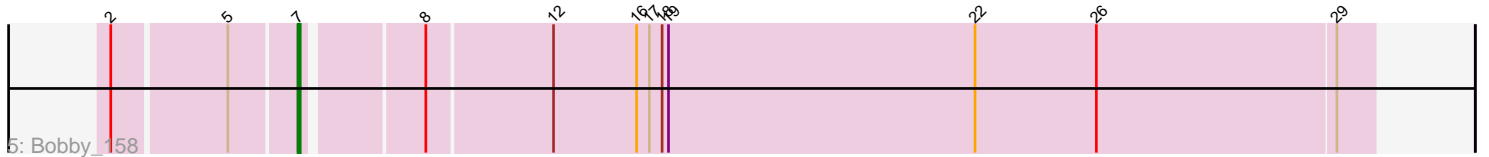
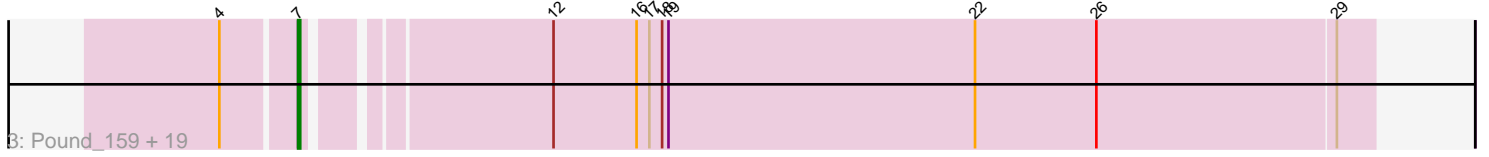
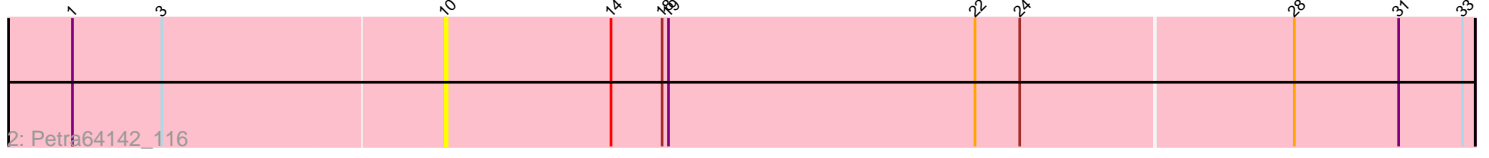
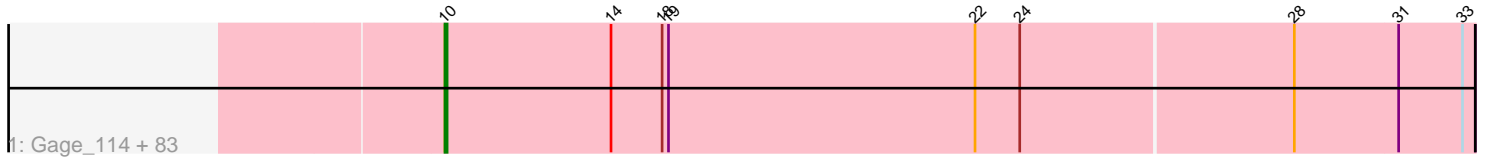


Pham 294551



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 294551 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294551 has 122 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Gage_114, Eureka_112, Murphy_111, Lilpickle_111, HanKaySha_112, Paperbeatsrock_111, PhatBacter_115, NonchalantPear_110, Adnama_116, RiverMonster_111, Contagion_109, Bench_114, Murica_116, Lilizi_112, Greep_116, ChosenOne_112, Hopey_112, Phaux_114, Stark_112, Moldemort_114, Emmina_112, Pumpkin_113, Bruin_109, Tarkin_111, Sassay_107, Elite2014_111, Misfit_113, GoldenSpark_116, Miniwave_107, Manda_113, xkcd_116, NelitzaMV_109, Maxxinsta_114, StolenFromERC_114, Buck_113, FairyPath_112, Ukulele_107, TeamEdward_112, PaddyBaddy_111, Dumbo_112, Saints25_108, Cjw1_112, AmericanBeauty_115, Qualification_113, MPhalcon_113, Brewer_106, YassJohnny_109, Easy2Say_112, Becksu_110, Hoonter_115, Youngblood_116, Gemini_117, Ptowny_108, FireRed_115, Lilac_113, Czystczon1_112, Policronamos_115, Thresher_113, Rimmer_110, Argent26_116, StellaBean_110, Pharsalus_109, Terminus_115, Palpatine_113, BugsBunny_111, Bogg_113, Nala_114, Thimble_114, Highbury_108, Elph10_111, NoSleep_112, Willez_107, ShereKhan_110, MollyToe_106, Kanye_109, Mosby_109, HufflyPuff_114, MadamMonkfish_111, OrionPax_110, MISSy_113, Tomaszewski_107, Phrux_108, GooberAzure_115, Simpliphy_110
- Track 2 : Petra64142_116
- Track 3 : Pound_159, Beem_166, BAKA_171, Minerva_165, Constella_161, Klein_169, Optimus_164, Kalah2_162, Ejimix_156, Halley_166, Duke13_168, Yeet_157, Hughesyang_164, Odette_169, Zelink_158, ThreeRngTarjay_162, Schatzie_160, EricMillard_163, Dallas_165, Wanda_163
- Track 4 : Hannaconda_158, KashFlow_163, Omega_174, Rearden_165, Gonephishing_159
- Track 5 : Bobby_158
- Track 6 : Dove_152, Phoebus_166, HokkenD_160, Redno2_159, Bombitas_152, JuicyJay_160, NihilNomen_167
- Track 7 : Xiaokay_161
- Track 8 : Hidrated_158
- Track 9 : Bagrid_174
- Track 10 : Boilgate_51

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

The start number called the most often in the published annotations is 10, it was called in 73 of the 104 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adnama_116, AmericanBeauty_115, Argent26_116, Becksu_110, Bench_114, Bogg_113, Brewer_106, Bruin_109, Buck_113, BugsBunny_111, ChosenOne_112, Cjw1_112, Contagion_109, Czyszczo1_112, Dumbo_112, Easy2Say_112, Elite2014_111, Elph10_111, Emmina_112, Eureka_112, FairyPath_112, FireRed_115, Gage_114, Gemini_117, GoldenSpark_116, GooberAzure_115, Greep_116, HanKaySha_112, Highbury_108, Hoonter_115, Hopey_112, HufflyPuff_114, Kanye_109, Lilac_113, Lilizi_112, Lilpickle_111, MISSy_113, MPhalcon_113, MadamMonkfish_111, Manda_113, Maxxinista_114, Miniwave_107, Misfit_113, Moldemort_114, MollyToe_106, Mosby_109, Murica_116, Murphy_111, Nala_114, NelitzaMV_109, NoSleep_112, NonchalantPear_110, OrionPax_110, PaddyBaddy_111, Palpatine_113, Paperbeatsrock_111, Petra64142_116, Pharsalus_109, PhatBacter_115, Phaux_114, Phrux_108, Policronamos_115, Ptowny_108, Pumpkin_113, Qualification_113, Rimmer_110, RiverMonster_111, Saints25_108, Sassay_107, ShereKhan_110, Simpliphy_110, Stark_112, StellaBean_110, StolenFromERC_114, Tarkin_111, TeamEdward_112, Terminus_115, Thimble_114, Thresher_113, Tomaszewski_107, Ukulele_107, Willez_107, YassJohnny_109, Youngblood_116, xkcd_116,

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

-

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

- BAKA_171, Bagrid_174, Beem_166, Bobby_158, Boilgate_51, Bombitas_152, Constella_161, Dallas_165, Dove_152, Duke13_168, Ejimix_156, EricMillard_163, Gonephishing_159, Halley_166, Hannaconda_158, Hidrated_158, HokkenD_160, Hughesyang_164, JuicyJay_160, Kalah2_162, KashFlow_163, Klein_169, Minerva_165, NihilNomen_167, Odette_169, Omega_174, Optimus_164, Phoebus_166, Pound_159, Rearden_165, Redno2_159, Schatzie_160, ThreeRngTarjay_162, Wanda_163, Xiaokay_161, Yeet_157, Zelink_158,

Summary by start number:

Start 6:

- Found in 5 of 122 (4.1%) of genes in pham
- Manual Annotations of this start: 3 of 104
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gonephishing_159 (J), Hannaconda_158 (J), KashFlow_163 (J), Omega_174 (J), Rearden_165 (J),

Start 7:

- Found in 31 of 122 (25.4%) of genes in pham
- Manual Annotations of this start: 27 of 104
- Called 96.8% of time when present
- Phage (with cluster) where this start called: BAKA_171 (J), Beem_166 (J), Bobby_158 (J), Bombitas_152 (J), Constella_161 (J), Dallas_165 (J), Dove_152 (J), Duke13_168 (J), Ejimix_156 (J), EricMillard_163 (J), Halley_166 (J), Hidrated_158 (J), HokkenD_160 (J), Hughesyang_164 (J), JuicyJay_160 (J), Kalah2_162 (J), Klein_169 (J), Minerva_165 (J), NihilNomen_167 (J), Odette_169 (J), Optimus_164 (J), Phoebus_166 (J), Pound_159 (J), Redno2_159 (J), Schatzie_160 (J),

ThreeRngTarjay_162 (J), Wanda_163 (J), Xiaokay_161 (J), Yeet_157 (J), Zelink_158 (J),

Start 9:

- Found in 1 of 122 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 104
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Boilgate_51 (K8),

Start 10:

- Found in 85 of 122 (69.7%) of genes in pham
- Manual Annotations of this start: 73 of 104
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adnama_116 (E), AmericanBeauty_115 (E), Argent26_116 (E), Becksu_110 (E), Bench_114 (E), Bogg_113 (E), Brewer_106 (E), Bruin_109 (E), Buck_113 (E), BugsBunny_111 (E), ChosenOne_112 (E), Cjw1_112 (E), Contagion_109 (E), Czyszczonek_112 (E), Dumbo_112 (E), Easy2Say_112 (E), Elite2014_111 (E), Elph10_111 (E), Emmina_112 (E), Eureka_112 (E), FairyPath_112 (E), FireRed_115 (E), Gage_114 (E), Gemini_117 (E), GoldenSpark_116 (E), GooberAzure_115 (E), Greep_116 (E), HanKaySha_112 (E), Highbury_108 (E), Hoonter_115 (E), Hopey_112 (E), HufflyPuff_114 (E), Kanye_109 (E), Lilac_113 (E), Lilizi_112 (E), Lilipickle_111 (E), MISSy_113 (E), MPhalcon_113 (E), MadamMonkfish_111 (E), Manda_113 (E), Maxxinista_114 (E), Miniwave_107 (E), Misfit_113 (E), Moldemort_114 (E), MollyToe_106 (E), Mosby_109 (E), Murica_116 (E), Murphy_111 (E), Nala_114 (E), NelitzaMV_109 (E), NoSleep_112 (E), NonchalantPear_110 (E), OrionPax_110 (E), PaddyBaddy_111 (E), Palpatine_113 (E), Paperbeatsrock_111 (E), Petra64142_116 (E), Pharsalus_109 (E), PhatBacter_115 (E), Phaux_114 (E), Phrux_108 (E), Policronamos_115 (E), Ptowny_108 (E), Pumpkin_113 (E), Quallification_113 (E), Rimmer_110 (E), RiverMonster_111 (E), Saints25_108 (E), Sassay_107 (E), ShereKhan_110 (E), Simpliphy_110 (E), Stark_112 (E), StellaBean_110 (E), StolenFromERC_114 (E), Tarkin_111 (E), TeamEdward_112 (E), Terminus_115 (E), Thimble_114 (E), Thresher_113 (E), Tomaszewski_107 (E), Ukulele_107 (E), Willez_107 (E), YassJohnny_109 (E), Youngblood_116 (E), xkcd_116 (E),

Start 12:

- Found in 36 of 122 (29.5%) of genes in pham
- No Manual Annotations of this start.
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Bagrid_174 (J),

Summary by clusters:

There are 3 clusters represented in this pham: K8, J, E,

Info for manual annotations of cluster E:

- Start number 10 was manually annotated 73 times for cluster E.

Info for manual annotations of cluster J:

- Start number 6 was manually annotated 3 times for cluster J.
- Start number 7 was manually annotated 27 times for cluster J.

Info for manual annotations of cluster K8:

- Start number 9 was manually annotated 1 time for cluster K8.

Gene Information:

Gene: Adnama_116 Start: 63697, Stop: 64176, Start Num: 10

Candidate Starts for Adnama_116:

(Start: 10 @63697 has 73 MA's), (14, 63775), (18, 63799), (19, 63802), (22, 63946), (24, 63967), (28, 64093), (31, 64141), (33, 64171),

Gene: AmericanBeauty_115 Start: 63739, Stop: 64218, Start Num: 10

Candidate Starts for AmericanBeauty_115:

(Start: 10 @63739 has 73 MA's), (14, 63817), (18, 63841), (19, 63844), (22, 63988), (24, 64009), (28, 64135), (31, 64183), (33, 64213),

Gene: Argent26_116 Start: 63621, Stop: 64100, Start Num: 10

Candidate Starts for Argent26_116:

(Start: 10 @63621 has 73 MA's), (14, 63699), (18, 63723), (19, 63726), (22, 63870), (24, 63891), (28, 64017), (31, 64065), (33, 64095),

Gene: BAKA_171 Start: 89814, Stop: 90299, Start Num: 7

Candidate Starts for BAKA_171:

(4, 89781), (Start: 7 @89814 has 27 MA's), (12, 89916), (16, 89955), (17, 89961), (18, 89967), (19, 89970), (22, 90114), (26, 90171), (29, 90282),

Gene: Bagrid_174 Start: 90278, Stop: 90661, Start Num: 12

Candidate Starts for Bagrid_174:

(4, 90143), (Start: 7 @90176 has 27 MA's), (12, 90278), (16, 90317), (17, 90323), (18, 90329), (19, 90332), (22, 90476), (26, 90533), (29, 90644),

Gene: Becksu_110 Start: 64010, Stop: 64489, Start Num: 10

Candidate Starts for Becksu_110:

(Start: 10 @64010 has 73 MA's), (14, 64088), (18, 64112), (19, 64115), (22, 64259), (24, 64280), (28, 64406), (31, 64454), (33, 64484),

Gene: Beem_166 Start: 88969, Stop: 89454, Start Num: 7

Candidate Starts for Beem_166:

(4, 88936), (Start: 7 @88969 has 27 MA's), (12, 89071), (16, 89110), (17, 89116), (18, 89122), (19, 89125), (22, 89269), (26, 89326), (29, 89437),

Gene: Bench_114 Start: 64378, Stop: 64857, Start Num: 10

Candidate Starts for Bench_114:

(Start: 10 @64378 has 73 MA's), (14, 64456), (18, 64480), (19, 64483), (22, 64627), (24, 64648), (28, 64774), (31, 64822), (33, 64852),

Gene: Bobby_158 Start: 89958, Stop: 90449, Start Num: 7

Candidate Starts for Bobby_158:

(2, 89877), (5, 89928), (Start: 7 @89958 has 27 MA's), (8, 90009), (12, 90066), (16, 90105), (17, 90111), (18, 90117), (19, 90120), (22, 90264), (26, 90321), (29, 90432),

Gene: Bogg_113 Start: 63897, Stop: 64376, Start Num: 10

Candidate Starts for Bogg_113:

(Start: 10 @63897 has 73 MA's), (14, 63975), (18, 63999), (19, 64002), (22, 64146), (24, 64167), (28, 64293), (31, 64341), (33, 64371),

Gene: Boilgate_51 Start: 39018, Stop: 39488, Start Num: 9

Candidate Starts for Boilgate_51:

(1, 38853), (3, 38895), (4, 38922), (Start: 9 @39018 has 1 MA's), (12, 39075), (13, 39090), (14, 39102), (17, 39120), (18, 39126), (19, 39129), (30, 39456), (32, 39483),

Gene: Bombitas_152 Start: 85199, Stop: 85684, Start Num: 7

Candidate Starts for Bombitas_152:

(4, 85166), (Start: 7 @85199 has 27 MA's), (12, 85301), (16, 85340), (17, 85346), (18, 85352), (19, 85355), (22, 85499), (26, 85556), (29, 85667),

Gene: Brewer_106 Start: 62534, Stop: 63013, Start Num: 10

Candidate Starts for Brewer_106:

(Start: 10 @62534 has 73 MA's), (14, 62612), (18, 62636), (19, 62639), (22, 62783), (24, 62804), (28, 62930), (31, 62978), (33, 63008),

Gene: Bruin_109 Start: 63062, Stop: 63541, Start Num: 10

Candidate Starts for Bruin_109:

(Start: 10 @63062 has 73 MA's), (14, 63140), (18, 63164), (19, 63167), (22, 63311), (24, 63332), (28, 63458), (31, 63506), (33, 63536),

Gene: Buck_113 Start: 64878, Stop: 65357, Start Num: 10

Candidate Starts for Buck_113:

(Start: 10 @64878 has 73 MA's), (14, 64956), (18, 64980), (19, 64983), (22, 65127), (24, 65148), (28, 65274), (31, 65322), (33, 65352),

Gene: BugsBunny_111 Start: 64376, Stop: 64855, Start Num: 10

Candidate Starts for BugsBunny_111:

(Start: 10 @64376 has 73 MA's), (14, 64454), (18, 64478), (19, 64481), (22, 64625), (24, 64646), (28, 64772), (31, 64820), (33, 64850),

Gene: ChosenOne_112 Start: 63262, Stop: 63741, Start Num: 10

Candidate Starts for ChosenOne_112:

(Start: 10 @63262 has 73 MA's), (14, 63340), (18, 63364), (19, 63367), (22, 63511), (24, 63532), (28, 63658), (31, 63706), (33, 63736),

Gene: Cjw1_112 Start: 65071, Stop: 65550, Start Num: 10

Candidate Starts for Cjw1_112:

(Start: 10 @65071 has 73 MA's), (14, 65149), (18, 65173), (19, 65176), (22, 65320), (24, 65341), (28, 65467), (31, 65515), (33, 65545),

Gene: Constella_161 Start: 87703, Stop: 88188, Start Num: 7

Candidate Starts for Constella_161:

(4, 87670), (Start: 7 @87703 has 27 MA's), (12, 87805), (16, 87844), (17, 87850), (18, 87856), (19, 87859), (22, 88003), (26, 88060), (29, 88171),

Gene: Contagion_109 Start: 63424, Stop: 63903, Start Num: 10

Candidate Starts for Contagion_109:

(Start: 10 @63424 has 73 MA's), (14, 63502), (18, 63526), (19, 63529), (22, 63673), (24, 63694), (28, 63820), (31, 63868), (33, 63898),

Gene: Czyszczone1_112 Start: 63417, Stop: 63896, Start Num: 10

Candidate Starts for Czyszczone1_112:

(Start: 10 @63417 has 73 MA's), (14, 63495), (18, 63519), (19, 63522), (22, 63666), (24, 63687), (28, 63813), (31, 63861), (33, 63891),

Gene: Dallas_165 Start: 88192, Stop: 88677, Start Num: 7

Candidate Starts for Dallas_165:

(4, 88159), (Start: 7 @88192 has 27 MA's), (12, 88294), (16, 88333), (17, 88339), (18, 88345), (19, 88348), (22, 88492), (26, 88549), (29, 88660),

Gene: Dove_152 Start: 83555, Stop: 84040, Start Num: 7

Candidate Starts for Dove_152:

(4, 83522), (Start: 7 @83555 has 27 MA's), (12, 83657), (16, 83696), (17, 83702), (18, 83708), (19, 83711), (22, 83855), (26, 83912), (29, 84023),

Gene: Duke13_168 Start: 88310, Stop: 88795, Start Num: 7

Candidate Starts for Duke13_168:

(4, 88277), (Start: 7 @88310 has 27 MA's), (12, 88412), (16, 88451), (17, 88457), (18, 88463), (19, 88466), (22, 88610), (26, 88667), (29, 88778),

Gene: Dumbo_112 Start: 63454, Stop: 63933, Start Num: 10

Candidate Starts for Dumbo_112:

(Start: 10 @63454 has 73 MA's), (14, 63532), (18, 63556), (19, 63559), (22, 63703), (24, 63724), (28, 63850), (31, 63898), (33, 63928),

Gene: Easy2Say_112 Start: 64088, Stop: 64567, Start Num: 10

Candidate Starts for Easy2Say_112:

(Start: 10 @64088 has 73 MA's), (14, 64166), (18, 64190), (19, 64193), (22, 64337), (24, 64358), (28, 64484), (31, 64532), (33, 64562),

Gene: Ejimix_156 Start: 87180, Stop: 87665, Start Num: 7

Candidate Starts for Ejimix_156:

(4, 87147), (Start: 7 @87180 has 27 MA's), (12, 87282), (16, 87321), (17, 87327), (18, 87333), (19, 87336), (22, 87480), (26, 87537), (29, 87648),

Gene: Elite2014_111 Start: 63261, Stop: 63740, Start Num: 10

Candidate Starts for Elite2014_111:

(Start: 10 @63261 has 73 MA's), (14, 63339), (18, 63363), (19, 63366), (22, 63510), (24, 63531), (28, 63657), (31, 63705), (33, 63735),

Gene: Elph10_111 Start: 63100, Stop: 63579, Start Num: 10

Candidate Starts for Elph10_111:

(Start: 10 @63100 has 73 MA's), (14, 63178), (18, 63202), (19, 63205), (22, 63349), (24, 63370), (28, 63496), (31, 63544), (33, 63574),

Gene: Emmina_112 Start: 63039, Stop: 63518, Start Num: 10

Candidate Starts for Emmina_112:

(Start: 10 @63039 has 73 MA's), (14, 63117), (18, 63141), (19, 63144), (22, 63288), (24, 63309), (28, 63435), (31, 63483), (33, 63513),

Gene: EricMillard_163 Start: 88786, Stop: 89271, Start Num: 7

Candidate Starts for EricMillard_163:

(4, 88753), (Start: 7 @88786 has 27 MA's), (12, 88888), (16, 88927), (17, 88933), (18, 88939), (19, 88942), (22, 89086), (26, 89143), (29, 89254),

Gene: Eureka_112 Start: 64227, Stop: 64706, Start Num: 10

Candidate Starts for Eureka_112:

(Start: 10 @64227 has 73 MA's), (14, 64305), (18, 64329), (19, 64332), (22, 64476), (24, 64497), (28, 64623), (31, 64671), (33, 64701),

Gene: FairyPath_112 Start: 64532, Stop: 65011, Start Num: 10

Candidate Starts for FairyPath_112:

(Start: 10 @64532 has 73 MA's), (14, 64610), (18, 64634), (19, 64637), (22, 64781), (24, 64802), (28, 64928), (31, 64976), (33, 65006),

Gene: FireRed_115 Start: 64503, Stop: 64982, Start Num: 10

Candidate Starts for FireRed_115:

(Start: 10 @64503 has 73 MA's), (14, 64581), (18, 64605), (19, 64608), (22, 64752), (24, 64773), (28, 64899), (31, 64947), (33, 64977),

Gene: Gage_114 Start: 63759, Stop: 64238, Start Num: 10

Candidate Starts for Gage_114:

(Start: 10 @63759 has 73 MA's), (14, 63837), (18, 63861), (19, 63864), (22, 64008), (24, 64029), (28, 64155), (31, 64203), (33, 64233),

Gene: Gemini_117 Start: 64138, Stop: 64617, Start Num: 10

Candidate Starts for Gemini_117:

(Start: 10 @64138 has 73 MA's), (14, 64216), (18, 64240), (19, 64243), (22, 64387), (24, 64408), (28, 64534), (31, 64582), (33, 64612),

Gene: GoldenSpark_116 Start: 63621, Stop: 64100, Start Num: 10

Candidate Starts for GoldenSpark_116:

(Start: 10 @63621 has 73 MA's), (14, 63699), (18, 63723), (19, 63726), (22, 63870), (24, 63891), (28, 64017), (31, 64065), (33, 64095),

Gene: Gonephishing_159 Start: 86073, Stop: 86573, Start Num: 6

Candidate Starts for Gonephishing_159:

(Start: 6 @86073 has 3 MA's), (12, 86199), (14, 86226), (17, 86244), (18, 86250), (20, 86331), (21, 86385), (23, 86406), (25, 86424), (27, 86490), (28, 86544),

Gene: GooberAzure_115 Start: 63621, Stop: 64100, Start Num: 10

Candidate Starts for GooberAzure_115:

(Start: 10 @63621 has 73 MA's), (14, 63699), (18, 63723), (19, 63726), (22, 63870), (24, 63891), (28, 64017), (31, 64065), (33, 64095),

Gene: Greep_116 Start: 65193, Stop: 65672, Start Num: 10

Candidate Starts for Greep_116:

(Start: 10 @65193 has 73 MA's), (14, 65271), (18, 65295), (19, 65298), (22, 65442), (24, 65463), (28, 65589), (31, 65637), (33, 65667),

Gene: Halley_166 Start: 87496, Stop: 87981, Start Num: 7

Candidate Starts for Halley_166:

(4, 87463), (Start: 7 @87496 has 27 MA's), (12, 87598), (16, 87637), (17, 87643), (18, 87649), (19, 87652), (22, 87796), (26, 87853), (29, 87964),

Gene: HanKaySha_112 Start: 63809, Stop: 64288, Start Num: 10

Candidate Starts for HanKaySha_112:

(Start: 10 @63809 has 73 MA's), (14, 63887), (18, 63911), (19, 63914), (22, 64058), (24, 64079), (28, 64205), (31, 64253), (33, 64283),

Gene: Hannaconda_158 Start: 87994, Stop: 88494, Start Num: 6

Candidate Starts for Hannaconda_158:

(Start: 6 @87994 has 3 MA's), (12, 88120), (14, 88147), (17, 88165), (18, 88171), (20, 88252), (21, 88306), (23, 88327), (25, 88345), (27, 88411), (28, 88465),

Gene: Hidrated_158 Start: 89219, Stop: 89695, Start Num: 7

Candidate Starts for Hidrated_158:

(4, 89186), (Start: 7 @89219 has 27 MA's), (11, 89306), (14, 89348), (20, 89453), (21, 89507), (23, 89528), (27, 89612), (28, 89666),

Gene: Highbury_108 Start: 61966, Stop: 62445, Start Num: 10

Candidate Starts for Highbury_108:

(Start: 10 @61966 has 73 MA's), (14, 62044), (18, 62068), (19, 62071), (22, 62215), (24, 62236), (28, 62362), (31, 62410), (33, 62440),

Gene: HokkenD_160 Start: 89277, Stop: 89762, Start Num: 7

Candidate Starts for HokkenD_160:

(4, 89244), (Start: 7 @89277 has 27 MA's), (12, 89379), (16, 89418), (17, 89424), (18, 89430), (19, 89433), (22, 89577), (26, 89634), (29, 89745),

Gene: Hoonter_115 Start: 64114, Stop: 64593, Start Num: 10

Candidate Starts for Hoonter_115:

(Start: 10 @64114 has 73 MA's), (14, 64192), (18, 64216), (19, 64219), (22, 64363), (24, 64384), (28, 64510), (31, 64558), (33, 64588),

Gene: Hokey_112 Start: 64420, Stop: 64899, Start Num: 10

Candidate Starts for Hokey_112:

(Start: 10 @64420 has 73 MA's), (14, 64498), (18, 64522), (19, 64525), (22, 64669), (24, 64690), (28, 64816), (31, 64864), (33, 64894),

Gene: HufflyPuff_114 Start: 64729, Stop: 65208, Start Num: 10

Candidate Starts for HufflyPuff_114:

(Start: 10 @64729 has 73 MA's), (14, 64807), (18, 64831), (19, 64834), (22, 64978), (24, 64999), (28, 65125), (31, 65173), (33, 65203),

Gene: Hughesyang_164 Start: 87978, Stop: 88463, Start Num: 7

Candidate Starts for Hughesyang_164:

(4, 87945), (Start: 7 @87978 has 27 MA's), (12, 88080), (16, 88119), (17, 88125), (18, 88131), (19, 88134), (22, 88278), (26, 88335), (29, 88446),

Gene: JuicyJay_160 Start: 88924, Stop: 89409, Start Num: 7

Candidate Starts for JuicyJay_160:

(4, 88891), (Start: 7 @88924 has 27 MA's), (12, 89026), (16, 89065), (17, 89071), (18, 89077), (19, 89080), (22, 89224), (26, 89281), (29, 89392),

Gene: Kalah2_162 Start: 89262, Stop: 89747, Start Num: 7

Candidate Starts for Kalah2_162:

(4, 89229), (Start: 7 @89262 has 27 MA's), (12, 89364), (16, 89403), (17, 89409), (18, 89415), (19, 89418), (22, 89562), (26, 89619), (29, 89730),

Gene: Kanye_109 Start: 63870, Stop: 64349, Start Num: 10

Candidate Starts for Kanye_109:

(Start: 10 @63870 has 73 MA's), (14, 63948), (18, 63972), (19, 63975), (22, 64119), (24, 64140), (28, 64266), (31, 64314), (33, 64344),

Gene: KashFlow_163 Start: 87807, Stop: 88307, Start Num: 6

Candidate Starts for KashFlow_163:

(Start: 6 @87807 has 3 MA's), (12, 87933), (14, 87960), (17, 87978), (18, 87984), (20, 88065), (21, 88119), (23, 88140), (25, 88158), (27, 88224), (28, 88278),

Gene: Klein_169 Start: 87601, Stop: 88086, Start Num: 7

Candidate Starts for Klein_169:

(4, 87568), (Start: 7 @87601 has 27 MA's), (12, 87703), (16, 87742), (17, 87748), (18, 87754), (19, 87757), (22, 87901), (26, 87958), (29, 88069),

Gene: Lilac_113 Start: 64563, Stop: 65042, Start Num: 10

Candidate Starts for Lilac_113:

(Start: 10 @64563 has 73 MA's), (14, 64641), (18, 64665), (19, 64668), (22, 64812), (24, 64833), (28, 64959), (31, 65007), (33, 65037),

Gene: Lilizi_112 Start: 63849, Stop: 64328, Start Num: 10

Candidate Starts for Lilizi_112:

(Start: 10 @63849 has 73 MA's), (14, 63927), (18, 63951), (19, 63954), (22, 64098), (24, 64119), (28, 64245), (31, 64293), (33, 64323),

Gene: Lilpickle_111 Start: 63261, Stop: 63740, Start Num: 10

Candidate Starts for Lilpickle_111:

(Start: 10 @63261 has 73 MA's), (14, 63339), (18, 63363), (19, 63366), (22, 63510), (24, 63531), (28, 63657), (31, 63705), (33, 63735),

Gene: MISSy_113 Start: 64546, Stop: 65025, Start Num: 10

Candidate Starts for MISSy_113:

(Start: 10 @64546 has 73 MA's), (14, 64624), (18, 64648), (19, 64651), (22, 64795), (24, 64816), (28, 64942), (31, 64990), (33, 65020),

Gene: MPhalcon_113 Start: 63964, Stop: 64443, Start Num: 10

Candidate Starts for MPhalcon_113:

(Start: 10 @63964 has 73 MA's), (14, 64042), (18, 64066), (19, 64069), (22, 64213), (24, 64234), (28, 64360), (31, 64408), (33, 64438),

Gene: MadamMonkfish_111 Start: 63271, Stop: 63750, Start Num: 10

Candidate Starts for MadamMonkfish_111:

(Start: 10 @63271 has 73 MA's), (14, 63349), (18, 63373), (19, 63376), (22, 63520), (24, 63541), (28, 63667), (31, 63715), (33, 63745),

Gene: Manda_113 Start: 64001, Stop: 64480, Start Num: 10

Candidate Starts for Manda_113:

(Start: 10 @64001 has 73 MA's), (14, 64079), (18, 64103), (19, 64106), (22, 64250), (24, 64271), (28, 64397), (31, 64445), (33, 64475),

Gene: Maxxinista_114 Start: 63748, Stop: 64227, Start Num: 10

Candidate Starts for Maxxinista_114:

(Start: 10 @63748 has 73 MA's), (14, 63826), (18, 63850), (19, 63853), (22, 63997), (24, 64018), (28, 64144), (31, 64192), (33, 64222),

Gene: Minerva_165 Start: 87342, Stop: 87827, Start Num: 7

Candidate Starts for Minerva_165:

(4, 87309), (Start: 7 @87342 has 27 MA's), (12, 87444), (16, 87483), (17, 87489), (18, 87495), (19, 87498), (22, 87642), (26, 87699), (29, 87810),

Gene: Miniwave_107 Start: 63457, Stop: 63936, Start Num: 10

Candidate Starts for Miniwave_107:

(Start: 10 @63457 has 73 MA's), (14, 63535), (18, 63559), (19, 63562), (22, 63706), (24, 63727), (28, 63853), (31, 63901), (33, 63931),

Gene: Misfit_113 Start: 65060, Stop: 65539, Start Num: 10

Candidate Starts for Misfit_113:

(Start: 10 @65060 has 73 MA's), (14, 65138), (18, 65162), (19, 65165), (22, 65309), (24, 65330), (28, 65456), (31, 65504), (33, 65534),

Gene: Moldemort_114 Start: 63729, Stop: 64208, Start Num: 10

Candidate Starts for Moldemort_114:

(Start: 10 @63729 has 73 MA's), (14, 63807), (18, 63831), (19, 63834), (22, 63978), (24, 63999), (28, 64125), (31, 64173), (33, 64203),

Gene: MollyToe_106 Start: 61837, Stop: 62316, Start Num: 10

Candidate Starts for MollyToe_106:

(Start: 10 @61837 has 73 MA's), (14, 61915), (18, 61939), (19, 61942), (22, 62086), (24, 62107), (28, 62233), (31, 62281), (33, 62311),

Gene: Mosby_109 Start: 63424, Stop: 63903, Start Num: 10

Candidate Starts for Mosby_109:

(Start: 10 @63424 has 73 MA's), (14, 63502), (18, 63526), (19, 63529), (22, 63673), (24, 63694), (28, 63820), (31, 63868), (33, 63898),

Gene: Murica_116 Start: 65763, Stop: 66242, Start Num: 10

Candidate Starts for Murica_116:

(Start: 10 @65763 has 73 MA's), (14, 65841), (18, 65865), (19, 65868), (22, 66012), (24, 66033), (28, 66159), (31, 66207), (33, 66237),

Gene: Murphy_111 Start: 64121, Stop: 64600, Start Num: 10

Candidate Starts for Murphy_111:

(Start: 10 @64121 has 73 MA's), (14, 64199), (18, 64223), (19, 64226), (22, 64370), (24, 64391), (28, 64517), (31, 64565), (33, 64595),

Gene: Nala_114 Start: 64473, Stop: 64952, Start Num: 10

Candidate Starts for Nala_114:

(Start: 10 @64473 has 73 MA's), (14, 64551), (18, 64575), (19, 64578), (22, 64722), (24, 64743), (28, 64869), (31, 64917), (33, 64947),

Gene: NelitzaMV_109 Start: 62446, Stop: 62925, Start Num: 10

Candidate Starts for NelitzaMV_109:

(Start: 10 @62446 has 73 MA's), (14, 62524), (18, 62548), (19, 62551), (22, 62695), (24, 62716), (28, 62842), (31, 62890), (33, 62920),

Gene: NihilNomen_167 Start: 87050, Stop: 87535, Start Num: 7

Candidate Starts for NihilNomen_167:

(4, 87017), (Start: 7 @87050 has 27 MA's), (12, 87152), (16, 87191), (17, 87197), (18, 87203), (19, 87206), (22, 87350), (26, 87407), (29, 87518),

Gene: NoSleep_112 Start: 63281, Stop: 63760, Start Num: 10

Candidate Starts for NoSleep_112:

(Start: 10 @63281 has 73 MA's), (14, 63359), (18, 63383), (19, 63386), (22, 63530), (24, 63551), (28, 63677), (31, 63725), (33, 63755),

Gene: NonchalantPear_110 Start: 62714, Stop: 63193, Start Num: 10

Candidate Starts for NonchalantPear_110:

(Start: 10 @62714 has 73 MA's), (14, 62792), (18, 62816), (19, 62819), (22, 62963), (24, 62984), (28, 63110), (31, 63158), (33, 63188),

Gene: Odette_169 Start: 89731, Stop: 90216, Start Num: 7

Candidate Starts for Odette_169:

(4, 89698), (Start: 7 @89731 has 27 MA's), (12, 89833), (16, 89872), (17, 89878), (18, 89884), (19, 89887), (22, 90031), (26, 90088), (29, 90199),

Gene: Omega_174 Start: 89801, Stop: 90301, Start Num: 6

Candidate Starts for Omega_174:

(Start: 6 @89801 has 3 MA's), (12, 89927), (14, 89954), (17, 89972), (18, 89978), (20, 90059), (21, 90113), (23, 90134), (25, 90152), (27, 90218), (28, 90272),

Gene: Optimus_164 Start: 88257, Stop: 88742, Start Num: 7

Candidate Starts for Optimus_164:

(4, 88224), (Start: 7 @88257 has 27 MA's), (12, 88359), (16, 88398), (17, 88404), (18, 88410), (19, 88413), (22, 88557), (26, 88614), (29, 88725),

Gene: OrionPax_110 Start: 63354, Stop: 63833, Start Num: 10

Candidate Starts for OrionPax_110:

(Start: 10 @63354 has 73 MA's), (14, 63432), (18, 63456), (19, 63459), (22, 63603), (24, 63624), (28, 63750), (31, 63798), (33, 63828),

Gene: PaddyBaddy_111 Start: 63472, Stop: 63951, Start Num: 10

Candidate Starts for PaddyBaddy_111:

(Start: 10 @63472 has 73 MA's), (14, 63550), (18, 63574), (19, 63577), (22, 63721), (24, 63742), (28, 63868), (31, 63916), (33, 63946),

Gene: Palpatine_113 Start: 64758, Stop: 65237, Start Num: 10

Candidate Starts for Palpatine_113:

(Start: 10 @64758 has 73 MA's), (14, 64836), (18, 64860), (19, 64863), (22, 65007), (24, 65028), (28, 65154), (31, 65202), (33, 65232),

Gene: Paperbeatsrock_111 Start: 64135, Stop: 64614, Start Num: 10

Candidate Starts for Paperbeatsrock_111:

(Start: 10 @64135 has 73 MA's), (14, 64213), (18, 64237), (19, 64240), (22, 64384), (24, 64405), (28, 64531), (31, 64579), (33, 64609),

Gene: Petra64142_116 Start: 64603, Stop: 65082, Start Num: 10

Candidate Starts for Petra64142_116:

(1, 64432), (3, 64474), (Start: 10 @64603 has 73 MA's), (14, 64681), (18, 64705), (19, 64708), (22, 64852), (24, 64873), (28, 64999), (31, 65047), (33, 65077),

Gene: Pharsalus_109 Start: 63834, Stop: 64313, Start Num: 10

Candidate Starts for Pharsalus_109:

(Start: 10 @63834 has 73 MA's), (14, 63912), (18, 63936), (19, 63939), (22, 64083), (24, 64104), (28, 64230), (31, 64278), (33, 64308),

Gene: PhatBacter_115 Start: 64503, Stop: 64982, Start Num: 10

Candidate Starts for PhatBacter_115:

(Start: 10 @64503 has 73 MA's), (14, 64581), (18, 64605), (19, 64608), (22, 64752), (24, 64773), (28, 64899), (31, 64947), (33, 64977),

Gene: Phaux_114 Start: 65063, Stop: 65542, Start Num: 10

Candidate Starts for Phaux_114:

(Start: 10 @65063 has 73 MA's), (14, 65141), (18, 65165), (19, 65168), (22, 65312), (24, 65333), (28, 65459), (31, 65507), (33, 65537),

Gene: Phoebus_166 Start: 90737, Stop: 91222, Start Num: 7

Candidate Starts for Phoebus_166:

(4, 90704), (Start: 7 @90737 has 27 MA's), (12, 90839), (16, 90878), (17, 90884), (18, 90890), (19, 90893), (22, 91037), (26, 91094), (29, 91205),

Gene: Phrux_108 Start: 63141, Stop: 63620, Start Num: 10

Candidate Starts for Phrux_108:

(Start: 10 @63141 has 73 MA's), (14, 63219), (18, 63243), (19, 63246), (22, 63390), (24, 63411), (28, 63537), (31, 63585), (33, 63615),

Gene: Policronamos_115 Start: 64767, Stop: 65246, Start Num: 10

Candidate Starts for Policronamos_115:

(Start: 10 @64767 has 73 MA's), (14, 64845), (18, 64869), (19, 64872), (22, 65016), (24, 65037), (28, 65163), (31, 65211), (33, 65241),

Gene: Pound_159 Start: 86786, Stop: 87271, Start Num: 7

Candidate Starts for Pound_159:

(4, 86753), (Start: 7 @86786 has 27 MA's), (12, 86888), (16, 86927), (17, 86933), (18, 86939), (19, 86942), (22, 87086), (26, 87143), (29, 87254),

Gene: Ptowny_108 Start: 62175, Stop: 62654, Start Num: 10

Candidate Starts for Ptowny_108:

(Start: 10 @62175 has 73 MA's), (14, 62253), (18, 62277), (19, 62280), (22, 62424), (24, 62445), (28, 62571), (31, 62619), (33, 62649),

Gene: Pumpkin_113 Start: 63481, Stop: 63960, Start Num: 10

Candidate Starts for Pumpkin_113:

(Start: 10 @63481 has 73 MA's), (14, 63559), (18, 63583), (19, 63586), (22, 63730), (24, 63751), (28, 63877), (31, 63925), (33, 63955),

Gene: Quallification_113 Start: 64549, Stop: 65028, Start Num: 10

Candidate Starts for Quallification_113:

(Start: 10 @64549 has 73 MA's), (14, 64627), (18, 64651), (19, 64654), (22, 64798), (24, 64819), (28, 64945), (31, 64993), (33, 65023),

Gene: Rearden_165 Start: 85776, Stop: 86276, Start Num: 6

Candidate Starts for Rearden_165:

(Start: 6 @85776 has 3 MA's), (12, 85902), (14, 85929), (17, 85947), (18, 85953), (20, 86034), (21, 86088), (23, 86109), (25, 86127), (27, 86193), (28, 86247),

Gene: Redno2_159 Start: 84850, Stop: 85335, Start Num: 7

Candidate Starts for Redno2_159:

(4, 84817), (Start: 7 @84850 has 27 MA's), (12, 84952), (16, 84991), (17, 84997), (18, 85003), (19, 85006), (22, 85150), (26, 85207), (29, 85318),

Gene: Rimmer_110 Start: 63940, Stop: 64419, Start Num: 10

Candidate Starts for Rimmer_110:

(Start: 10 @63940 has 73 MA's), (14, 64018), (18, 64042), (19, 64045), (22, 64189), (24, 64210), (28, 64336), (31, 64384), (33, 64414),

Gene: RiverMonster_111 Start: 64036, Stop: 64515, Start Num: 10

Candidate Starts for RiverMonster_111:

(Start: 10 @64036 has 73 MA's), (14, 64114), (18, 64138), (19, 64141), (22, 64285), (24, 64306), (28, 64432), (31, 64480), (33, 64510),

Gene: Saints25_108 Start: 61966, Stop: 62445, Start Num: 10

Candidate Starts for Saints25_108:

(Start: 10 @61966 has 73 MA's), (14, 62044), (18, 62068), (19, 62071), (22, 62215), (24, 62236), (28, 62362), (31, 62410), (33, 62440),

Gene: Sassay_107 Start: 62386, Stop: 62865, Start Num: 10

Candidate Starts for Sassay_107:

(Start: 10 @62386 has 73 MA's), (14, 62464), (18, 62488), (19, 62491), (22, 62635), (24, 62656), (28, 62782), (31, 62830), (33, 62860),

Gene: Schatzie_160 Start: 87785, Stop: 88270, Start Num: 7

Candidate Starts for Schatzie_160:

(4, 87752), (Start: 7 @87785 has 27 MA's), (12, 87887), (16, 87926), (17, 87932), (18, 87938), (19, 87941), (22, 88085), (26, 88142), (29, 88253),

Gene: ShereKhan_110 Start: 64795, Stop: 65274, Start Num: 10

Candidate Starts for ShereKhan_110:

(Start: 10 @64795 has 73 MA's), (14, 64873), (18, 64897), (19, 64900), (22, 65044), (24, 65065), (28, 65191), (31, 65239), (33, 65269),

Gene: Simpliphy_110 Start: 63607, Stop: 64086, Start Num: 10

Candidate Starts for Simpliphy_110:

(Start: 10 @63607 has 73 MA's), (14, 63685), (18, 63709), (19, 63712), (22, 63856), (24, 63877), (28, 64003), (31, 64051), (33, 64081),

Gene: Stark_112 Start: 63920, Stop: 64399, Start Num: 10

Candidate Starts for Stark_112:

(Start: 10 @63920 has 73 MA's), (14, 63998), (18, 64022), (19, 64025), (22, 64169), (24, 64190), (28, 64316), (31, 64364), (33, 64394),

Gene: StellaBean_110 Start: 64217, Stop: 64696, Start Num: 10

Candidate Starts for StellaBean_110:

(Start: 10 @64217 has 73 MA's), (14, 64295), (18, 64319), (19, 64322), (22, 64466), (24, 64487), (28, 64613), (31, 64661), (33, 64691),

Gene: StolenFromERC_114 Start: 63759, Stop: 64238, Start Num: 10

Candidate Starts for StolenFromERC_114:

(Start: 10 @63759 has 73 MA's), (14, 63837), (18, 63861), (19, 63864), (22, 64008), (24, 64029), (28, 64155), (31, 64203), (33, 64233),

Gene: Tarkin_111 Start: 64660, Stop: 65139, Start Num: 10

Candidate Starts for Tarkin_111:

(Start: 10 @64660 has 73 MA's), (14, 64738), (18, 64762), (19, 64765), (22, 64909), (24, 64930), (28, 65056), (31, 65104), (33, 65134),

Gene: TeamEdward_112 Start: 64301, Stop: 64780, Start Num: 10

Candidate Starts for TeamEdward_112:

(Start: 10 @64301 has 73 MA's), (14, 64379), (18, 64403), (19, 64406), (22, 64550), (24, 64571), (28, 64697), (31, 64745), (33, 64775),

Gene: Terminus_115 Start: 65060, Stop: 65539, Start Num: 10

Candidate Starts for Terminus_115:

(Start: 10 @65060 has 73 MA's), (14, 65138), (18, 65162), (19, 65165), (22, 65309), (24, 65330), (28, 65456), (31, 65504), (33, 65534),

Gene: Thimble_114 Start: 63021, Stop: 63500, Start Num: 10

Candidate Starts for Thimble_114:

(Start: 10 @63021 has 73 MA's), (14, 63099), (18, 63123), (19, 63126), (22, 63270), (24, 63291), (28, 63417), (31, 63465), (33, 63495),

Gene: ThreeRngTarjay_162 Start: 88659, Stop: 89144, Start Num: 7

Candidate Starts for ThreeRngTarjay_162:

(4, 88626), (Start: 7 @88659 has 27 MA's), (12, 88761), (16, 88800), (17, 88806), (18, 88812), (19, 88815), (22, 88959), (26, 89016), (29, 89127),

Gene: Thresher_113 Start: 64700, Stop: 65179, Start Num: 10

Candidate Starts for Thresher_113:

(Start: 10 @64700 has 73 MA's), (14, 64778), (18, 64802), (19, 64805), (22, 64949), (24, 64970), (28, 65096), (31, 65144), (33, 65174),

Gene: Tomaszewski_107 Start: 63598, Stop: 64077, Start Num: 10

Candidate Starts for Tomaszewski_107:

(Start: 10 @63598 has 73 MA's), (14, 63676), (18, 63700), (19, 63703), (22, 63847), (24, 63868), (28, 63994), (31, 64042), (33, 64072),

Gene: Ukulele_107 Start: 63417, Stop: 63896, Start Num: 10

Candidate Starts for Ukulele_107:

(Start: 10 @63417 has 73 MA's), (14, 63495), (18, 63519), (19, 63522), (22, 63666), (24, 63687), (28, 63813), (31, 63861), (33, 63891),

Gene: Wanda_163 Start: 85250, Stop: 85735, Start Num: 7

Candidate Starts for Wanda_163:

(4, 85217), (Start: 7 @85250 has 27 MA's), (12, 85352), (16, 85391), (17, 85397), (18, 85403), (19, 85406), (22, 85550), (26, 85607), (29, 85718),

Gene: Willez_107 Start: 62386, Stop: 62865, Start Num: 10

Candidate Starts for Willez_107:

(Start: 10 @62386 has 73 MA's), (14, 62464), (18, 62488), (19, 62491), (22, 62635), (24, 62656), (28, 62782), (31, 62830), (33, 62860),

Gene: Xiaokay_161 Start: 88667, Stop: 89170, Start Num: 7

Candidate Starts for Xiaokay_161:

(4, 88634), (Start: 7 @88667 has 27 MA's), (12, 88787), (15, 88817), (16, 88826), (17, 88832), (18, 88838), (19, 88841), (22, 88985), (26, 89042), (29, 89153),

Gene: YassJohnny_109 Start: 62407, Stop: 62886, Start Num: 10

Candidate Starts for YassJohnny_109:

(Start: 10 @62407 has 73 MA's), (14, 62485), (18, 62509), (19, 62512), (22, 62656), (24, 62677), (28, 62803), (31, 62851), (33, 62881),

Gene: Yeet_157 Start: 86638, Stop: 87123, Start Num: 7

Candidate Starts for Yeet_157:

(4, 86605), (Start: 7 @86638 has 27 MA's), (12, 86740), (16, 86779), (17, 86785), (18, 86791), (19, 86794), (22, 86938), (26, 86995), (29, 87106),

Gene: Youngblood_116 Start: 64556, Stop: 65035, Start Num: 10

Candidate Starts for Youngblood_116:

(Start: 10 @64556 has 73 MA's), (14, 64634), (18, 64658), (19, 64661), (22, 64805), (24, 64826), (28, 64952), (31, 65000), (33, 65030),

Gene: Zelink_158 Start: 86973, Stop: 87458, Start Num: 7

Candidate Starts for Zelink_158:

(4, 86940), (Start: 7 @86973 has 27 MA's), (12, 87075), (16, 87114), (17, 87120), (18, 87126), (19, 87129), (22, 87273), (26, 87330), (29, 87441),

Gene: xkcd_116 Start: 64741, Stop: 65220, Start Num: 10

Candidate Starts for xkcd_116:

(Start: 10 @64741 has 73 MA's), (14, 64819), (18, 64843), (19, 64846), (22, 64990), (24, 65011), (28, 65137), (31, 65185), (33, 65215),