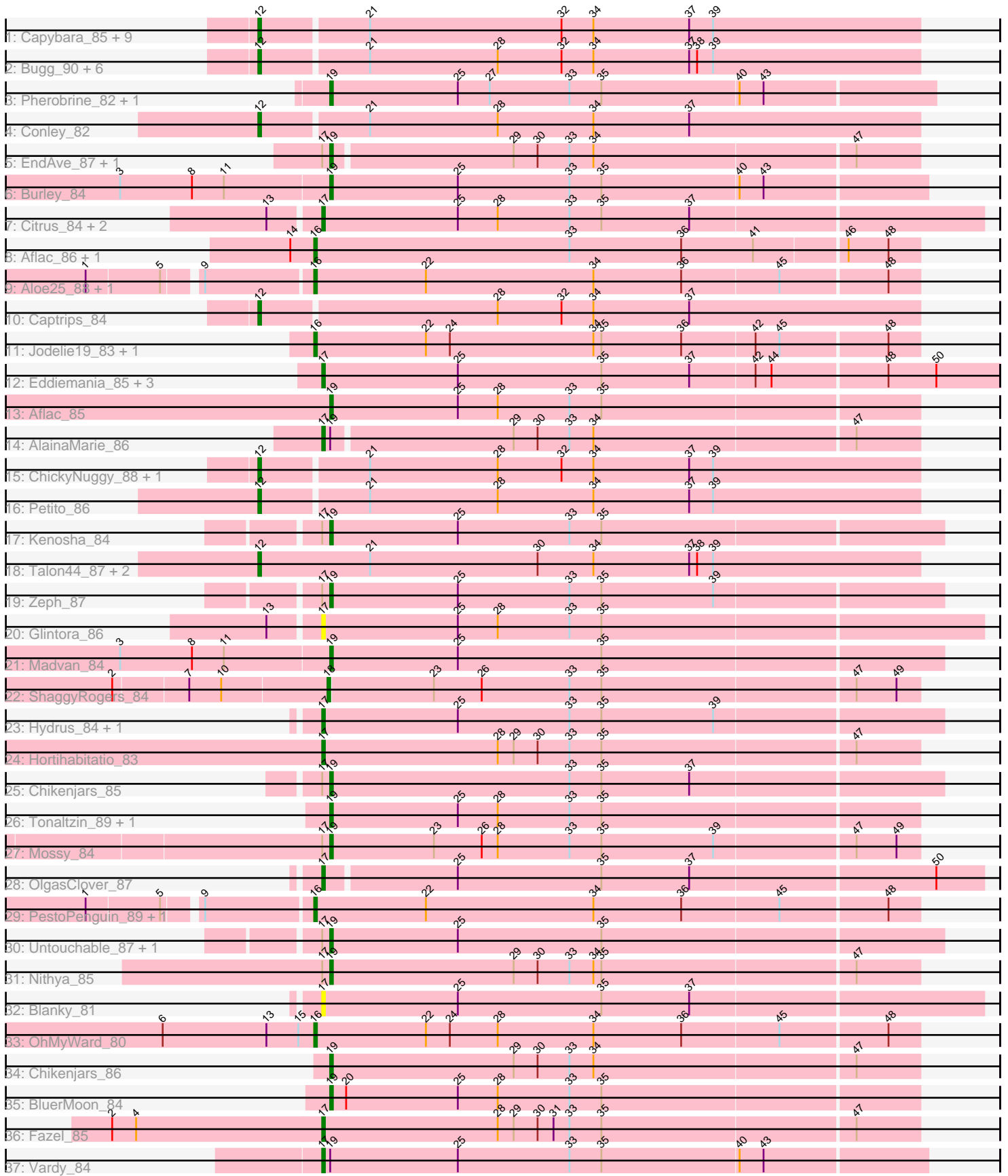


Pham 308558



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 308558 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308558 has 69 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Capybara_85, Gravy_84, Football_89, Gill_85, Tanis_85, Kerry_84, Roney_84, Magel_86, Odesza_84, NoPickles_86
- Track 2 : Bugg_90, Tairn4Wing_89, FortCran_86, Artorias_86, Trufflozitus_87, Dancer_86, Avazak_86
- Track 3 : Pherobrine_82, Mysticmoon_82
- Track 4 : Conley_82
- Track 5 : EndAve_87, Luthien_86
- Track 6 : Burley_84
- Track 7 : Citrus_84, Runhaar_83, CWormy_83
- Track 8 : Aflac_86, Tonaltzin_90
- Track 9 : Aloe25_88, Gusicorn_86
- Track 10 : Captrips_84
- Track 11 : Jodelie19_83, Figliar_83
- Track 12 : Eddiemania_85, MajinBuu_85, Duffington_85, TenaciousP_85
- Track 13 : Aflac_85
- Track 14 : AlainaMarie_86
- Track 15 : ChickyNuggy_88, JulesRay_85
- Track 16 : Petite_86
- Track 17 : Kenosha_84
- Track 18 : Talon44_87, Perkunas_86, SweetCrkHerbs_87
- Track 19 : Zeph_87
- Track 20 : Glintora_86
- Track 21 : Madvan_84
- Track 22 : ShaggyRogers_84
- Track 23 : Hydrus_84, Nadmeg_84
- Track 24 : Hortihabitatio_83
- Track 25 : Chikenjars_85
- Track 26 : Tonaltzin_89, Rickmore_84
- Track 27 : Mossy_84
- Track 28 : OlgasClover_87
- Track 29 : PestoPenguin_89, BetterYeti_84
- Track 30 : Untouchable_87, Phepper_86
- Track 31 : Nithya_85
- Track 32 : Blanky_81
- Track 33 : OhMyWard_80
- Track 34 : Chikenjars_86
- Track 35 : BluerMoon_84

- Track 36 : Fazel_85
- Track 37 : Vardy_84

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

The start number called the most often in the published annotations is 12, it was called in 20 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artorias_86, Avazak_86, Bugg_90, Captrips_84, Copybara_85, ChickyNuggy_88, Conley_82, Dancer_86, Football_89, FortCran_86, Gill_85, Gravy_84, JulesRay_85, Kerry_84, Magel_86, NoPickles_86, Odesza_84, Perkunas_86, Petite_86, Roney_84, SweetCrkHerbs_87, Tairn4Wing_89, Talon44_87, Tanis_85, Trufflozitus_87,

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

-

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

- Aflac_85, Aflac_86, AlainaMarie_86, Aloe25_88, BetterYeti_84, Blanky_81, BluerMoon_84, Burley_84, CWormy_83, Chikenjars_85, Chikenjars_86, Citrus_84, Duffington_85, Eddiemania_85, EndAve_87, Fazel_85, Figliar_83, Glintora_86, Gusicorn_86, Hortihabitatio_83, Hydrus_84, Jodelie19_83, Kenosha_84, Luthien_86, Madvan_84, MajinBuu_85, Mossy_84, Mysticmoon_82, Nadmeg_84, Nithya_85, OhMyWard_80, OlgasClover_87, PestoPenguin_89, Phepper_86, Pherobrine_82, Rickmore_84, Runhaar_83, ShaggyRogers_84, TenaciousP_85, Tonaltzin_89, Tonaltzin_90, Untouchable_87, Vardy_84, Zeph_87,

Summary by start number:

Start 12:

- Found in 25 of 69 (36.2%) of genes in pham
- Manual Annotations of this start: 20 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artorias_86 (DJ), Avazak_86 (DJ), Bugg_90 (DJ), Captrips_84 (DJ), Copybara_85 (DJ), ChickyNuggy_88 (DJ), Conley_82 (DJ), Dancer_86 (DJ), Football_89 (DJ), FortCran_86 (DJ), Gill_85 (DJ), Gravy_84 (DJ), JulesRay_85 (DJ), Kerry_84 (DJ), Magel_86 (DJ), NoPickles_86 (DJ), Odesza_84 (DJ), Perkunas_86 (DJ), Petite_86 (DJ), Roney_84 (DJ), SweetCrkHerbs_87 (DJ), Tairn4Wing_89 (DJ), Talon44_87 (DJ), Tanis_85 (DJ), Trufflozitus_87 (DJ),

Start 16:

- Found in 9 of 69 (13.0%) of genes in pham
- Manual Annotations of this start: 6 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aflac_86 (DJ), Aloe25_88 (DJ), BetterYeti_84 (DJ), Figliar_83 (DJ), Gusicorn_86 (DJ), Jodelie19_83 (DJ), OhMyWard_80 (DJ), PestoPenguin_89 (DJ), Tonaltzin_90 (DJ),

Start 17:

- Found in 25 of 69 (36.2%) of genes in pham
- Manual Annotations of this start: 13 of 56
- Called 64.0% of time when present
- Phage (with cluster) where this start called: AlainaMarie_86 (DJ), Blanky_81 (DJ), CWormy_83 (DJ), Citrus_84 (DJ), Duffington_85 (DJ), Eddiemania_85 (DJ), Fazel_85 (DJ), Glintora_86 (DJ), Hortihabitatio_83 (DJ), Hydrus_84 (DJ), MajinBuu_85 (DJ), Nadmeg_84 (DJ), OlgasClover_87 (DJ), Runhaar_83 (DJ), TenaciousP_85 (DJ), Vardy_84 (DJ),

Start 18:

- Found in 1 of 69 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 56
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ShaggyRogers_84 (DJ),

Start 19:

- Found in 20 of 69 (29.0%) of genes in pham
- Manual Annotations of this start: 16 of 56
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Aflac_85 (DJ), BluerMoon_84 (DJ), Burley_84 (DJ), Chikenjars_85 (DJ), Chikenjars_86 (DJ), EndAve_87 (DJ), Kenosha_84 (DJ), Luthien_86 (DJ), Madvan_84 (DJ), Mossy_84 (DJ), Mysticmoon_82 (DJ), Nithya_85 (DJ), Phepper_86 (DJ), Pherobrine_82 (DJ), Rickmore_84 (DJ), Tonaltzin_89 (DJ), Untouchable_87 (DJ), Zeph_87 (DJ),

Summary by clusters:

There is one cluster represented in this pham: DJ

Info for manual annotations of cluster DJ:

- Start number 12 was manually annotated 20 times for cluster DJ.
- Start number 16 was manually annotated 6 times for cluster DJ.
- Start number 17 was manually annotated 13 times for cluster DJ.
- Start number 18 was manually annotated 1 time for cluster DJ.
- Start number 19 was manually annotated 16 times for cluster DJ.

Gene Information:

Gene: Aflac_86 Start: 54840, Stop: 55064, Start Num: 16

Candidate Starts for Aflac_86:

(14, 54831), (Start: 16 @54840 has 6 MA's), (33, 54936), (36, 54978), (41, 55005), (46, 55038), (48, 55053),

Gene: Aflac_85 Start: 54616, Stop: 54834, Start Num: 19

Candidate Starts for Aflac_85:

(Start: 19 @54616 has 16 MA's), (25, 54664), (28, 54679), (33, 54706), (35, 54718),

Gene: AlainaMarie_86 Start: 54900, Stop: 55118, Start Num: 17

Candidate Starts for AlainaMarie_86:

(Start: 17 @54900 has 13 MA's), (Start: 19 @54903 has 16 MA's), (29, 54969), (30, 54978), (33, 54990), (34, 54999), (47, 55095),

Gene: Aloe25_88 Start: 54053, Stop: 54277, Start Num: 16

Candidate Starts for Aloe25_88:

(1, 53975), (5, 54002), (9, 54014), (Start: 16 @54053 has 6 MA's), (22, 54095), (34, 54158), (36, 54191), (45, 54227), (48, 54266),

Gene: Artorias_86 Start: 53340, Stop: 53585, Start Num: 12

Candidate Starts for Artorias_86:

(Start: 12 @53340 has 20 MA's), (21, 53379), (28, 53427), (32, 53451), (34, 53463), (37, 53499), (38, 53502), (39, 53508),

Gene: Avazak_86 Start: 53769, Stop: 54014, Start Num: 12

Candidate Starts for Avazak_86:

(Start: 12 @53769 has 20 MA's), (21, 53808), (28, 53856), (32, 53880), (34, 53892), (37, 53928), (38, 53931), (39, 53937),

Gene: BetterYeti_84 Start: 54052, Stop: 54276, Start Num: 16

Candidate Starts for BetterYeti_84:

(1, 53974), (5, 54001), (9, 54013), (Start: 16 @54052 has 6 MA's), (22, 54094), (34, 54157), (36, 54190), (45, 54226), (48, 54265),

Gene: Blanky_81 Start: 54678, Stop: 54923, Start Num: 17

Candidate Starts for Blanky_81:

(Start: 17 @54678 has 13 MA's), (25, 54729), (35, 54783), (37, 54816),

Gene: BluerMoon_84 Start: 54687, Stop: 54905, Start Num: 19

Candidate Starts for BluerMoon_84:

(Start: 19 @54687 has 16 MA's), (20, 54693), (25, 54735), (28, 54750), (33, 54777), (35, 54789),

Gene: Bugg_90 Start: 53385, Stop: 53630, Start Num: 12

Candidate Starts for Bugg_90:

(Start: 12 @53385 has 20 MA's), (21, 53424), (28, 53472), (32, 53496), (34, 53508), (37, 53544), (38, 53547), (39, 53553),

Gene: Burley_84 Start: 53706, Stop: 53927, Start Num: 19

Candidate Starts for Burley_84:

(3, 53628), (8, 53655), (11, 53667), (Start: 19 @53706 has 16 MA's), (25, 53754), (33, 53796), (35, 53808), (40, 53859), (43, 53868),

Gene: CWormy_83 Start: 53634, Stop: 53879, Start Num: 17

Candidate Starts for CWormy_83:

(13, 53616), (Start: 17 @53634 has 13 MA's), (25, 53685), (28, 53700), (33, 53727), (35, 53739), (37, 53772),

Gene: Captrips_84 Start: 52917, Stop: 53162, Start Num: 12

Candidate Starts for Captrips_84:

(Start: 12 @52917 has 20 MA's), (28, 53004), (32, 53028), (34, 53040), (37, 53076),

Gene: Capybara_85 Start: 53157, Stop: 53402, Start Num: 12

Candidate Starts for Capybara_85:

(Start: 12 @53157 has 20 MA's), (21, 53196), (32, 53268), (34, 53280), (37, 53316), (39, 53325),

Gene: ChickyNuggy_88 Start: 53511, Stop: 53756, Start Num: 12

Candidate Starts for ChickyNuggy_88:

(Start: 12 @53511 has 20 MA's), (21, 53550), (28, 53598), (32, 53622), (34, 53634), (37, 53670), (39, 53679),

Gene: Chikenjars_85 Start: 54894, Stop: 55121, Start Num: 19

Candidate Starts for Chikenjars_85:

(Start: 17 @54891 has 13 MA's), (Start: 19 @54894 has 16 MA's), (33, 54984), (35, 54996), (37, 55029),

Gene: Chikenjars_86 Start: 55128, Stop: 55346, Start Num: 19

Candidate Starts for Chikenjars_86:

(Start: 19 @55128 has 16 MA's), (29, 55197), (30, 55206), (33, 55218), (34, 55227), (47, 55323),

Gene: Citrus_84 Start: 54695, Stop: 54940, Start Num: 17

Candidate Starts for Citrus_84:

(13, 54677), (Start: 17 @54695 has 13 MA's), (25, 54746), (28, 54761), (33, 54788), (35, 54800), (37, 54833),

Gene: Conley_82 Start: 53103, Stop: 53348, Start Num: 12

Candidate Starts for Conley_82:

(Start: 12 @53103 has 20 MA's), (21, 53142), (28, 53190), (34, 53226), (37, 53262),

Gene: Dancer_86 Start: 53077, Stop: 53322, Start Num: 12

Candidate Starts for Dancer_86:

(Start: 12 @53077 has 20 MA's), (21, 53116), (28, 53164), (32, 53188), (34, 53200), (37, 53236), (38, 53239), (39, 53245),

Gene: Duffington_85 Start: 54606, Stop: 54857, Start Num: 17

Candidate Starts for Duffington_85:

(Start: 17 @54606 has 13 MA's), (25, 54657), (35, 54711), (37, 54744), (42, 54768), (44, 54774), (48, 54816), (50, 54834),

Gene: Eddiemania_85 Start: 54725, Stop: 54976, Start Num: 17

Candidate Starts for Eddiemania_85:

(Start: 17 @54725 has 13 MA's), (25, 54776), (35, 54830), (37, 54863), (42, 54887), (44, 54893), (48, 54935), (50, 54953),

Gene: EndAve_87 Start: 54841, Stop: 55056, Start Num: 19

Candidate Starts for EndAve_87:

(Start: 17 @54838 has 13 MA's), (Start: 19 @54841 has 16 MA's), (29, 54907), (30, 54916), (33, 54928), (34, 54937), (47, 55033),

Gene: Fazel_85 Start: 53442, Stop: 53663, Start Num: 17

Candidate Starts for Fazel_85:

(2, 53370), (4, 53379), (Start: 17 @53442 has 13 MA's), (28, 53508), (29, 53514), (30, 53523), (31, 53529), (33, 53535), (35, 53547), (47, 53640),

Gene: Figliar_83 Start: 54424, Stop: 54648, Start Num: 16

Candidate Starts for Figliar_83:

(Start: 16 @54424 has 6 MA's), (22, 54466), (24, 54475), (34, 54529), (35, 54532), (36, 54562), (42, 54589), (45, 54598), (48, 54637),

Gene: Football_89 Start: 52932, Stop: 53177, Start Num: 12

Candidate Starts for Football_89:

(Start: 12 @52932 has 20 MA's), (21, 52971), (32, 53043), (34, 53055), (37, 53091), (39, 53100),

Gene: FortCran_86 Start: 53340, Stop: 53585, Start Num: 12

Candidate Starts for FortCran_86:

(Start: 12 @53340 has 20 MA's), (21, 53379), (28, 53427), (32, 53451), (34, 53463), (37, 53499), (38, 53502), (39, 53508),

Gene: Gill_85 Start: 53184, Stop: 53429, Start Num: 12

Candidate Starts for Gill_85:

(Start: 12 @53184 has 20 MA's), (21, 53223), (32, 53295), (34, 53307), (37, 53343), (39, 53352),

Gene: Glintora_86 Start: 54804, Stop: 55049, Start Num: 17

Candidate Starts for Glintora_86:

(13, 54786), (Start: 17 @54804 has 13 MA's), (25, 54855), (28, 54870), (33, 54897), (35, 54909),

Gene: Gravy_84 Start: 52847, Stop: 53092, Start Num: 12

Candidate Starts for Gravy_84:

(Start: 12 @52847 has 20 MA's), (21, 52886), (32, 52958), (34, 52970), (37, 53006), (39, 53015),

Gene: Gusicorn_86 Start: 54053, Stop: 54277, Start Num: 16

Candidate Starts for Gusicorn_86:

(1, 53975), (5, 54002), (9, 54014), (Start: 16 @54053 has 6 MA's), (22, 54095), (34, 54158), (36, 54191), (45, 54227), (48, 54266),

Gene: Hortihabitatio_83 Start: 53488, Stop: 53709, Start Num: 17

Candidate Starts for Hortihabitatio_83:

(Start: 17 @53488 has 13 MA's), (28, 53554), (29, 53560), (30, 53569), (33, 53581), (35, 53593), (47, 53686),

Gene: Hydrus_84 Start: 54426, Stop: 54656, Start Num: 17

Candidate Starts for Hydrus_84:

(Start: 17 @54426 has 13 MA's), (25, 54477), (33, 54519), (35, 54531), (39, 54573),

Gene: Jodelie19_83 Start: 55591, Stop: 55815, Start Num: 16

Candidate Starts for Jodelie19_83:

(Start: 16 @55591 has 6 MA's), (22, 55633), (24, 55642), (34, 55696), (35, 55699), (36, 55729), (42, 55756), (45, 55765), (48, 55804),

Gene: JulesRay_85 Start: 53436, Stop: 53681, Start Num: 12

Candidate Starts for JulesRay_85:

(Start: 12 @53436 has 20 MA's), (21, 53475), (28, 53523), (32, 53547), (34, 53559), (37, 53595), (39, 53604),

Gene: Kenosha_84 Start: 54511, Stop: 54738, Start Num: 19

Candidate Starts for Kenosha_84:

(Start: 17 @54508 has 13 MA's), (Start: 19 @54511 has 16 MA's), (25, 54559), (33, 54601), (35, 54613),

Gene: Kerry_84 Start: 52910, Stop: 53155, Start Num: 12

Candidate Starts for Kerry_84:

(Start: 12 @52910 has 20 MA's), (21, 52949), (32, 53021), (34, 53033), (37, 53069), (39, 53078),

Gene: Luthien_86 Start: 54846, Stop: 55061, Start Num: 19

Candidate Starts for Luthien_86:

(Start: 17 @54843 has 13 MA's), (Start: 19 @54846 has 16 MA's), (29, 54912), (30, 54921), (33, 54933), (34, 54942), (47, 55038),

Gene: Madvan_84 Start: 53741, Stop: 53968, Start Num: 19

Candidate Starts for Madvan_84:

(3, 53663), (8, 53690), (11, 53702), (Start: 19 @53741 has 16 MA's), (25, 53789), (35, 53843),

Gene: Magel_86 Start: 53099, Stop: 53344, Start Num: 12

Candidate Starts for Magel_86:

(Start: 12 @53099 has 20 MA's), (21, 53138), (32, 53210), (34, 53222), (37, 53258), (39, 53267),

Gene: MajinBuu_85 Start: 54788, Stop: 55039, Start Num: 17

Candidate Starts for MajinBuu_85:

(Start: 17 @54788 has 13 MA's), (25, 54839), (35, 54893), (37, 54926), (42, 54950), (44, 54956), (48, 54998), (50, 55016),

Gene: Mossy_84 Start: 54808, Stop: 55026, Start Num: 19

Candidate Starts for Mossy_84:

(Start: 17 @54805 has 13 MA's), (Start: 19 @54808 has 16 MA's), (23, 54847), (26, 54865), (28, 54871), (33, 54898), (35, 54910), (39, 54952), (47, 55003), (49, 55018),

Gene: Mysticmoon_82 Start: 53604, Stop: 53828, Start Num: 19

Candidate Starts for Mysticmoon_82:

(Start: 19 @53604 has 16 MA's), (25, 53652), (27, 53664), (33, 53694), (35, 53706), (40, 53757), (43, 53766),

Gene: Nadmeg_84 Start: 54723, Stop: 54953, Start Num: 17

Candidate Starts for Nadmeg_84:

(Start: 17 @54723 has 13 MA's), (25, 54774), (33, 54816), (35, 54828), (39, 54870),

Gene: Nithya_85 Start: 54677, Stop: 54895, Start Num: 19

Candidate Starts for Nithya_85:

(Start: 17 @54674 has 13 MA's), (Start: 19 @54677 has 16 MA's), (29, 54746), (30, 54755), (33, 54767), (34, 54776), (35, 54779), (47, 54872),

Gene: NoPickles_86 Start: 53006, Stop: 53251, Start Num: 12

Candidate Starts for NoPickles_86:

(Start: 12 @53006 has 20 MA's), (21, 53045), (32, 53117), (34, 53129), (37, 53165), (39, 53174),

Gene: Odesza_84 Start: 53046, Stop: 53291, Start Num: 12

Candidate Starts for Odesza_84:

(Start: 12 @53046 has 20 MA's), (21, 53085), (32, 53157), (34, 53169), (37, 53205), (39, 53214),

Gene: OhMyWard_80 Start: 54597, Stop: 54821, Start Num: 16

Candidate Starts for OhMyWard_80:

(6, 54540), (13, 54579), (15, 54591), (Start: 16 @54597 has 6 MA's), (22, 54639), (24, 54648), (28, 54666), (34, 54702), (36, 54735), (45, 54771), (48, 54810),

Gene: OlgasClover_87 Start: 55488, Stop: 55730, Start Num: 17

Candidate Starts for OlgasClover_87:

(Start: 17 @55488 has 13 MA's), (25, 55536), (35, 55590), (37, 55623), (50, 55713),

Gene: Perkunas_86 Start: 52945, Stop: 53193, Start Num: 12

Candidate Starts for Perkunas_86:

(Start: 12 @52945 has 20 MA's), (21, 52987), (30, 53050), (34, 53071), (37, 53107), (38, 53110), (39, 53116),

Gene: PestoPenguin_89 Start: 54053, Stop: 54277, Start Num: 16

Candidate Starts for PestoPenguin_89:

(1, 53975), (5, 54002), (9, 54014), (Start: 16 @54053 has 6 MA's), (22, 54095), (34, 54158), (36, 54191), (45, 54227), (48, 54266),

Gene: Petito_86 Start: 54052, Stop: 54297, Start Num: 12

Candidate Starts for Petito_86:

(Start: 12 @54052 has 20 MA's), (21, 54091), (28, 54139), (34, 54175), (37, 54211), (39, 54220),

Gene: Phepper_86 Start: 54213, Stop: 54440, Start Num: 19

Candidate Starts for Phepper_86:

(Start: 17 @54210 has 13 MA's), (Start: 19 @54213 has 16 MA's), (25, 54261), (35, 54315),

Gene: Pherobrine_82 Start: 53659, Stop: 53883, Start Num: 19

Candidate Starts for Pherobrine_82:

(Start: 19 @53659 has 16 MA's), (25, 53707), (27, 53719), (33, 53749), (35, 53761), (40, 53812), (43, 53821),

Gene: Rickmore_84 Start: 53515, Stop: 53733, Start Num: 19

Candidate Starts for Rickmore_84:

(Start: 19 @53515 has 16 MA's), (25, 53563), (28, 53578), (33, 53605), (35, 53617),

Gene: Roney_84 Start: 53209, Stop: 53454, Start Num: 12

Candidate Starts for Roney_84:

(Start: 12 @53209 has 20 MA's), (21, 53248), (32, 53320), (34, 53332), (37, 53368), (39, 53377),

Gene: Runhaar_83 Start: 53800, Stop: 54045, Start Num: 17

Candidate Starts for Runhaar_83:

(13, 53782), (Start: 17 @53800 has 13 MA's), (25, 53851), (28, 53866), (33, 53893), (35, 53905), (37, 53938),

Gene: ShaggyRogers_84 Start: 53795, Stop: 54013, Start Num: 18

Candidate Starts for ShaggyRogers_84:

(2, 53717), (7, 53744), (10, 53756), (Start: 18 @53795 has 1 MA's), (23, 53834), (26, 53852), (33, 53885), (35, 53897), (47, 53990), (49, 54005),

Gene: SweetCrkHerbs_87 Start: 52958, Stop: 53206, Start Num: 12

Candidate Starts for SweetCrkHerbs_87:

(Start: 12 @52958 has 20 MA's), (21, 53000), (30, 53063), (34, 53084), (37, 53120), (38, 53123), (39, 53129),

Gene: Tairn4Wing_89 Start: 53178, Stop: 53423, Start Num: 12

Candidate Starts for Tairn4Wing_89:

(Start: 12 @53178 has 20 MA's), (21, 53217), (28, 53265), (32, 53289), (34, 53301), (37, 53337), (38, 53340), (39, 53346),

Gene: Talon44_87 Start: 53555, Stop: 53803, Start Num: 12

Candidate Starts for Talon44_87:

(Start: 12 @53555 has 20 MA's), (21, 53597), (30, 53660), (34, 53681), (37, 53717), (38, 53720), (39, 53726),

Gene: Tanis_85 Start: 53029, Stop: 53274, Start Num: 12

Candidate Starts for Tanis_85:

(Start: 12 @53029 has 20 MA's), (21, 53068), (32, 53140), (34, 53152), (37, 53188), (39, 53197),

Gene: TenaciousP_85 Start: 55540, Stop: 55791, Start Num: 17

Candidate Starts for TenaciousP_85:

(Start: 17 @55540 has 13 MA's), (25, 55591), (35, 55645), (37, 55678), (42, 55702), (44, 55708), (48, 55750), (50, 55768),

Gene: Tonaltzin_90 Start: 54596, Stop: 54820, Start Num: 16

Candidate Starts for Tonaltzin_90:

(14, 54587), (Start: 16 @54596 has 6 MA's), (33, 54692), (36, 54734), (41, 54761), (46, 54794), (48, 54809),

Gene: Tonaltzin_89 Start: 54372, Stop: 54590, Start Num: 19

Candidate Starts for Tonaltzin_89:

(Start: 19 @54372 has 16 MA's), (25, 54420), (28, 54435), (33, 54462), (35, 54474),

Gene: Trufflozitus_87 Start: 53693, Stop: 53938, Start Num: 12

Candidate Starts for Trufflozitus_87:

(Start: 12 @53693 has 20 MA's), (21, 53732), (28, 53780), (32, 53804), (34, 53816), (37, 53852), (38, 53855), (39, 53861),

Gene: Untouchable_87 Start: 55210, Stop: 55437, Start Num: 19

Candidate Starts for Untouchable_87:

(Start: 17 @55207 has 13 MA's), (Start: 19 @55210 has 16 MA's), (25, 55258), (35, 55312),

Gene: Vardy_84 Start: 53737, Stop: 53961, Start Num: 17

Candidate Starts for Vardy_84:

(Start: 17 @53737 has 13 MA's), (Start: 19 @53740 has 16 MA's), (25, 53788), (33, 53830), (35, 53842), (40, 53893), (43, 53902),

Gene: Zeph_87 Start: 55014, Stop: 55241, Start Num: 19

Candidate Starts for Zeph_87:

(Start: 17 @55011 has 13 MA's), (Start: 19 @55014 has 16 MA's), (25, 55062), (33, 55104), (35, 55116), (39, 55158),