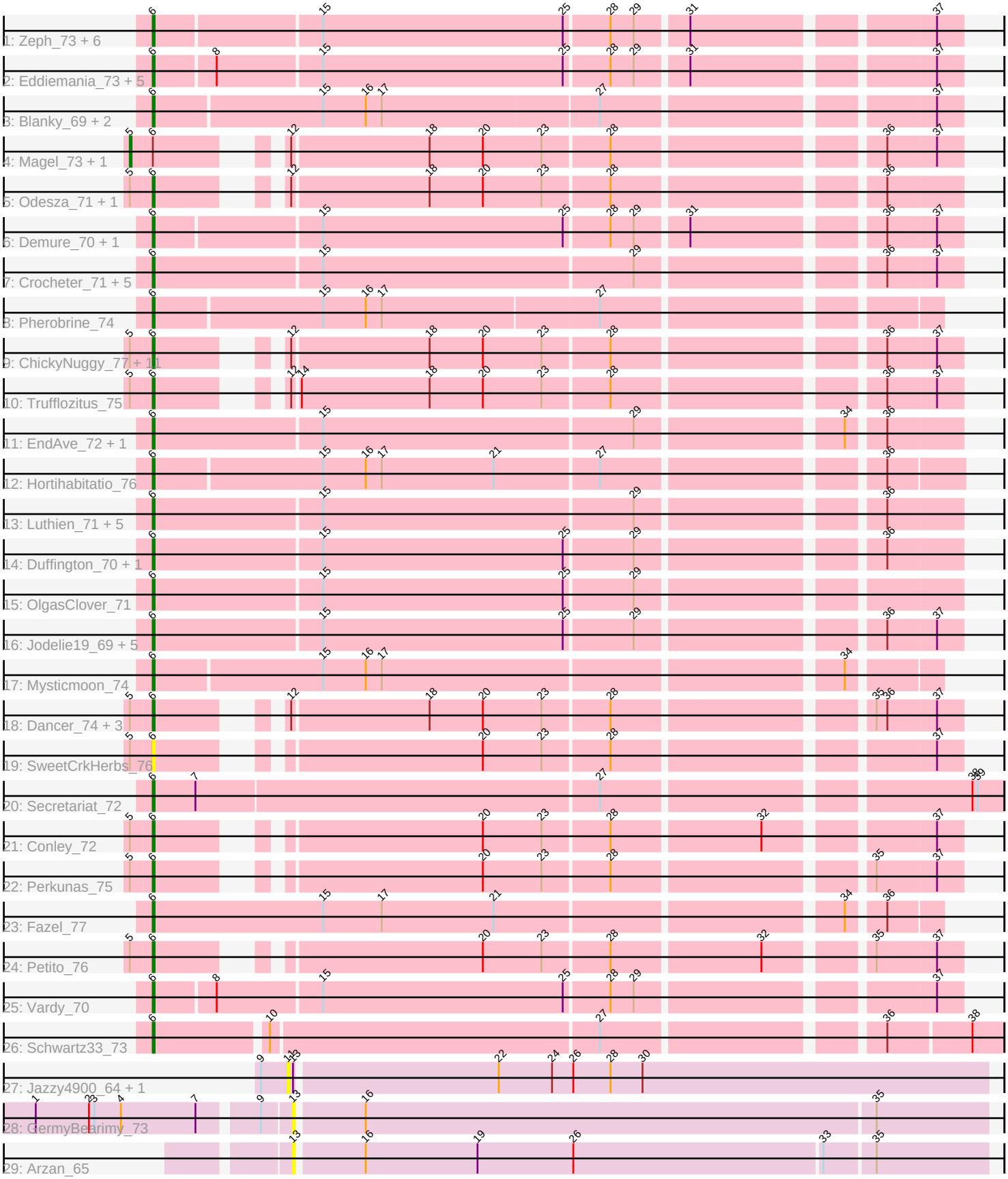
Pham 347545


1: Zeph_73 + 6
2: Eddiemania_73 + 5
3: Blanky_69 + 2
4: Magel_73 + 1
5: Odesza_71 + 1
6: Demure_70 + 1
7: Crocheter_71 + 5
8: Pherobrine_74
9: ChickyNuggy_77 + 11
10: Trufflozitus_75
11: EndAve_72 + 1
12: Hortihabitatio_76
13: Luthien_71 + 5
14: Duffington_70 + 1
15: OlgasClover_71
16: Jodelie19_69 + 5
17: Mysticmoon_74
18: Dancer_74 + 3
19: SweetCrkHerbs_76
20: Secretariat_72
21: Conley_72
22: Perkunas_75
23: Fazel_77
24: Petito_76
25: Vardy_70
26: Schwartz33_73
27: Jazzy4900_64 + 1
28: GermyBearimy_73
29: Arzan_65

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 347545 Report

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

Pham number 347545 has 77 members, 14 are drafts.

Phages represented in each track:
• Track 1 : Zeph_73, ArtetaBall_70, Hydrus_73, Dialga_72, Phepper_72, CWormy_70, Untouchable_73
• Track 2 : Eddiemania_73, Kenosha_70, Madvan_71, Burley_71, Nadmeg_72, Runhaar_71
• Track 3 : Blanky_69, Mossy_74, OhMyWard_70
• Track 4 : Magel_73, Gill_72
• Track 5 : Odesza_71, Roney_72
• Track 6 : Demure_70, Arataki_70
• Track 7 : Crocheter_71, PestoPenguin_73, Aloe25_72, BetterYeti_71, ShaggyRogers_71, Gusicorn_72
• Track 8 : Pherobrine_74
• Track 9 : ChickyNuggy_77, Kerry_71, Football_76, Tanis_72, Talon44_76, Avazak_75, Capybara_72, Gravy_71, NoPickles_73, Tairn4Wing_76, JulesRay_74, Captrips_73
• Track 10 : Trufflozitus_75
• Track 11 : EndAve_72, AlainaMarie_70
• Track 12 : Hortihabitatio_76
• Track 13 : Luthien_71, Glintora_72, Citrus_70, Chikenjars_69, Rickmore_68, Nithya_71
• Track 14 : Duffington_70, BluerMoon_69
• Track 15 : OlgasClover_71
• Track 16 : Jodelie19_69, Aflac_70, MajinBuu_71, Figliar_69, Tonaltzin_69, TenaciousP_71
• Track 17 : Mysticmoon_74
• Track 18 : Dancer_74, Bugg_77, Artorias_74, FortCran_74
• Track 19 : SweetCrkHerbs_76
• Track 20 : Secretariat_72
• Track 21 : Conley_72
• Track 22 : Perkunas_75
• Track 23 : Fazel_77
• Track 24 : Petito_76
• Track 25 : Vardy_70
• Track 26 : Schwartz33_73
• Track 27 : Jazzy4900_64, Sunny4976_63
• Track 28 : GermyBearimy_73
• Track 29 : Arzan_65

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

The start number called the most often in the published annotations is 6, it was called in 61 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aflac_70, AlainaMarie_70, Aloe25_72, Arataki_70, ArtetaBall_70, Artorias_74, Avazak_75, BetterYeti_71, Blanky_69, BluerMoon_69, Bugg_77, Burley_71, CWormy_70, Captrips_73, Capybara_72, ChickyNuggy_77, Chikenjars_69, Citrus_70, Conley_72, Crocheter_71, Dancer_74, Demure_70, Dialga_72, Duffington_70, Eddiemania_73, EndAve_72, Fazel_77, Figliar_69, Football_76, FortCran_74, Glintora_72, Gravy_71, Gusicorn_72, Hortihabitatio_76, Hydrus_73, Jodelie19_69, JulesRay_74, Kenosha_70, Kerry_71, Luthien_71, Madvan_71, MajinBuu_71, Mossy_74, Mysticmoon_74, Nadmeg_72, Nithya_71, NoPickles_73, Odesza_71, OhMyWard_70, OlgasClover_71, Perkunas_75, PestoPenguin_73, Petito_76, Phepper_72, Pherobrine_74, Rickmore_68, Roney_72, Runhaar_71, Schwartz33_73, Secretariat_72, ShaggyRogers_71, SweetCrkHerbs_76, Tairn4Wing_76, Talon44_76, Tanis_72, TenaciousP_71, Tonaltzin_69, Trufflozitus_75, Untouchable_73, Vardy_70, Zeph_73,

Genes that have the "Most Annotated" start but do not call it:
• Gill_72, Magel_73,

Genes that do not have the "Most Annotated" start:
• Arzan_65, GermyBearimy_73, Jazzy4900_64, Sunny4976_63,

Summary by start number:

Start 5:
• Found in 25 of 77 (32.5%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 8.0% of time when present
• Phage (with cluster) where this start called: Gill_72 (DJ), Magel_73 (DJ),

Start 6:
• Found in 73 of 77 (94.8%) of genes in pham
• Manual Annotations of this start: 61 of 63
• Called 97.3% of time when present
• Phage (with cluster) where this start called: Aflac_70 (DJ), AlainaMarie_70 (DJ), Aloe25_72 (DJ), Arataki_70 (DJ), ArtetaBall_70 (DJ), Artorias_74 (DJ), Avazak_75 (DJ), BetterYeti_71 (DJ), Blanky_69 (DJ), BluerMoon_69 (DJ), Bugg_77 (DJ), Burley_71 (DJ), CWormy_70 (DJ), Captrips_73 (DJ), Capybara_72 (DJ), ChickyNuggy_77 (DJ), Chikenjars_69 (DJ), Citrus_70 (DJ), Conley_72 (DJ), Crocheter_71 (DJ), Dancer_74 (DJ), Demure_70 (DJ), Dialga_72 (DJ), Duffington_70 (DJ), Eddiemania_73 (DJ), EndAve_72 (DJ), Fazel_77 (DJ), Figliar_69 (DJ), Football_76 (DJ), FortCran_74 (DJ), Glintora_72 (DJ), Gravy_71 (DJ), Gusicorn_72 (DJ), Hortihabitatio_76 (DJ), Hydrus_73 (DJ), Jodelie19_69 (DJ), JulesRay_74 (DJ), Kenosha_70 (DJ), Kerry_71 (DJ), Luthien_71 (DJ), Madvan_71 (DJ), MajinBuu_71 (DJ), Mossy_74 (DJ), Mysticmoon_74 (DJ), Nadmeg_72 (DJ), Nithya_71 (DJ), NoPickles_73 (DJ), Odesza_71 (DJ), OhMyWard_70 (DJ), OlgasClover_71 (DJ),

Perkunas_75 (DJ), PestoPenguin_73 (DJ), Petito_76 (DJ), Phepper_72 (DJ), Pherobrine_74 (DJ), Rickmore_68 (DJ), Roney_72 (DJ), Runhaar_71 (DJ), Schwartz33_73 (DJ), Secretariat_72 (DJ), ShaggyRogers_71 (DJ), SweetCrkHerbs_76 (DJ), Tairn4Wing_76 (DJ), Talon44_76 (DJ), Tanis_72 (DJ), TenaciousP_71 (DJ), Tonaltzin_69 (DJ), Trufflozitus_75 (DJ), Untouchable_73 (DJ), Vardy_70 (DJ), Zeph_73 (DJ),

Start 11:
• Found in 2 of 77 (2.6%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jazzy4900_64 (FI), Sunny4976_63 (FI),

Start 13:
• Found in 4 of 77 (5.2%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Arzan_65 (FI), GermyBearimy_73 (FI),

Summary by clusters:

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

Info for manual annotations of cluster DJ:
•Start number 5 was manually annotated 2 times for cluster DJ.
•Start number 6 was manually annotated 61 times for cluster DJ.

Gene Information:

Gene: Aflac_70 Start: 49866, Stop: 50294, Start Num: 6
Candidate Starts for Aflac_70:
(Start: 6 @49866 has 61 MA's), (15, 49959), (25, 50094), (29, 50130), (36, 50253), (37, 50280),

Gene: AlainaMarie_70 Start: 49907, Stop: 50335, Start Num: 6
Candidate Starts for AlainaMarie_70:
(Start: 6 @49907 has 61 MA's), (15, 50000), (29, 50171), (34, 50276), (36, 50294),

Gene: Aloe25_72 Start: 49709, Stop: 50137, Start Num: 6
Candidate Starts for Aloe25_72:
(Start: 6 @49709 has 61 MA's), (15, 49802), (29, 49973), (36, 50096), (37, 50123),

Gene: Arataki_70 Start: 49339, Stop: 49764, Start Num: 6
Candidate Starts for Arataki_70:
(Start: 6 @49339 has 61 MA's), (15, 49429), (25, 49564), (28, 49588), (29, 49600), (31, 49627), (36, 49723), (37, 49750),

Gene: ArtetaBall_70 Start: 49902, Stop: 50327, Start Num: 6
Candidate Starts for ArtetaBall_70:
(Start: 6 @49902 has 61 MA's), (15, 49992), (25, 50127), (28, 50151), (29, 50163), (31, 50190), (37, 50313),

Gene: Artorias_74 Start: 49927, Stop: 50325, Start Num: 6
Candidate Starts for Artorias_74:
(Start: 5 @49915 has 2 MA's), (Start: 6 @49927 has 61 MA's), (12, 49975), (18, 50050), (20, 50080), (23, 50113), (28, 50149), (35, 50278), (36, 50284), (37, 50311),

Gene: Arzan_65 Start: 43421, Stop: 43801, Start Num: 13
Candidate Starts for Arzan_65:
(13, 43421), (16, 43457), (19, 43520), (26, 43574), (33, 43712), (35, 43739),

Gene: Avazak_75 Start: 50609, Stop: 51007, Start Num: 6
Candidate Starts for Avazak_75:
(Start: 5 @50597 has 2 MA's), (Start: 6 @50609 has 61 MA's), (12, 50657), (18, 50732), (20, 50762), (23, 50795), (28, 50831), (36, 50966), (37, 50993),

Gene: BetterYeti_71 Start: 49708, Stop: 50136, Start Num: 6
Candidate Starts for BetterYeti_71:
(Start: 6 @49708 has 61 MA's), (15, 49801), (29, 49972), (36, 50095), (37, 50122),

Gene: Blanky_69 Start: 51188, Stop: 51616, Start Num: 6
Candidate Starts for Blanky_69:
(Start: 6 @51188 has 61 MA's), (15, 51281), (16, 51305), (17, 51314), (27, 51434), (37, 51602),

Gene: BluerMoon_69 Start: 49818, Stop: 50246, Start Num: 6
Candidate Starts for BluerMoon_69:
(Start: 6 @49818 has 61 MA's), (15, 49911), (25, 50046), (29, 50082), (36, 50205),

Gene: Bugg_77 Start: 49972, Stop: 50370, Start Num: 6
Candidate Starts for Bugg_77:
(Start: 5 @49960 has 2 MA's), (Start: 6 @49972 has 61 MA's), (12, 50020), (18, 50095), (20, 50125), (23, 50158), (28, 50194), (35, 50323), (36, 50329), (37, 50356),

Gene: Burley_71 Start: 49358, Stop: 49783, Start Num: 6
Candidate Starts for Burley_71:
(Start: 6 @49358 has 61 MA's), (8, 49391), (15, 49448), (25, 49583), (28, 49607), (29, 49619), (31, 49646), (37, 49769),

Gene: CWormy_70 Start: 49316, Stop: 49741, Start Num: 6
Candidate Starts for CWormy_70:
(Start: 6 @49316 has 61 MA's), (15, 49406), (25, 49541), (28, 49565), (29, 49577), (31, 49604), (37, 49727),

Gene: Captrips_73 Start: 49757, Stop: 50155, Start Num: 6
Candidate Starts for Captrips_73:
(Start: 5 @49745 has 2 MA's), (Start: 6 @49757 has 61 MA's), (12, 49805), (18, 49880), (20, 49910), (23, 49943), (28, 49979), (36, 50114), (37, 50141),

Gene: Capybara_72 Start: 49596, Stop: 49994, Start Num: 6
Candidate Starts for Capybara_72:
(Start: 5 @49584 has 2 MA's), (Start: 6 @49596 has 61 MA's), (12, 49644), (18, 49719), (20, 49749), (23, 49782), (28, 49818), (36, 49953), (37, 49980),

Gene: ChickyNuggy_77 Start: 50351, Stop: 50749, Start Num: 6

Candidate Starts for ChickyNuggy_77:
(Start: 5 @50339 has 2 MA's), (Start: 6 @50351 has 61 MA's), (12, 50399), (18, 50474), (20, 50504), (23, 50537), (28, 50573), (36, 50708), (37, 50735),

Gene: Chikenjars_69 Start: 49939, Stop: 50367, Start Num: 6
Candidate Starts for Chikenjars_69:
(Start: 6 @49939 has 61 MA's), (15, 50032), (29, 50203), (36, 50326),

Gene: Citrus_70 Start: 50200, Stop: 50628, Start Num: 6
Candidate Starts for Citrus_70:
(Start: 6 @50200 has 61 MA's), (15, 50293), (29, 50464), (36, 50587),

Gene: Conley_72 Start: 50234, Stop: 50632, Start Num: 6
Candidate Starts for Conley_72:
(Start: 5 @50222 has 2 MA's), (Start: 6 @50234 has 61 MA's), (20, 50387), (23, 50420), (28, 50456), (32, 50534), (37, 50618),

Gene: Crocheter_71 Start: 49802, Stop: 50230, Start Num: 6
Candidate Starts for Crocheter_71:
(Start: 6 @49802 has 61 MA's), (15, 49895), (29, 50066), (36, 50189), (37, 50216),

Gene: Dancer_74 Start: 49664, Stop: 50062, Start Num: 6
Candidate Starts for Dancer_74:
(Start: 5 @49652 has 2 MA's), (Start: 6 @49664 has 61 MA's), (12, 49712), (18, 49787), (20, 49817), (23, 49850), (28, 49886), (35, 50015), (36, 50021), (37, 50048),

Gene: Demure_70 Start: 49339, Stop: 49764, Start Num: 6
Candidate Starts for Demure_70:
(Start: 6 @49339 has 61 MA's), (15, 49429), (25, 49564), (28, 49588), (29, 49600), (31, 49627), (36, 49723), (37, 49750),

Gene: Dialga_72 Start: 49921, Stop: 50346, Start Num: 6
Candidate Starts for Dialga_72:
(Start: 6 @49921 has 61 MA's), (15, 50011), (25, 50146), (28, 50170), (29, 50182), (31, 50209), (37, 50332),

Gene: Duffington_70 Start: 49872, Stop: 50300, Start Num: 6
Candidate Starts for Duffington_70:
(Start: 6 @49872 has 61 MA's), (15, 49965), (25, 50100), (29, 50136), (36, 50259),

Gene: Eddiemania_73 Start: 50547, Stop: 50972, Start Num: 6
Candidate Starts for Eddiemania_73:
(Start: 6 @50547 has 61 MA's), (8, 50580), (15, 50637), (25, 50772), (28, 50796), (29, 50808), (31, 50835), (37, 50958),

Gene: EndAve_72 Start: 50094, Stop: 50522, Start Num: 6
Candidate Starts for EndAve_72:
(Start: 6 @50094 has 61 MA's), (15, 50187), (29, 50358), (34, 50463), (36, 50481),

Gene: Fazel_77 Start: 50881, Stop: 51300, Start Num: 6
Candidate Starts for Fazel_77:
(Start: 6 @50881 has 61 MA's), (15, 50977), (17, 51010), (21, 51073), (34, 51253), (36, 51271),

Gene: Figliar_69 Start: 49935, Stop: 50363, Start Num: 6
Candidate Starts for Figliar_69:
(Start: 6 @49935 has 61 MA's), (15, 50028), (25, 50163), (29, 50199), (36, 50322), (37, 50349),

Gene: Football_76 Start: 49555, Stop: 49953, Start Num: 6
Candidate Starts for Football_76:
(Start: 5 @49543 has 2 MA's), (Start: 6 @49555 has 61 MA's), (12, 49603), (18, 49678), (20, 49708), (23, 49741), (28, 49777), (36, 49912), (37, 49939),

Gene: FortCran_74 Start: 49927, Stop: 50325, Start Num: 6
Candidate Starts for FortCran_74:
(Start: 5 @49915 has 2 MA's), (Start: 6 @49927 has 61 MA's), (12, 49975), (18, 50050), (20, 50080), (23, 50113), (28, 50149), (35, 50278), (36, 50284), (37, 50311),

Gene: GermyBearimy_73 Start: 44988, Stop: 45371, Start Num: 13
Candidate Starts for GermyBearimy_73:
(1, 44853), (2, 44883), (3, 44886), (4, 44901), (7, 44943), (9, 44973), (13, 44988), (16, 45024), (35, 45309),

Gene: Gill_72 Start: 49596, Stop: 50006, Start Num: 5
Candidate Starts for Gill_72:
(Start: 5 @49596 has 2 MA's), (Start: 6 @49608 has 61 MA's), (12, 49656), (18, 49731), (20, 49761), (23, 49794), (28, 49830), (36, 49965), (37, 49992),

Gene: Glintora_72 Start: 50527, Stop: 50955, Start Num: 6
Candidate Starts for Glintora_72:
(Start: 6 @50527 has 61 MA's), (15, 50620), (29, 50791), (36, 50914),

Gene: Gravy_71 Start: 49286, Stop: 49684, Start Num: 6
Candidate Starts for Gravy_71:
(Start: 5 @49274 has 2 MA's), (Start: 6 @49286 has 61 MA's), (12, 49334), (18, 49409), (20, 49439), (23, 49472), (28, 49508), (36, 49643), (37, 49670),

Gene: Gusicorn_72 Start: 49709, Stop: 50137, Start Num: 6
Candidate Starts for Gusicorn_72:
(Start: 6 @49709 has 61 MA's), (15, 49802), (29, 49973), (36, 50096), (37, 50123),

Gene: Hortihabitatio_76 Start: 51089, Stop: 51517, Start Num: 6
Candidate Starts for Hortihabitatio_76:
(Start: 6 @51089 has 61 MA's), (15, 51182), (16, 51206), (17, 51215), (21, 51278), (27, 51335), (36, 51476),

Gene: Hydrus_73 Start: 50523, Stop: 50948, Start Num: 6
Candidate Starts for Hydrus_73:
(Start: 6 @50523 has 61 MA's), (15, 50613), (25, 50748), (28, 50772), (29, 50784), (31, 50811), (37, 50934),

Gene: Jazzy4900_64 Start: 44190, Stop: 44579, Start Num: 11
Candidate Starts for Jazzy4900_64:
(9, 44175), (11, 44190), (13, 44193), (22, 44304), (24, 44334), (26, 44346), (28, 44367), (30, 44385),

Gene: Jodelie19_69 Start: 51102, Stop: 51530, Start Num: 6
Candidate Starts for Jodelie19_69:

(Start: 6 @51102 has 61 MA's), (15, 51195), (25, 51330), (29, 51366), (36, 51489), (37, 51516),

Gene: JulesRay_74 Start: 50276, Stop: 50674, Start Num: 6
Candidate Starts for JulesRay_74:
(Start: 5 @50264 has 2 MA's), (Start: 6 @50276 has 61 MA's), (12, 50324), (18, 50399), (20, 50429), (23, 50462), (28, 50498), (36, 50633), (37, 50660),

Gene: Kenosha_70 Start: 49949, Stop: 50374, Start Num: 6
Candidate Starts for Kenosha_70:
(Start: 6 @49949 has 61 MA's), (8, 49982), (15, 50039), (25, 50174), (28, 50198), (29, 50210), (31, 50237), (37, 50360),

Gene: Kerry_71 Start: 49349, Stop: 49747, Start Num: 6
Candidate Starts for Kerry_71:
(Start: 5 @49337 has 2 MA's), (Start: 6 @49349 has 61 MA's), (12, 49397), (18, 49472), (20, 49502), (23, 49535), (28, 49571), (36, 49706), (37, 49733),

Gene: Luthien_71 Start: 50089, Stop: 50517, Start Num: 6
Candidate Starts for Luthien_71:
(Start: 6 @50089 has 61 MA's), (15, 50182), (29, 50353), (36, 50476),

Gene: Madvan_71 Start: 49411, Stop: 49836, Start Num: 6
Candidate Starts for Madvan_71:
(Start: 6 @49411 has 61 MA's), (8, 49444), (15, 49501), (25, 49636), (28, 49660), (29, 49672), (31, 49699), (37, 49822),

Gene: Magel_73 Start: 49511, Stop: 49921, Start Num: 5
Candidate Starts for Magel_73:
(Start: 5 @49511 has 2 MA's), (Start: 6 @49523 has 61 MA's), (12, 49571), (18, 49646), (20, 49676), (23, 49709), (28, 49745), (36, 49880), (37, 49907),

Gene: MajinBuu_71 Start: 50317, Stop: 50745, Start Num: 6
Candidate Starts for MajinBuu_71:
(Start: 6 @50317 has 61 MA's), (15, 50410), (25, 50545), (29, 50581), (36, 50704), (37, 50731),

Gene: Mossy_74 Start: 51400, Stop: 51828, Start Num: 6
Candidate Starts for Mossy_74:
(Start: 6 @51400 has 61 MA's), (15, 51493), (16, 51517), (17, 51526), (27, 51646), (37, 51814),

Gene: Mysticmoon_74 Start: 51102, Stop: 51518, Start Num: 6
Candidate Starts for Mysticmoon_74:
(Start: 6 @51102 has 61 MA's), (15, 51195), (16, 51219), (17, 51228), (34, 51471),

Gene: Nadmeg_72 Start: 50640, Stop: 51065, Start Num: 6
Candidate Starts for Nadmeg_72:
(Start: 6 @50640 has 61 MA's), (8, 50673), (15, 50730), (25, 50865), (28, 50889), (29, 50901), (31, 50928), (37, 51051),

Gene: Nithya_71 Start: 49795, Stop: 50223, Start Num: 6
Candidate Starts for Nithya_71:
(Start: 6 @49795 has 61 MA's), (15, 49888), (29, 50059), (36, 50182),

Gene: NoPickles_73 Start: 49443, Stop: 49841, Start Num: 6

Candidate Starts for NoPickles_73:
(Start: 5 @49431 has 2 MA's), (Start: 6 @49443 has 61 MA's), (12, 49491), (18, 49566), (20, 49596), (23, 49629), (28, 49665), (36, 49800), (37, 49827),

Gene: Odesza_71 Start: 49467, Stop: 49865, Start Num: 6
Candidate Starts for Odesza_71:
(Start: 5 @49455 has 2 MA's), (Start: 6 @49467 has 61 MA's), (12, 49515), (18, 49590), (20, 49620), (23, 49653), (28, 49689), (36, 49824),

Gene: OhMyWard_70 Start: 51159, Stop: 51587, Start Num: 6
Candidate Starts for OhMyWard_70:
(Start: 6 @51159 has 61 MA's), (15, 51252), (16, 51276), (17, 51285), (27, 51405), (37, 51573),

Gene: OlgasClover_71 Start: 50444, Stop: 50872, Start Num: 6
Candidate Starts for OlgasClover_71:
(Start: 6 @50444 has 61 MA's), (15, 50537), (25, 50672), (29, 50708),

Gene: Perkunas_75 Start: 49660, Stop: 50058, Start Num: 6
Candidate Starts for Perkunas_75:
(Start: 5 @49648 has 2 MA's), (Start: 6 @49660 has 61 MA's), (20, 49813), (23, 49846), (28, 49882), (35, 50011), (37, 50044),

Gene: PestoPenguin_73 Start: 49709, Stop: 50137, Start Num: 6
Candidate Starts for PestoPenguin_73:
(Start: 6 @49709 has 61 MA's), (15, 49802), (29, 49973), (36, 50096), (37, 50123),

Gene: Petito_76 Start: 51180, Stop: 51578, Start Num: 6
Candidate Starts for Petito_76:
(Start: 5 @51168 has 2 MA's), (Start: 6 @51180 has 61 MA's), (20, 51333), (23, 51366), (28, 51402), (32, 51480), (35, 51531), (37, 51564),

Gene: Phepper_72 Start: 49653, Stop: 50078, Start Num: 6
Candidate Starts for Phepper_72:
(Start: 6 @49653 has 61 MA's), (15, 49743), (25, 49878), (28, 49902), (29, 49914), (31, 49941), (37, 50064),

Gene: Pherobrine_74 Start: 51157, Stop: 51573, Start Num: 6
Candidate Starts for Pherobrine_74:
(Start: 6 @51157 has 61 MA's), (15, 51250), (16, 51274), (17, 51283), (27, 51403),

Gene: Rickmore_68 Start: 48311, Stop: 48739, Start Num: 6
Candidate Starts for Rickmore_68:
(Start: 6 @48311 has 61 MA's), (15, 48404), (29, 48575), (36, 48698),

Gene: Roney_72 Start: 49633, Stop: 50031, Start Num: 6
Candidate Starts for Roney_72:
(Start: 5 @49621 has 2 MA's), (Start: 6 @49633 has 61 MA's), (12, 49681), (18, 49756), (20, 49786), (23, 49819), (28, 49855), (36, 49990),

Gene: Runhaar_71 Start: 49462, Stop: 49887, Start Num: 6
Candidate Starts for Runhaar_71:
(Start: 6 @49462 has 61 MA's), (8, 49495), (15, 49552), (25, 49687), (28, 49711), (29, 49723), (31, 49750), (37, 49873),

Gene: Schwartz33_73 Start: 49999, Stop: 50442, Start Num: 6
Candidate Starts for Schwartz33_73:
(Start: 6 @49999 has 61 MA's), (10, 50059), (27, 50239), (36, 50380), (38, 50425),

Gene: Secretariat_72 Start: 49337, Stop: 49789, Start Num: 6
Candidate Starts for Secretariat_72:
(Start: 6 @49337 has 61 MA's), (7, 49361), (27, 49583), (38, 49772), (39, 49775),

Gene: ShaggyRogers_71 Start: 49443, Stop: 49871, Start Num: 6
Candidate Starts for ShaggyRogers_71:
(Start: 6 @49443 has 61 MA's), (15, 49536), (29, 49707), (36, 49830), (37, 49857),

Gene: Sunny4976_63 Start: 44190, Stop: 44579, Start Num: 11
Candidate Starts for Sunny4976_63:
(9, 44175), (11, 44190), (13, 44193), (22, 44304), (24, 44334), (26, 44346), (28, 44367), (30, 44385),

Gene: SweetCrkHerbs_76 Start: 49672, Stop: 50070, Start Num: 6
Candidate Starts for SweetCrkHerbs_76:
(Start: 5 @49660 has 2 MA's), (Start: 6 @49672 has 61 MA's), (20, 49825), (23, 49858), (28, 49894), (37, 50056),

Gene: Tairn4Wing_76 Start: 49765, Stop: 50163, Start Num: 6
Candidate Starts for Tairn4Wing_76:
(Start: 5 @49753 has 2 MA's), (Start: 6 @49765 has 61 MA's), (12, 49813), (18, 49888), (20, 49918), (23, 49951), (28, 49987), (36, 50122), (37, 50149),

Gene: Talon44_76 Start: 50395, Stop: 50793, Start Num: 6
Candidate Starts for Talon44_76:
(Start: 5 @50383 has 2 MA's), (Start: 6 @50395 has 61 MA's), (12, 50443), (18, 50518), (20, 50548), (23, 50581), (28, 50617), (36, 50752), (37, 50779),

Gene: Tanis_72 Start: 49453, Stop: 49851, Start Num: 6
Candidate Starts for Tanis_72:
(Start: 5 @49441 has 2 MA's), (Start: 6 @49453 has 61 MA's), (12, 49501), (18, 49576), (20, 49606), (23, 49639), (28, 49675), (36, 49810), (37, 49837),

Gene: TenaciousP_71 Start: 51064, Stop: 51492, Start Num: 6
Candidate Starts for TenaciousP_71:
(Start: 6 @51064 has 61 MA's), (15, 51157), (25, 51292), (29, 51328), (36, 51451), (37, 51478),

Gene: Tonaltzin_69 Start: 49634, Stop: 50062, Start Num: 6
Candidate Starts for Tonaltzin_69:
(Start: 6 @49634 has 61 MA's), (15, 49727), (25, 49862), (29, 49898), (36, 50021), (37, 50048),

Gene: Trufflozitus_75 Start: 50280, Stop: 50678, Start Num: 6
Candidate Starts for Trufflozitus_75:
(Start: 5 @50268 has 2 MA's), (Start: 6 @50280 has 61 MA's), (12, 50328), (14, 50331), (18, 50403), (20, 50433), (23, 50466), (28, 50502), (36, 50637), (37, 50664),

Gene: Untouchable_73 Start: 50650, Stop: 51075, Start Num: 6
Candidate Starts for Untouchable_73:

(Start: 6 @50650 has 61 MA's), (15, 50740), (25, 50875), (28, 50899), (29, 50911), (31, 50938), (37, 51061),

Gene: Vardy_70 Start: 49352, Stop: 49777, Start Num: 6
Candidate Starts for Vardy_70:
(Start: 6 @49352 has 61 MA's), (8, 49385), (15, 49442), (25, 49577), (28, 49601), (29, 49613), (37, 49763),

Gene: Zeph_73 Start: 50490, Stop: 50915, Start Num: 6
Candidate Starts for Zeph_73:
(Start: 6 @50490 has 61 MA's), (15, 50580), (25, 50715), (28, 50739), (29, 50751), (31, 50778), (37, 50901),