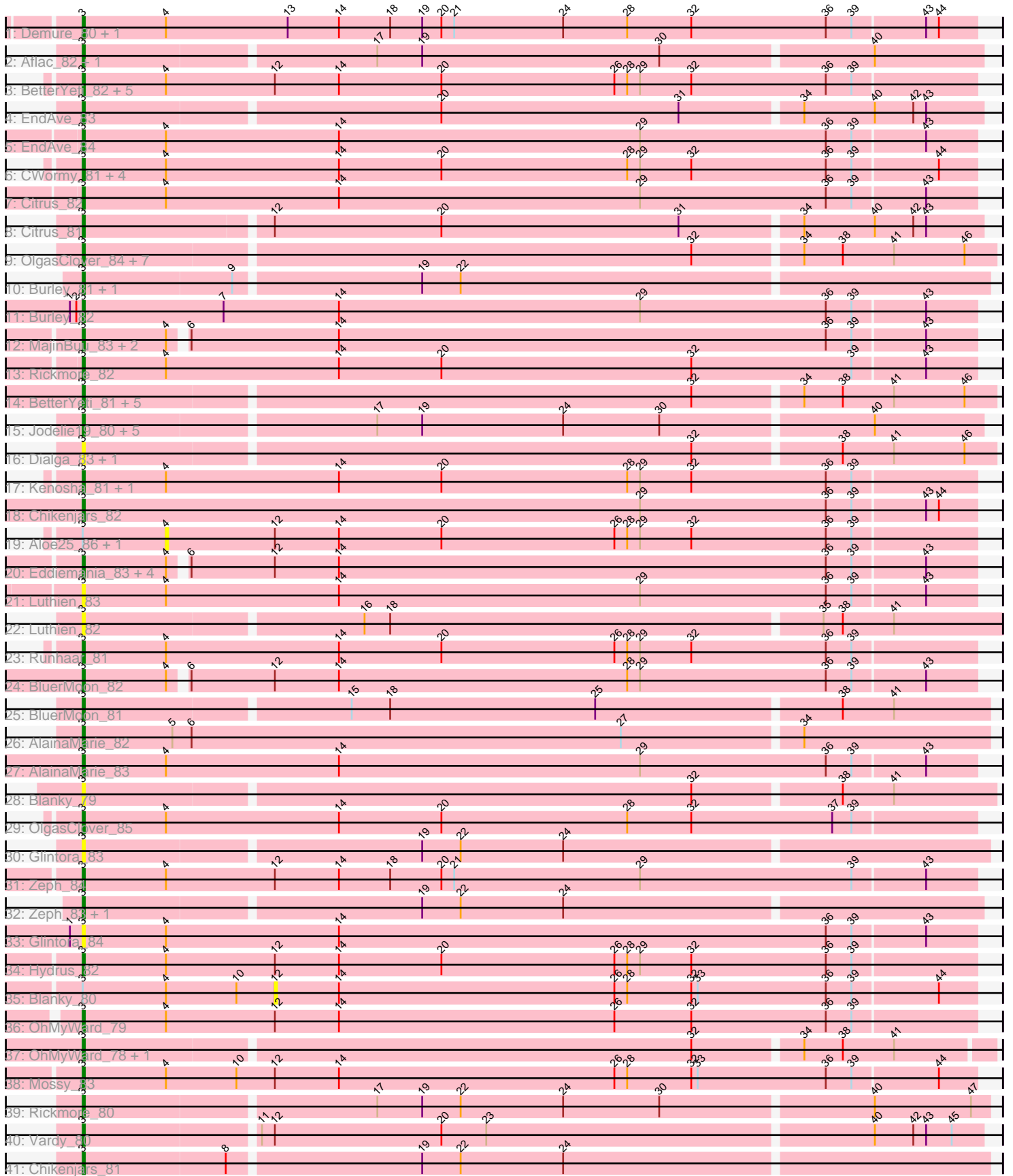


Pham 311504



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 311504 Report

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

Pham number 311504 has 81 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Demure_80, Arataki_81
- Track 2 : Aflac_82, Duffington_82
- Track 3 : BetterYeti_82, ShaggyRogers_82, Crocheter_83, Madvan_82, Gusicorn_84, Untouchable_84
- Track 4 : EndAve_83
- Track 5 : EndAve_84
- Track 6 : CWormy_81, Dialga_84, ArtetaBall_82, Nadmeg_82, Nithya_81
- Track 7 : Citrus_82
- Track 8 : Citrus_81
- Track 9 : OlgasClover_84, Madvan_81, Runhaar_80, Kenosha_80, Untouchable_83, Phepper_82, Nithya_80, Nadmeg_81
- Track 10 : Burley_81, Demure_78
- Track 11 : Burley_82
- Track 12 : MajinBuu_83, Figliar_81, Jodelie19_81
- Track 13 : Rickmore_82
- Track 14 : BetterYeti_81, Gusicorn_83, Aloe25_85, ShaggyRogers_81, Crocheter_82, PestoPenguin_86
- Track 15 : Jodelie19_80, Figliar_80, Eddiemania_82, TenaciousP_82, Tonaltzin_86, MajinBuu_82
- Track 16 : Dialga_83, ArtetaBall_81
- Track 17 : Kenosha_81, Phepper_83
- Track 18 : Chikenjars_82
- Track 19 : Aloe25_86, PestoPenguin_87
- Track 20 : Eddiemania_83, TenaciousP_83, Duffington_83, Tonaltzin_87, Aflac_83
- Track 21 : Luthien_83
- Track 22 : Luthien_82
- Track 23 : Runhaar_81
- Track 24 : BluerMoon_82
- Track 25 : BluerMoon_81
- Track 26 : AlainaMarie_82
- Track 27 : AlainaMarie_83
- Track 28 : Blanky_79
- Track 29 : OlgasClover_85
- Track 30 : Glintora_83
- Track 31 : Zeph_84
- Track 32 : Zeph_83, Hydrus_81
- Track 33 : Glintora_84

- Track 34 : Hydrus_82
- Track 35 : Blanky_80
- Track 36 : OhMyWard_79
- Track 37 : OhMyWard_78, Mossy_82
- Track 38 : Mossy_83
- Track 39 : Rickmore_80
- Track 40 : Vardy_80
- Track 41 : Chikenjars_81

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

The start number called the most often in the published annotations is 3, it was called in 62 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aflac_82, Aflac_83, AlainaMarie_82, AlainaMarie_83, Aloe25_85, Arataki_81, ArtetaBall_81, ArtetaBall_82, BetterYeti_81, BetterYeti_82, Blanky_79, BluerMoon_81, BluerMoon_82, Burley_81, Burley_82, CWormy_81, Chikenjars_81, Chikenjars_82, Citrus_81, Citrus_82, Crocheter_82, Crocheter_83, Demure_78, Demure_80, Dialga_83, Dialga_84, Duffington_82, Duffington_83, Eddiemania_82, Eddiemania_83, EndAve_83, EndAve_84, Figliar_80, Figliar_81, Glintora_83, Glintora_84, Gusicorn_83, Gusicorn_84, Hydrus_81, Hydrus_82, Jodelie19_80, Jodelie19_81, Kenosha_80, Kenosha_81, Luthien_82, Luthien_83, Madvan_81, Madvan_82, MajinBuu_82, MajinBuu_83, Mossy_82, Mossy_83, Nadmeg_81, Nadmeg_82, Nithya_80, Nithya_81, OhMyWard_78, OhMyWard_79, OlgasClover_84, OlgasClover_85, PestoPenguin_86, Phepper_82, Phepper_83, Rickmore_80, Rickmore_82, Runhaar_80, Runhaar_81, ShaggyRogers_81, ShaggyRogers_82, TenaciousP_82, TenaciousP_83, Tonaltzin_86, Tonaltzin_87, Untouchable_83, Untouchable_84, Vardy_80, Zeph_83, Zeph_84,

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

- Aloe25_86, Blanky_80, PestoPenguin_87,

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

-

Summary by start number:

Start 3:

- Found in 81 of 81 (100.0%) of genes in pham
- Manual Annotations of this start: 62 of 62
- Called 96.3% of time when present
- Phage (with cluster) where this start called: Aflac_82 (DJ), Aflac_83 (DJ), AlainaMarie_82 (DJ), AlainaMarie_83 (DJ), Aloe25_85 (DJ), Arataki_81 (DJ), ArtetaBall_81 (DJ), ArtetaBall_82 (DJ), BetterYeti_81 (DJ), BetterYeti_82 (DJ), Blanky_79 (DJ), BluerMoon_81 (DJ), BluerMoon_82 (DJ), Burley_81 (DJ), Burley_82 (DJ), CWormy_81 (DJ), Chikenjars_81 (DJ), Chikenjars_82 (DJ), Citrus_81 (DJ), Citrus_82 (DJ), Crocheter_82 (DJ), Crocheter_83 (DJ), Demure_78 (DJ), Demure_80 (DJ), Dialga_83 (DJ), Dialga_84 (DJ), Duffington_82 (DJ), Duffington_83 (DJ), Eddiemania_82 (DJ), Eddiemania_83 (DJ), EndAve_83 (DJ), EndAve_84 (DJ),

Figliar_80 (DJ), Figliar_81 (DJ), Glintora_83 (DJ), Glintora_84 (DJ), Gusicorn_83 (DJ), Gusicorn_84 (DJ), Hydrus_81 (DJ), Hydrus_82 (DJ), Jodelie19_80 (DJ), Jodelie19_81 (DJ), Kenosha_80 (DJ), Kenosha_81 (DJ), Luthien_82 (DJ), Luthien_83 (DJ), Madvan_81 (DJ), Madvan_82 (DJ), MajinBuu_82 (DJ), MajinBuu_83 (DJ), Mossy_82 (DJ), Mossy_83 (DJ), Nadmeg_81 (DJ), Nadmeg_82 (DJ), Nithya_80 (DJ), Nithya_81 (DJ), OhMyWard_78 (DJ), OhMyWard_79 (DJ), OlgasClover_84 (DJ), OlgasClover_85 (DJ), PestoPenguin_86 (DJ), Phepper_82 (DJ), Phepper_83 (DJ), Rickmore_80 (DJ), Rickmore_82 (DJ), Runhaar_80 (DJ), Runhaar_81 (DJ), ShaggyRogers_81 (DJ), ShaggyRogers_82 (DJ), TenaciousP_82 (DJ), TenaciousP_83 (DJ), Tonaltzin_86 (DJ), Tonaltzin_87 (DJ), Untouchable_83 (DJ), Untouchable_84 (DJ), Vardy_80 (DJ), Zeph_83 (DJ), Zeph_84 (DJ),

Start 4:

- Found in 39 of 81 (48.1%) of genes in pham
- No Manual Annotations of this start.
- Called 5.1% of time when present
- Phage (with cluster) where this start called: Aloe25_86 (DJ), PestoPenguin_87 (DJ),

Start 12:

- Found in 21 of 81 (25.9%) of genes in pham
- No Manual Annotations of this start.
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Blanky_80 (DJ),

Summary by clusters:

There is one cluster represented in this pham: DJ

Info for manual annotations of cluster DJ:

- Start number 3 was manually annotated 62 times for cluster DJ.

Gene Information:

Gene: Aflac_82 Start: 53154, Stop: 53564, Start Num: 3

Candidate Starts for Aflac_82:

(Start: 3 @53154 has 62 MA's), (17, 53286), (19, 53307), (30, 53418), (40, 53514),

Gene: Aflac_83 Start: 53564, Stop: 53974, Start Num: 3

Candidate Starts for Aflac_83:

(Start: 3 @53564 has 62 MA's), (4, 53603), (6, 53609), (12, 53648), (14, 53678), (36, 53906), (39, 53918), (43, 53951),

Gene: AlainaMarie_82 Start: 53199, Stop: 53618, Start Num: 3

Candidate Starts for AlainaMarie_82:

(Start: 3 @53199 has 62 MA's), (5, 53241), (6, 53250), (27, 53451), (34, 53532),

Gene: AlainaMarie_83 Start: 53618, Stop: 54034, Start Num: 3

Candidate Starts for AlainaMarie_83:

(Start: 3 @53618 has 62 MA's), (4, 53657), (14, 53738), (29, 53879), (36, 53966), (39, 53978), (43, 54011),

Gene: Aloe25_85 Start: 52603, Stop: 53019, Start Num: 3
Candidate Starts for Aloe25_85:
(Start: 3 @52603 has 62 MA's), (32, 52882), (34, 52930), (38, 52948), (41, 52972), (46, 53005),

Gene: Aloe25_86 Start: 53058, Stop: 53435, Start Num: 4
Candidate Starts for Aloe25_86:
(Start: 3 @53019 has 62 MA's), (4, 53058), (12, 53109), (14, 53139), (20, 53187), (26, 53268), (28, 53274), (29, 53280), (32, 53304), (36, 53367), (39, 53379),

Gene: Arataki_81 Start: 52635, Stop: 53051, Start Num: 3
Candidate Starts for Arataki_81:
(Start: 3 @52635 has 62 MA's), (4, 52674), (13, 52731), (14, 52755), (18, 52779), (19, 52794), (20, 52803), (21, 52809), (24, 52860), (28, 52890), (32, 52920), (36, 52983), (39, 52995), (43, 53028), (44, 53034),

Gene: ArtetaBall_81 Start: 52779, Stop: 53195, Start Num: 3
Candidate Starts for ArtetaBall_81:
(Start: 3 @52779 has 62 MA's), (32, 53058), (38, 53124), (41, 53148), (46, 53181),

Gene: ArtetaBall_82 Start: 53195, Stop: 53611, Start Num: 3
Candidate Starts for ArtetaBall_82:
(Start: 3 @53195 has 62 MA's), (4, 53234), (14, 53315), (20, 53363), (28, 53450), (29, 53456), (32, 53480), (36, 53543), (39, 53555), (44, 53594),

Gene: BetterYeti_82 Start: 53018, Stop: 53434, Start Num: 3
Candidate Starts for BetterYeti_82:
(Start: 3 @53018 has 62 MA's), (4, 53057), (12, 53108), (14, 53138), (20, 53186), (26, 53267), (28, 53273), (29, 53279), (32, 53303), (36, 53366), (39, 53378),

Gene: BetterYeti_81 Start: 52602, Stop: 53018, Start Num: 3
Candidate Starts for BetterYeti_81:
(Start: 3 @52602 has 62 MA's), (32, 52881), (34, 52929), (38, 52947), (41, 52971), (46, 53004),

Gene: Blanky_79 Start: 53664, Stop: 54080, Start Num: 3
Candidate Starts for Blanky_79:
(Start: 3 @53664 has 62 MA's), (32, 53943), (38, 54009), (41, 54033),

Gene: Blanky_80 Start: 54170, Stop: 54496, Start Num: 12
Candidate Starts for Blanky_80:
(Start: 3 @54080 has 62 MA's), (4, 54119), (10, 54152), (12, 54170), (14, 54200), (26, 54329), (28, 54335), (32, 54365), (33, 54368), (36, 54428), (39, 54440), (44, 54479),

Gene: BluerMoon_82 Start: 53519, Stop: 53929, Start Num: 3
Candidate Starts for BluerMoon_82:
(Start: 3 @53519 has 62 MA's), (4, 53558), (6, 53564), (12, 53603), (14, 53633), (28, 53768), (29, 53774), (36, 53861), (39, 53873), (43, 53906),

Gene: BluerMoon_81 Start: 53106, Stop: 53519, Start Num: 3
Candidate Starts for BluerMoon_81:
(Start: 3 @53106 has 62 MA's), (15, 53226), (18, 53244), (25, 53340), (38, 53451), (41, 53475),

Gene: Burley_81 Start: 52236, Stop: 52649, Start Num: 3
Candidate Starts for Burley_81:

(Start: 3 @52236 has 62 MA's), (9, 52305), (19, 52389), (22, 52407),

Gene: Burley_82 Start: 52649, Stop: 53065, Start Num: 3

Candidate Starts for Burley_82:

(1, 52643), (2, 52646), (Start: 3 @52649 has 62 MA's), (7, 52715), (14, 52769), (29, 52910), (36, 52997), (39, 53009), (43, 53042),

Gene: CWormy_81 Start: 52622, Stop: 53038, Start Num: 3

Candidate Starts for CWormy_81:

(Start: 3 @52622 has 62 MA's), (4, 52661), (14, 52742), (20, 52790), (28, 52877), (29, 52883), (32, 52907), (36, 52970), (39, 52982), (44, 53021),

Gene: Chikenjars_82 Start: 53605, Stop: 54021, Start Num: 3

Candidate Starts for Chikenjars_82:

(Start: 3 @53605 has 62 MA's), (29, 53866), (36, 53953), (39, 53965), (43, 53998), (44, 54004),

Gene: Chikenjars_81 Start: 53192, Stop: 53605, Start Num: 3

Candidate Starts for Chikenjars_81:

(Start: 3 @53192 has 62 MA's), (8, 53258), (19, 53345), (22, 53363), (24, 53411),

Gene: Citrus_82 Start: 53631, Stop: 54047, Start Num: 3

Candidate Starts for Citrus_82:

(Start: 3 @53631 has 62 MA's), (4, 53670), (14, 53751), (29, 53892), (36, 53979), (39, 53991), (43, 54024),

Gene: Citrus_81 Start: 53221, Stop: 53631, Start Num: 3

Candidate Starts for Citrus_81:

(Start: 3 @53221 has 62 MA's), (12, 53305), (20, 53383), (31, 53494), (34, 53548), (40, 53581), (42, 53599), (43, 53605),

Gene: Crocheter_82 Start: 52696, Stop: 53112, Start Num: 3

Candidate Starts for Crocheter_82:

(Start: 3 @52696 has 62 MA's), (32, 52975), (34, 53023), (38, 53041), (41, 53065), (46, 53098),

Gene: Crocheter_83 Start: 53112, Stop: 53528, Start Num: 3

Candidate Starts for Crocheter_83:

(Start: 3 @53112 has 62 MA's), (4, 53151), (12, 53202), (14, 53232), (20, 53280), (26, 53361), (28, 53367), (29, 53373), (32, 53397), (36, 53460), (39, 53472),

Gene: Demure_80 Start: 53045, Stop: 53461, Start Num: 3

Candidate Starts for Demure_80:

(Start: 3 @53045 has 62 MA's), (4, 53084), (13, 53141), (14, 53165), (18, 53189), (19, 53204), (20, 53213), (21, 53219), (24, 53270), (28, 53300), (32, 53330), (36, 53393), (39, 53405), (43, 53438), (44, 53444),

Gene: Demure_78 Start: 52228, Stop: 52638, Start Num: 3

Candidate Starts for Demure_78:

(Start: 3 @52228 has 62 MA's), (9, 52297), (19, 52381), (22, 52399),

Gene: Dialga_83 Start: 52798, Stop: 53214, Start Num: 3

Candidate Starts for Dialga_83:

(Start: 3 @52798 has 62 MA's), (32, 53077), (38, 53143), (41, 53167), (46, 53200),

Gene: Dialga_84 Start: 53214, Stop: 53630, Start Num: 3

Candidate Starts for Dialga_84:

(Start: 3 @53214 has 62 MA's), (4, 53253), (14, 53334), (20, 53382), (28, 53469), (29, 53475), (32, 53499), (36, 53562), (39, 53574), (44, 53613),

Gene: Duffington_82 Start: 53156, Stop: 53566, Start Num: 3

Candidate Starts for Duffington_82:

(Start: 3 @53156 has 62 MA's), (17, 53288), (19, 53309), (30, 53420), (40, 53516),

Gene: Duffington_83 Start: 53566, Stop: 53976, Start Num: 3

Candidate Starts for Duffington_83:

(Start: 3 @53566 has 62 MA's), (4, 53605), (6, 53611), (12, 53650), (14, 53680), (36, 53908), (39, 53920), (43, 53953),

Gene: Eddiemania_82 Start: 53275, Stop: 53685, Start Num: 3

Candidate Starts for Eddiemania_82:

(Start: 3 @53275 has 62 MA's), (17, 53407), (19, 53428), (24, 53494), (30, 53539), (40, 53635),

Gene: Eddiemania_83 Start: 53685, Stop: 54095, Start Num: 3

Candidate Starts for Eddiemania_83:

(Start: 3 @53685 has 62 MA's), (4, 53724), (6, 53730), (12, 53769), (14, 53799), (36, 54027), (39, 54039), (43, 54072),

Gene: EndAve_83 Start: 53143, Stop: 53553, Start Num: 3

Candidate Starts for EndAve_83:

(Start: 3 @53143 has 62 MA's), (20, 53305), (31, 53416), (34, 53470), (40, 53503), (42, 53521), (43, 53527),

Gene: EndAve_84 Start: 53553, Stop: 53969, Start Num: 3

Candidate Starts for EndAve_84:

(Start: 3 @53553 has 62 MA's), (4, 53592), (14, 53673), (29, 53814), (36, 53901), (39, 53913), (43, 53946),

Gene: Figliar_80 Start: 52961, Stop: 53371, Start Num: 3

Candidate Starts for Figliar_80:

(Start: 3 @52961 has 62 MA's), (17, 53093), (19, 53114), (24, 53180), (30, 53225), (40, 53321),

Gene: Figliar_81 Start: 53371, Stop: 53781, Start Num: 3

Candidate Starts for Figliar_81:

(Start: 3 @53371 has 62 MA's), (4, 53410), (6, 53416), (14, 53485), (36, 53713), (39, 53725), (43, 53758),

Gene: Glintora_83 Start: 53328, Stop: 53741, Start Num: 3

Candidate Starts for Glintora_83:

(Start: 3 @53328 has 62 MA's), (19, 53481), (22, 53499), (24, 53547),

Gene: Glintora_84 Start: 53741, Stop: 54157, Start Num: 3

Candidate Starts for Glintora_84:

(1, 53735), (Start: 3 @53741 has 62 MA's), (4, 53780), (14, 53861), (36, 54089), (39, 54101), (43, 54134),

Gene: Gusicorn_83 Start: 52603, Stop: 53019, Start Num: 3

Candidate Starts for Gusicorn_83:

(Start: 3 @52603 has 62 MA's), (32, 52882), (34, 52930), (38, 52948), (41, 52972), (46, 53005),

Gene: Gusicorn_84 Start: 53019, Stop: 53435, Start Num: 3

Candidate Starts for Gusicorn_84:

(Start: 3 @53019 has 62 MA's), (4, 53058), (12, 53109), (14, 53139), (20, 53187), (26, 53268), (28, 53274), (29, 53280), (32, 53304), (36, 53367), (39, 53379),

Gene: Hydrus_81 Start: 52971, Stop: 53381, Start Num: 3

Candidate Starts for Hydrus_81:

(Start: 3 @52971 has 62 MA's), (19, 53124), (22, 53142), (24, 53190),

Gene: Hydrus_82 Start: 53381, Stop: 53797, Start Num: 3

Candidate Starts for Hydrus_82:

(Start: 3 @53381 has 62 MA's), (4, 53420), (12, 53471), (14, 53501), (20, 53549), (26, 53630), (28, 53636), (29, 53642), (32, 53666), (36, 53729), (39, 53741),

Gene: Jodelie19_80 Start: 54128, Stop: 54538, Start Num: 3

Candidate Starts for Jodelie19_80:

(Start: 3 @54128 has 62 MA's), (17, 54260), (19, 54281), (24, 54347), (30, 54392), (40, 54488),

Gene: Jodelie19_81 Start: 54538, Stop: 54948, Start Num: 3

Candidate Starts for Jodelie19_81:

(Start: 3 @54538 has 62 MA's), (4, 54577), (6, 54583), (14, 54652), (36, 54880), (39, 54892), (43, 54925),

Gene: Kenosha_81 Start: 53250, Stop: 53666, Start Num: 3

Candidate Starts for Kenosha_81:

(Start: 3 @53250 has 62 MA's), (4, 53289), (14, 53370), (20, 53418), (28, 53505), (29, 53511), (32, 53535), (36, 53598), (39, 53610),

Gene: Kenosha_80 Start: 52834, Stop: 53250, Start Num: 3

Candidate Starts for Kenosha_80:

(Start: 3 @52834 has 62 MA's), (32, 53113), (34, 53161), (38, 53179), (41, 53203), (46, 53236),

Gene: Luthien_83 Start: 53557, Stop: 53973, Start Num: 3

Candidate Starts for Luthien_83:

(Start: 3 @53557 has 62 MA's), (4, 53596), (14, 53677), (29, 53818), (36, 53905), (39, 53917), (43, 53950),

Gene: Luthien_82 Start: 53138, Stop: 53557, Start Num: 3

Candidate Starts for Luthien_82:

(Start: 3 @53138 has 62 MA's), (16, 53264), (18, 53276), (35, 53474), (38, 53483), (41, 53507),

Gene: Madvan_81 Start: 52291, Stop: 52707, Start Num: 3

Candidate Starts for Madvan_81:

(Start: 3 @52291 has 62 MA's), (32, 52570), (34, 52618), (38, 52636), (41, 52660), (46, 52693),

Gene: Madvan_82 Start: 52707, Stop: 53123, Start Num: 3

Candidate Starts for Madvan_82:

(Start: 3 @52707 has 62 MA's), (4, 52746), (12, 52797), (14, 52827), (20, 52875), (26, 52956), (28, 52962), (29, 52968), (32, 52992), (36, 53055), (39, 53067),

Gene: MajinBuu_83 Start: 53747, Stop: 54157, Start Num: 3

Candidate Starts for MajinBuu_83:

(Start: 3 @53747 has 62 MA's), (4, 53786), (6, 53792), (14, 53861), (36, 54089), (39, 54101), (43, 54134),

Gene: MajinBuu_82 Start: 53337, Stop: 53747, Start Num: 3

Candidate Starts for MajinBuu_82:

(Start: 3 @53337 has 62 MA's), (17, 53469), (19, 53490), (24, 53556), (30, 53601), (40, 53697),

Gene: Mossy_83 Start: 54302, Stop: 54718, Start Num: 3

Candidate Starts for Mossy_83:

(Start: 3 @54302 has 62 MA's), (4, 54341), (10, 54374), (12, 54392), (14, 54422), (26, 54551), (28, 54557), (32, 54587), (33, 54590), (36, 54650), (39, 54662), (44, 54701),

Gene: Mossy_82 Start: 53886, Stop: 54302, Start Num: 3

Candidate Starts for Mossy_82:

(Start: 3 @53886 has 62 MA's), (32, 54165), (34, 54213), (38, 54231), (41, 54255),

Gene: Nadmeg_82 Start: 53710, Stop: 54126, Start Num: 3

Candidate Starts for Nadmeg_82:

(Start: 3 @53710 has 62 MA's), (4, 53749), (14, 53830), (20, 53878), (28, 53965), (29, 53971), (32, 53995), (36, 54058), (39, 54070), (44, 54109),

Gene: Nadmeg_81 Start: 53294, Stop: 53710, Start Num: 3

Candidate Starts for Nadmeg_81:

(Start: 3 @53294 has 62 MA's), (32, 53573), (34, 53621), (38, 53639), (41, 53663), (46, 53696),

Gene: Nithya_80 Start: 52687, Stop: 53103, Start Num: 3

Candidate Starts for Nithya_80:

(Start: 3 @52687 has 62 MA's), (32, 52966), (34, 53014), (38, 53032), (41, 53056), (46, 53089),

Gene: Nithya_81 Start: 53103, Stop: 53519, Start Num: 3

Candidate Starts for Nithya_81:

(Start: 3 @53103 has 62 MA's), (4, 53142), (14, 53223), (20, 53271), (28, 53358), (29, 53364), (32, 53388), (36, 53451), (39, 53463), (44, 53502),

Gene: OhMyWard_79 Start: 54058, Stop: 54474, Start Num: 3

Candidate Starts for OhMyWard_79:

(Start: 3 @54058 has 62 MA's), (4, 54097), (12, 54148), (14, 54178), (26, 54307), (32, 54343), (36, 54406), (39, 54418),

Gene: OhMyWard_78 Start: 53645, Stop: 54058, Start Num: 3

Candidate Starts for OhMyWard_78:

(Start: 3 @53645 has 62 MA's), (32, 53924), (34, 53972), (38, 53990), (41, 54014),

Gene: OlgasClover_84 Start: 54030, Stop: 54446, Start Num: 3

Candidate Starts for OlgasClover_84:

(Start: 3 @54030 has 62 MA's), (32, 54309), (34, 54357), (38, 54375), (41, 54399), (46, 54432),

Gene: OlgasClover_85 Start: 54446, Stop: 54862, Start Num: 3

Candidate Starts for OlgasClover_85:

(Start: 3 @54446 has 62 MA's), (4, 54485), (14, 54566), (20, 54614), (28, 54701), (32, 54731), (37, 54797), (39, 54806),

Gene: PestoPenguin_87 Start: 53058, Stop: 53435, Start Num: 4
Candidate Starts for PestoPenguin_87:
(Start: 3 @53019 has 62 MA's), (4, 53058), (12, 53109), (14, 53139), (20, 53187), (26, 53268), (28, 53274), (29, 53280), (32, 53304), (36, 53367), (39, 53379),

Gene: PestoPenguin_86 Start: 52603, Stop: 53019, Start Num: 3
Candidate Starts for PestoPenguin_86:
(Start: 3 @52603 has 62 MA's), (32, 52882), (34, 52930), (38, 52948), (41, 52972), (46, 53005),

Gene: Phepper_82 Start: 52533, Stop: 52949, Start Num: 3
Candidate Starts for Phepper_82:
(Start: 3 @52533 has 62 MA's), (32, 52812), (34, 52860), (38, 52878), (41, 52902), (46, 52935),

Gene: Phepper_83 Start: 52949, Stop: 53365, Start Num: 3
Candidate Starts for Phepper_83:
(Start: 3 @52949 has 62 MA's), (4, 52988), (14, 53069), (20, 53117), (28, 53204), (29, 53210), (32, 53234), (36, 53297), (39, 53309),

Gene: Rickmore_82 Start: 52469, Stop: 52885, Start Num: 3
Candidate Starts for Rickmore_82:
(Start: 3 @52469 has 62 MA's), (4, 52508), (14, 52589), (20, 52637), (32, 52754), (39, 52829), (43, 52862),

Gene: Rickmore_80 Start: 51652, Stop: 52065, Start Num: 3
Candidate Starts for Rickmore_80:
(Start: 3 @51652 has 62 MA's), (17, 51784), (19, 51805), (22, 51823), (24, 51871), (30, 51916), (40, 52012), (47, 52057),

Gene: Runhaar_81 Start: 52758, Stop: 53174, Start Num: 3
Candidate Starts for Runhaar_81:
(Start: 3 @52758 has 62 MA's), (4, 52797), (14, 52878), (20, 52926), (26, 53007), (28, 53013), (29, 53019), (32, 53043), (36, 53106), (39, 53118),

Gene: Runhaar_80 Start: 52342, Stop: 52758, Start Num: 3
Candidate Starts for Runhaar_80:
(Start: 3 @52342 has 62 MA's), (32, 52621), (34, 52669), (38, 52687), (41, 52711), (46, 52744),

Gene: ShaggyRogers_81 Start: 52345, Stop: 52761, Start Num: 3
Candidate Starts for ShaggyRogers_81:
(Start: 3 @52345 has 62 MA's), (32, 52624), (34, 52672), (38, 52690), (41, 52714), (46, 52747),

Gene: ShaggyRogers_82 Start: 52761, Stop: 53177, Start Num: 3
Candidate Starts for ShaggyRogers_82:
(Start: 3 @52761 has 62 MA's), (4, 52800), (12, 52851), (14, 52881), (20, 52929), (26, 53010), (28, 53016), (29, 53022), (32, 53046), (36, 53109), (39, 53121),

Gene: TenaciousP_83 Start: 54500, Stop: 54910, Start Num: 3
Candidate Starts for TenaciousP_83:
(Start: 3 @54500 has 62 MA's), (4, 54539), (6, 54545), (12, 54584), (14, 54614), (36, 54842), (39, 54854), (43, 54887),

Gene: TenaciousP_82 Start: 54090, Stop: 54500, Start Num: 3
Candidate Starts for TenaciousP_82:

(Start: 3 @54090 has 62 MA's), (17, 54222), (19, 54243), (24, 54309), (30, 54354), (40, 54450),

Gene: Tonaltzin_87 Start: 53332, Stop: 53742, Start Num: 3

Candidate Starts for Tonaltzin_87:

(Start: 3 @53332 has 62 MA's), (4, 53371), (6, 53377), (12, 53416), (14, 53446), (36, 53674), (39, 53686), (43, 53719),

Gene: Tonaltzin_86 Start: 52922, Stop: 53332, Start Num: 3

Candidate Starts for Tonaltzin_86:

(Start: 3 @52922 has 62 MA's), (17, 53054), (19, 53075), (24, 53141), (30, 53186), (40, 53282),

Gene: Untouchable_83 Start: 53530, Stop: 53946, Start Num: 3

Candidate Starts for Untouchable_83:

(Start: 3 @53530 has 62 MA's), (32, 53809), (34, 53857), (38, 53875), (41, 53899), (46, 53932),

Gene: Untouchable_84 Start: 53946, Stop: 54362, Start Num: 3

Candidate Starts for Untouchable_84:

(Start: 3 @53946 has 62 MA's), (4, 53985), (12, 54036), (14, 54066), (20, 54114), (26, 54195), (28, 54201), (29, 54207), (32, 54231), (36, 54294), (39, 54306),

Gene: Vardy_80 Start: 52229, Stop: 52639, Start Num: 3

Candidate Starts for Vardy_80:

(Start: 3 @52229 has 62 MA's), (11, 52307), (12, 52313), (20, 52391), (23, 52412), (40, 52589), (42, 52607), (43, 52613), (45, 52625),

Gene: Zeph_84 Start: 53754, Stop: 54170, Start Num: 3

Candidate Starts for Zeph_84:

(Start: 3 @53754 has 62 MA's), (4, 53793), (12, 53844), (14, 53874), (18, 53898), (20, 53922), (21, 53928), (29, 54015), (39, 54114), (43, 54147),

Gene: Zeph_83 Start: 53344, Stop: 53754, Start Num: 3

Candidate Starts for Zeph_83:

(Start: 3 @53344 has 62 MA's), (19, 53497), (22, 53515), (24, 53563),