



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 215972 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215972 has 122 members, 31 are drafts.

Phages represented in each track:

- Track 1 : Pound_150
- Track 2 : ThreeRngTarjay_154
- Track 3 : LittleE_159
- Track 4 : Gonephishing_151, Hannaconda_151, Squint_149, Rearden_151, Nekros_155
- Track 5 : Wanda_157, Ejimix_150, DmpstrDiver_158, Minerva_157, Halley_159, Dallas_158, Beem_159
- Track 6 : Bombitas_145, HokkenD_153, Dove_145, Redno2_152, Yeet_151, JuicyJay_153, NihilNomen_160, Phoebus_159
- Track 7 : Porcelain_153, Duke13_156, MiaZeal_156, Lucky2013_149, EricMillard_152, Optimus_150, Bagrid_162
- Track 8 : Odette_162, Schatzie_153
- Track 9 : Bobby_148, Thibault_140, Constella_150
- Track 10 : Superphikiman_154, Ariel_156
- Track 11 : Zelink_152
- Track 12 : Marleymoo_142
- Track 13 : Courthouse_152
- Track 14 : BAKA_159
- Track 15 : Omega_163
- Track 16 : Shaboozey_154, KashFlow_156
- Track 17 : Kalah2_150
- Track 18 : Hughesyang_158
- Track 19 : Klein_157
- Track 20 : Gardann_90, Underpass_80, Nicholasp3_90, Rumpelstiltskin_86
- Track 21 : MkaliMitinis3_92, Wigglewiggle_90, Kahlid_89, Wilder_91
- Track 22 : Breezona_90, BobsGarage_89, BigCheese_90, Sarshaun_91, Miley16_90, DrSeegs_89, Winky_90, Soap141_90
- Track 23 : DHan_93, LilDestine_88, ZhongYanYuan_87
- Track 24 : Loadrie_89, GuuelaD_87, Itos_90, Gabriela_90
- Track 25 : Faith1_90, Zakai_91, Netyap_89, Crossroads_90
- Track 26 : Archie_87
- Track 27 : Tourach_90
- Track 28 : Baoshan_87
- Track 29 : Vetrix_88
- Track 30 : Lewan_91
- Track 31 : Finemlucis_91
- Track 32 : Hafay_90, Claus_88

- Track 33 : Bazzle_87
- Track 34 : SoJulia_92
- Track 35 : DanBing_89
- Track 36 : Snenia_86, Jubie_86, Moostard_85, TriFive_87, Finnry_87, Clautastrophe_85, Nicholas_85, Jobypre_87, Red305_88, Samty_86, MsGreen_87, Kingsolomon_85, Lumos_87, Bellis_85
- Track 37 : MiniLon_91, MiniMac_91, Lolly9_86
- Track 38 : DuncansLeg_87
- Track 39 : BourbonZero_88, KirDoubleO7_85, Ellson_86, LiyuLake_86
- Track 40 : Whirlwind_88, Krypton555_88
- Track 41 : Douzhi_91, Sheng711_92, Quby_91, PYPDinur_91, BrainDrainer_92
- Track 42 : FarmResident_92
- Track 43 : Chaser_89
- Track 44 : Douge_91
- Track 45 : Kropertea_85, DyoEdafos_93
- Track 46 : Bromden_90
- Track 47 : Gaia_118, Nebkiss_119

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

The start number called the most often in the published annotations is 4, it was called in 40 of the 91 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel_156, BAKA_159, Bagrid_162, Beem_159, Bobby_148, Bombitas_145, Constella_150, Courthouse_152, Dallas_158, DmpstrDiver_158, Dove_145, Duke13_156, Ejimix_150, EricMillard_152, Gonephishing_151, Halley_159, Hannaconda_151, HokkenD_153, Hughesyang_158, JuicyJay_153, Kalah2_150, KashFlow_156, Klein_157, LittleE_159, Lucky2013_149, Marleymoo_142, MiaZeal_156, Minerva_157, Nekros_155, NihilNomen_160, Odette_162, Omega_163, Optimus_150, Phoebus_159, Porcelain_153, Pound_150, Rearden_151, Redno2_152, Schatzie_153, Shaboozey_154, Squint_149, Superphikiman_154, Thibault_140, ThreeRngTarjay_154, Wanda_157, Yeet_151, Zelink_152,

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

-

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

- Archie_87, Baoshan_87, Bazzle_87, Bellis_85, BigCheese_90, BobsGarage_89, BourbonZero_88, BrainDrainer_92, Breezona_90, Bromden_90, Chaser_89, Claus_88, Clautastrophe_85, Crossroads_90, DHan_93, DanBing_89, Douge_91, Douzhi_91, DrSeegs_89, DuncansLeg_87, DyoEdafos_93, Ellson_86, Faith1_90, FarmResident_92, Finemlucis_91, Finnry_87, Gabriela_90, Gaia_118, Gardann_90, GuuelaD_87, Hafay_90, Itos_90, Jobypre_87, Jubie_86, Kahlid_89, Kingsolomon_85, KirDoubleO7_85, Kropertea_85, Krypton555_88, Lewan_91, LilDestine_88, LiyuLake_86, Loadrie_89, Lolly9_86, Lumos_87, Miley16_90, MiniLon_91, MiniMac_91, MkaliMitinis3_92, Moostard_85, MsGreen_87, Nebkiss_119, Netyap_89, Nicholas_85, Nicholasp3_90, PYPDinur_91, Quby_91, Red305_88, Rumpelstiltskin_86, Samty_86, Sarshaun_91, Sheng711_92, Snenia_86, SoJulia_92,

Soap141_90, Tourach_90, TriFive_87, Underpass_80, Vetrrix_88, Whirlwind_88, Wigglewiggle_90, Wilder_91, Winky_90, Zakai_91, ZhongYanYuan_87,

Summary by start number:

Start 4:

- Found in 47 of 122 (38.5%) of genes in pham
- Manual Annotations of this start: 40 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel_156 (J), BAKA_159 (J), Bagrid_162 (J), Beem_159 (J), Bobby_148 (J), Bombitas_145 (J), Constella_150 (J), Courthouse_152 (J), Dallas_158 (J), DmpstrDiver_158 (J), Dove_145 (J), Duke13_156 (J), Ejimix_150 (J), EricMillard_152 (J), Gonephishing_151 (J), Halley_159 (J), Hannaconda_151 (J), HokkenD_153 (J), Hughesyang_158 (J), JuicyJay_153 (J), Kalah2_150 (J), KashFlow_156 (J), Klein_157 (J), LittleE_159 (J), Lucky2013_149 (J), Marleymoo_142 (J), MiaZeal_156 (J), Minerva_157 (J), Nekros_155 (J), NihilNomen_160 (J), Odette_162 (J), Omega_163 (J), Optimus_150 (J), Phoebus_159 (J), Porcelain_153 (J), Pound_150 (J), Rearden_151 (J), Redno2_152 (J), Schatzie_153 (J), Shaboozey_154 (J), Squint_149 (J), Superphikiman_154 (J), Thibault_140 (J), ThreeRngTarjay_154 (J), Wanda_157 (J), Yeet_151 (J), Zelink_152 (J),

Start 6:

- Found in 2 of 122 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: SoJulia_92 (L2),

Start 8:

- Found in 2 of 122 (1.6%) of genes in pham
- Manual Annotations of this start: 2 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia_118 (X), Nebkiss_119 (X),

Start 9:

- Found in 24 of 122 (19.7%) of genes in pham
- Manual Annotations of this start: 12 of 91
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Baoshan_87 (L2), BrainDrainer_92 (L4), Chaser_89 (L4), DanBing_89 (L2), Douge_91 (L4), Douzhi_91 (L4), DyoEdafos_93 (L4), FarmResident_92 (L4), Finemlucis_91 (L2), Gardann_90 (L2), Kahlid_89 (L2), Kropertea_85 (L4), Lewan_91 (L2), MkaliMitinis3_92 (L2), Nicholasp3_90 (L2), PYPDinur_91 (L4), Quby_91 (L4), Rumpelstiltskin_86 (L2), Sheng711_92 (L4), Underpass_80 (L2), Wigglewiggle_90 (L2), Wilder_91 (L2),

Start 10:

- Found in 2 of 122 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Vetrrix_88 (L2),

Start 11:

- Found in 9 of 122 (7.4%) of genes in pham

- Manual Annotations of this start: 4 of 91
- Called 44.4% of time when present
- Phage (with cluster) where this start called: Crossroads_90 (L2), Faith1_90 (L2), Netyap_89 (L2), Zakai_91 (L2),

Start 12:

- Found in 9 of 122 (7.4%) of genes in pham
- Manual Annotations of this start: 5 of 91
- Called 55.6% of time when present
- Phage (with cluster) where this start called: Gabriela_90 (L2), GuuelaD_87 (L2), Itos_90 (L2), Loadrie_89 (L2), Tourach_90 (L2),

Start 14:

- Found in 13 of 122 (10.7%) of genes in pham
- Manual Annotations of this start: 1 of 91
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Bromden_90 (L4),

Start 16:

- Found in 10 of 122 (8.2%) of genes in pham
- Manual Annotations of this start: 6 of 91
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BigCheese_90 (L2), BobsGarage_89 (L2), Breezona_90 (L2), DrSeegs_89 (L2), Miley16_90 (L2), Sarshaun_91 (L2), Soap141_90 (L2), Winky_90 (L2),

Start 17:

- Found in 31 of 122 (25.4%) of genes in pham
- Manual Annotations of this start: 20 of 91
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archie_87 (L2), Bazzle_87 (L2), Bellis_85 (L3), BourbonZero_88 (L3), Claus_88 (L2), Clautastrophe_85 (L3), DHan_93 (L2), DuncansLeg_87 (L3), Ellson_86 (L3), Finnry_87 (L3), Hafay_90 (L2), Jobypre_87 (L3), Jubie_86 (L3), Kingsolomon_85 (L3), KirDoubleO7_85 (L3), Krypton555_88 (L3), LilDestine_88 (L2), LiyuLake_86 (L3), Lolly9_86 (L3), Lumos_87 (L3), MiniLon_91 (L3), MiniMac_91 (L3), Moostard_85 (L3), MsGreen_87 (L3), Nicholas_85 (L3), Red305_88 (L3), Samty_86 (L3), Snenia_86 (L3), TriFive_87 (L3), Whirlwind_88 (L3), ZhongYanYuan_87 (L2),

Summary by clusters:

There are 5 clusters represented in this pham: X, L4, J, L2, L3,

Info for manual annotations of cluster J:

- Start number 4 was manually annotated 40 times for cluster J.

Info for manual annotations of cluster L2:

- Start number 9 was manually annotated 9 times for cluster L2.
- Start number 10 was manually annotated 1 time for cluster L2.
- Start number 11 was manually annotated 4 times for cluster L2.
- Start number 12 was manually annotated 5 times for cluster L2.
- Start number 16 was manually annotated 6 times for cluster L2.
- Start number 17 was manually annotated 3 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 17 was manually annotated 17 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 9 was manually annotated 3 times for cluster L4.
- Start number 14 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster X:

- Start number 8 was manually annotated 2 times for cluster X.

Gene Information:

Gene: Archie_87 Start: 57239, Stop: 57889, Start Num: 17

Candidate Starts for Archie_87:

(Start: 17 @57239 has 20 MA's), (22, 57308), (23, 57311), (27, 57365), (30, 57395), (38, 57467), (40, 57503), (41, 57512), (44, 57545), (45, 57569), (46, 57575), (47, 57581), (48, 57590), (49, 57602), (51, 57617), (55, 57662), (60, 57719), (72, 57866),

Gene: Ariel_156 Start: 80329, Stop: 81039, Start Num: 4

Candidate Starts for Ariel_156:

(Start: 4 @80329 has 40 MA's), (30, 80551), (32, 80575), (34, 80578), (36, 80587), (44, 80701), (46, 80731), (47, 80737), (48, 80746), (49, 80758), (53, 80794), (54, 80797), (59, 80863), (61, 80890), (67, 80971), (69, 81007),

Gene: BAKA_159 Start: 84277, Stop: 84987, Start Num: 4

Candidate Starts for BAKA_159:

(1, 84214), (2, 84229), (Start: 4 @84277 has 40 MA's), (30, 84499), (32, 84523), (34, 84526), (36, 84535), (46, 84679), (47, 84685), (48, 84694), (49, 84706), (54, 84745), (60, 84823), (61, 84838), (67, 84919),

Gene: Bagrid_162 Start: 85506, Stop: 86216, Start Num: 4

Candidate Starts for Bagrid_162:

(Start: 4 @85506 has 40 MA's), (30, 85728), (32, 85752), (34, 85755), (36, 85764), (46, 85908), (47, 85914), (48, 85923), (49, 85935), (54, 85974), (60, 86052), (61, 86067), (67, 86148),

Gene: Baoshan_87 Start: 57893, Stop: 58579, Start Num: 9

Candidate Starts for Baoshan_87:

(Start: 9 @57893 has 12 MA's), (Start: 14 @57917 has 1 MA's), (23, 57998), (27, 58052), (30, 58082), (38, 58154), (39, 58160), (44, 58232), (45, 58256), (46, 58262), (48, 58277), (49, 58289), (50, 58298), (55, 58349), (60, 58406), (68, 58514), (72, 58553), (73, 58571),

Gene: Bazzle_87 Start: 57795, Stop: 58445, Start Num: 17

Candidate Starts for Bazzle_87:

(Start: 17 @57795 has 20 MA's), (22, 57864), (23, 57867), (27, 57921), (30, 57951), (38, 58023), (40, 58059), (41, 58068), (44, 58101), (45, 58125), (46, 58131), (47, 58137), (48, 58146), (49, 58158), (51, 58173), (55, 58218), (60, 58275), (68, 58383), (72, 58422),

Gene: Beem_159 Start: 85469, Stop: 86179, Start Num: 4

Candidate Starts for Beem_159:

(Start: 4 @85469 has 40 MA's), (30, 85691), (32, 85715), (34, 85718), (36, 85727), (43, 85826), (44, 85841), (46, 85871), (48, 85886), (49, 85898), (54, 85937), (60, 86015), (61, 86030), (67, 86111),

Gene: Bellis_85 Start: 57329, Stop: 57982, Start Num: 17

Candidate Starts for Bellis_85:

(Start: 17 @57329 has 20 MA's), (20, 57368), (23, 57404), (27, 57458), (28, 57461), (30, 57488), (35, 57524), (38, 57560), (44, 57638), (46, 57668), (47, 57674), (49, 57695), (50, 57704), (51, 57710), (55, 57755), (56, 57758), (60, 57812), (63, 57857), (64, 57878), (68, 57920), (71, 57956), (72, 57959),

Gene: BigCheese_90 Start: 58042, Stop: 58695, Start Num: 16

Candidate Starts for BigCheese_90:

(Start: 16 @58042 has 6 MA's), (23, 58117), (27, 58171), (30, 58201), (38, 58273), (39, 58279), (44, 58351), (45, 58375), (46, 58381), (48, 58396), (49, 58408), (51, 58423), (55, 58468), (60, 58525), (68, 58633), (70, 58663), (72, 58672),

Gene: Bobby_148 Start: 85819, Stop: 86529, Start Num: 4

Candidate Starts for Bobby_148:

(Start: 4 @85819 has 40 MA's), (30, 86041), (32, 86065), (34, 86068), (36, 86077), (39, 86119), (44, 86191), (46, 86221), (48, 86236), (49, 86248), (54, 86287), (60, 86365), (61, 86380), (67, 86461),

Gene: BobsGarage_89 Start: 58042, Stop: 58695, Start Num: 16

Candidate Starts for BobsGarage_89:

(Start: 16 @58042 has 6 MA's), (23, 58117), (27, 58171), (30, 58201), (38, 58273), (39, 58279), (44, 58351), (45, 58375), (46, 58381), (48, 58396), (49, 58408), (51, 58423), (55, 58468), (60, 58525), (68, 58633), (70, 58663), (72, 58672),

Gene: Bombitas_145 Start: 81475, Stop: 82185, Start Num: 4

Candidate Starts for Bombitas_145:

(Start: 4 @81475 has 40 MA's), (30, 81697), (32, 81721), (34, 81724), (36, 81733), (43, 81832), (44, 81847), (46, 81877), (47, 81883), (48, 81892), (49, 81904), (54, 81943), (61, 82036), (67, 82117), (69, 82153),

Gene: BourbonZero_88 Start: 57358, Stop: 58008, Start Num: 17

Candidate Starts for BourbonZero_88:

(Start: 17 @57358 has 20 MA's), (23, 57430), (27, 57484), (28, 57487), (30, 57514), (35, 57550), (38, 57586), (44, 57664), (46, 57694), (47, 57700), (49, 57721), (50, 57730), (51, 57736), (53, 57757), (55, 57781), (56, 57784), (57, 57793), (60, 57838), (63, 57883), (64, 57904), (68, 57946), (71, 57982), (72, 57985), (73, 58003),

Gene: BrainDrainer_92 Start: 57521, Stop: 58210, Start Num: 9

Candidate Starts for BrainDrainer_92:

(Start: 9 @57521 has 12 MA's), (23, 57629), (26, 57668), (27, 57683), (28, 57686), (31, 57728), (35, 57749), (38, 57785), (45, 57887), (47, 57899), (48, 57908), (49, 57920), (50, 57929), (51, 57935), (55, 57980), (57, 57992), (59, 58025), (60, 58037), (72, 58184),

Gene: Breezona_90 Start: 58042, Stop: 58695, Start Num: 16

Candidate Starts for Breezona_90:

(Start: 16 @58042 has 6 MA's), (23, 58117), (27, 58171), (30, 58201), (38, 58273), (39, 58279), (44, 58351), (45, 58375), (46, 58381), (48, 58396), (49, 58408), (51, 58423), (55, 58468), (60, 58525), (68, 58633), (70, 58663), (72, 58672),

Gene: Bromden_90 Start: 58275, Stop: 58931, Start Num: 14

Candidate Starts for Bromden_90:

(Start: 14 @58275 has 1 MA's), (22, 58347), (23, 58350), (26, 58389), (27, 58404), (30, 58434), (31, 58449), (37, 58488), (38, 58506), (45, 58608), (47, 58620), (48, 58629), (49, 58641), (50, 58650), (51, 58656), (55, 58701), (57, 58713), (59, 58746), (60, 58758), (72, 58905),

Gene: Chaser_89 Start: 56649, Stop: 57341, Start Num: 9

Candidate Starts for Chaser_89:

(Start: 9 @56649 has 12 MA's), (27, 56814), (30, 56844), (31, 56859), (35, 56880), (38, 56916), (45, 57018), (47, 57030), (48, 57039), (49, 57051), (50, 57060), (51, 57066), (55, 57111), (57, 57123), (59, 57156), (60, 57168), (72, 57315),

Gene: Claus_88 Start: 57577, Stop: 58230, Start Num: 17

Candidate Starts for Claus_88:

(Start: 17 @57577 has 20 MA's), (23, 57649), (27, 57703), (30, 57733), (38, 57805), (39, 57811), (44, 57883), (45, 57907), (46, 57913), (48, 57928), (49, 57940), (50, 57949), (55, 58000), (57, 58012), (60, 58057), (68, 58165), (72, 58204), (73, 58222),

Gene: Clautastrophe_85 Start: 57327, Stop: 57977, Start Num: 17

Candidate Starts for Clautastrophe_85:

(Start: 17 @57327 has 20 MA's), (20, 57363), (23, 57399), (27, 57453), (28, 57456), (30, 57483), (35, 57519), (38, 57555), (44, 57633), (46, 57663), (47, 57669), (49, 57690), (50, 57699), (51, 57705), (55, 57750), (56, 57753), (60, 57807), (63, 57852), (64, 57873), (68, 57915), (71, 57951), (72, 57954),

Gene: Constella_150 Start: 82508, Stop: 83218, Start Num: 4

Candidate Starts for Constella_150:

(Start: 4 @82508 has 40 MA's), (30, 82730), (32, 82754), (34, 82757), (36, 82766), (39, 82808), (44, 82880), (46, 82910), (48, 82925), (49, 82937), (54, 82976), (60, 83054), (61, 83069), (67, 83150),

Gene: Courthouse_152 Start: 80187, Stop: 80897, Start Num: 4

Candidate Starts for Courthouse_152:

(Start: 4 @80187 has 40 MA's), (30, 80409), (32, 80433), (34, 80436), (36, 80445), (44, 80559), (46, 80589), (47, 80595), (48, 80604), (49, 80616), (53, 80652), (54, 80655), (61, 80748), (67, 80829), (69, 80865),

Gene: Crossroads_90 Start: 57736, Stop: 58407, Start Num: 11

Candidate Starts for Crossroads_90:

(Start: 11 @57736 has 4 MA's), (Start: 12 @57739 has 5 MA's), (23, 57829), (27, 57883), (30, 57913), (38, 57985), (39, 57991), (44, 58063), (45, 58087), (46, 58093), (48, 58108), (49, 58120), (51, 58135), (55, 58180), (60, 58237), (68, 58345), (70, 58375), (72, 58384),

Gene: DHan_93 Start: 57956, Stop: 58609, Start Num: 17

Candidate Starts for DHan_93:

(Start: 17 @57956 has 20 MA's), (23, 58028), (27, 58082), (30, 58112), (38, 58184), (39, 58190), (41, 58229), (44, 58262), (45, 58286), (46, 58292), (48, 58307), (49, 58319), (50, 58328), (55, 58379), (60, 58436), (68, 58544), (72, 58583), (73, 58601),

Gene: Dallas_158 Start: 84692, Stop: 85402, Start Num: 4

Candidate Starts for Dallas_158:

(Start: 4 @84692 has 40 MA's), (30, 84914), (32, 84938), (34, 84941), (36, 84950), (43, 85049), (44, 85064), (46, 85094), (48, 85109), (49, 85121), (54, 85160), (60, 85238), (61, 85253), (67, 85334),

Gene: DanBing_89 Start: 57454, Stop: 58140, Start Num: 9

Candidate Starts for DanBing_89:

(Start: 9 @57454 has 12 MA's), (Start: 14 @57478 has 1 MA's), (23, 57559), (27, 57613), (30, 57643), (38, 57715), (39, 57721), (44, 57793), (45, 57817), (46, 57823), (49, 57850), (50, 57859), (55, 57910), (60, 57967), (68, 58075), (72, 58114), (73, 58132),

Gene: DmpstrDiver_158 Start: 83419, Stop: 84129, Start Num: 4

Candidate Starts for DmpstrDiver_158:

(Start: 4 @83419 has 40 MA's), (30, 83641), (32, 83665), (34, 83668), (36, 83677), (43, 83776), (44, 83791), (46, 83821), (48, 83836), (49, 83848), (54, 83887), (60, 83965), (61, 83980), (67, 84061),

Gene: Douge_91 Start: 56944, Stop: 57627, Start Num: 9

Candidate Starts for Douge_91:

(Start: 9 @56944 has 12 MA's), (Start: 14 @56968 has 1 MA's), (27, 57100), (30, 57130), (31, 57145), (35, 57166), (38, 57202), (45, 57304), (47, 57316), (48, 57325), (49, 57337), (50, 57346), (51, 57352), (55, 57397), (57, 57409), (59, 57442), (60, 57454), (72, 57601),

Gene: Douzhi_91 Start: 57210, Stop: 57899, Start Num: 9

Candidate Starts for Douzhi_91:

(Start: 9 @57210 has 12 MA's), (23, 57318), (26, 57357), (27, 57372), (28, 57375), (31, 57417), (35, 57438), (38, 57474), (45, 57576), (47, 57588), (48, 57597), (49, 57609), (50, 57618), (51, 57624), (55, 57669), (57, 57681), (59, 57714), (60, 57726), (72, 57873),

Gene: Dove_145 Start: 79831, Stop: 80541, Start Num: 4

Candidate Starts for Dove_145:

(Start: 4 @79831 has 40 MA's), (30, 80053), (32, 80077), (34, 80080), (36, 80089), (43, 80188), (44, 80203), (46, 80233), (47, 80239), (48, 80248), (49, 80260), (54, 80299), (61, 80392), (67, 80473), (69, 80509),

Gene: DrSeegs_89 Start: 58042, Stop: 58695, Start Num: 16

Candidate Starts for DrSeegs_89:

(Start: 16 @58042 has 6 MA's), (23, 58117), (27, 58171), (30, 58201), (38, 58273), (39, 58279), (44, 58351), (45, 58375), (46, 58381), (48, 58396), (49, 58408), (51, 58423), (55, 58468), (60, 58525), (68, 58633), (70, 58663), (72, 58672),

Gene: Duke13_156 Start: 82773, Stop: 83483, Start Num: 4

Candidate Starts for Duke13_156:

(Start: 4 @82773 has 40 MA's), (30, 82995), (32, 83019), (34, 83022), (36, 83031), (46, 83175), (47, 83181), (48, 83190), (49, 83202), (54, 83241), (60, 83319), (61, 83334), (67, 83415),

Gene: DuncansLeg_87 Start: 57346, Stop: 57996, Start Num: 17

Candidate Starts for DuncansLeg_87:

(Start: 17 @57346 has 20 MA's), (23, 57418), (27, 57472), (28, 57475), (30, 57502), (35, 57538), (38, 57574), (44, 57652), (46, 57682), (47, 57688), (49, 57709), (50, 57718), (51, 57724), (53, 57745), (55, 57769), (56, 57772), (60, 57826), (63, 57871), (64, 57892), (68, 57934), (71, 57970), (72, 57973), (73, 57991),

Gene: DyoEdafos_93 Start: 57362, Stop: 58051, Start Num: 9

Candidate Starts for DyoEdafos_93:

(Start: 9 @57362 has 12 MA's), (24, 57491), (27, 57527), (28, 57530), (30, 57557), (31, 57572), (35, 57593), (37, 57611), (38, 57629), (47, 57743), (48, 57752), (49, 57764), (50, 57773), (51, 57779), (55, 57824), (57, 57836), (59, 57869), (60, 57881), (72, 58028),

Gene: Ejimix_150 Start: 83680, Stop: 84390, Start Num: 4

Candidate Starts for Ejimix_150:

(Start: 4 @83680 has 40 MA's), (30, 83902), (32, 83926), (34, 83929), (36, 83938), (43, 84037), (44, 84052), (46, 84082), (48, 84097), (49, 84109), (54, 84148), (60, 84226), (61, 84241), (67, 84322),

Gene: Ellson_86 Start: 57661, Stop: 58311, Start Num: 17

Candidate Starts for Ellson_86:

(Start: 17 @57661 has 20 MA's), (23, 57733), (27, 57787), (28, 57790), (30, 57817), (35, 57853), (38, 57889), (44, 57967), (46, 57997), (47, 58003), (49, 58024), (50, 58033), (51, 58039), (53, 58060), (55, 58084), (56, 58087), (57, 58096), (60, 58141), (63, 58186), (64, 58207), (68, 58249), (71, 58285), (72, 58288), (73, 58306),

Gene: EricMillard_152 Start: 84116, Stop: 84826, Start Num: 4

Candidate Starts for EricMillard_152:

(Start: 4 @84116 has 40 MA's), (30, 84338), (32, 84362), (34, 84365), (36, 84374), (46, 84518), (47, 84524), (48, 84533), (49, 84545), (54, 84584), (60, 84662), (61, 84677), (67, 84758),

Gene: Faith1_90 Start: 57661, Stop: 58332, Start Num: 11

Candidate Starts for Faith1_90:

(Start: 11 @57661 has 4 MA's), (Start: 12 @57664 has 5 MA's), (23, 57754), (27, 57808), (30, 57838), (38, 57910), (39, 57916), (44, 57988), (45, 58012), (46, 58018), (48, 58033), (49, 58045), (51, 58060), (55, 58105), (60, 58162), (68, 58270), (70, 58300), (72, 58309),

Gene: FarmResident_92 Start: 56922, Stop: 57611, Start Num: 9

Candidate Starts for FarmResident_92:

(Start: 9 @56922 has 12 MA's), (23, 57030), (26, 57069), (27, 57084), (28, 57087), (35, 57150), (38, 57186), (45, 57288), (47, 57300), (48, 57309), (49, 57321), (50, 57330), (51, 57336), (55, 57381), (57, 57393), (59, 57426), (60, 57438), (72, 57585),

Gene: Finemlucis_91 Start: 58780, Stop: 59463, Start Num: 9

Candidate Starts for Finemlucis_91:

(Start: 9 @58780 has 12 MA's), (23, 58885), (27, 58939), (30, 58969), (38, 59041), (39, 59047), (44, 59119), (45, 59143), (46, 59149), (48, 59164), (49, 59176), (51, 59191), (55, 59236), (60, 59293), (68, 59401), (70, 59431), (72, 59440),

Gene: Finnry_87 Start: 57677, Stop: 58330, Start Num: 17

Candidate Starts for Finnry_87:

(Start: 17 @57677 has 20 MA's), (20, 57716), (23, 57752), (27, 57806), (28, 57809), (30, 57836), (35, 57872), (38, 57908), (44, 57986), (46, 58016), (47, 58022), (49, 58043), (50, 58052), (51, 58058), (55, 58103), (56, 58106), (60, 58160), (63, 58205), (64, 58226), (68, 58268), (71, 58304), (72, 58307),

Gene: Gabriela_90 Start: 57010, Stop: 57678, Start Num: 12

Candidate Starts for Gabriela_90:

(Start: 11 @57007 has 4 MA's), (Start: 12 @57010 has 5 MA's), (23, 57100), (27, 57154), (30, 57184), (38, 57256), (39, 57262), (44, 57334), (45, 57358), (46, 57364), (48, 57379), (49, 57391), (51, 57406), (55, 57451), (60, 57508), (68, 57616), (70, 57646), (72, 57655),

Gene: Gaia_118 Start: 66289, Stop: 66987, Start Num: 8

Candidate Starts for Gaia_118:

(7, 66286), (Start: 8 @66289 has 2 MA's), (13, 66313), (15, 66322), (29, 66478), (30, 66499), (31, 66514), (33, 66523), (34, 66526), (36, 66535), (37, 66553), (41, 66616), (43, 66634), (49, 66706), (51, 66721), (52, 66736), (55, 66766), (58, 66793), (59, 66811), (60, 66823), (62, 66841), (63, 66868), (69, 66955), (72, 66970),

Gene: Gardann_90 Start: 57496, Stop: 58179, Start Num: 9

Candidate Starts for Gardann_90:

(Start: 9 @57496 has 12 MA's), (Start: 14 @57520 has 1 MA's), (20, 57565), (23, 57601), (27, 57655), (30, 57685), (38, 57757), (44, 57835), (45, 57859), (46, 57865), (48, 57880), (49, 57892), (51, 57907), (55, 57952), (60, 58009), (68, 58117), (70, 58147), (72, 58156),

Gene: Gonephishing_151 Start: 82284, Stop: 82994, Start Num: 4

Candidate Starts for Gonephishing_151:

(Start: 4 @82284 has 40 MA's), (30, 82506), (32, 82530), (34, 82533), (36, 82542), (46, 82686), (47, 82692), (48, 82701), (49, 82713), (53, 82749), (54, 82752), (61, 82845), (67, 82926), (69, 82962),

Gene: GuuelaD_87 Start: 57623, Stop: 58291, Start Num: 12

Candidate Starts for GuuelaD_87:

(Start: 11 @57620 has 4 MA's), (Start: 12 @57623 has 5 MA's), (23, 57713), (27, 57767), (30, 57797), (38, 57869), (39, 57875), (44, 57947), (45, 57971), (46, 57977), (48, 57992), (49, 58004), (51, 58019), (55, 58064), (60, 58121), (68, 58229), (70, 58259), (72, 58268),

Gene: Hafay_90 Start: 57572, Stop: 58225, Start Num: 17

Candidate Starts for Hafay_90:

(Start: 17 @57572 has 20 MA's), (23, 57644), (27, 57698), (30, 57728), (38, 57800), (39, 57806), (44, 57878), (45, 57902), (46, 57908), (48, 57923), (49, 57935), (50, 57944), (55, 57995), (57, 58007), (60, 58052), (68, 58160), (72, 58199), (73, 58217),

Gene: Halley_159 Start: 83996, Stop: 84706, Start Num: 4

Candidate Starts for Halley_159:

(Start: 4 @83996 has 40 MA's), (30, 84218), (32, 84242), (34, 84245), (36, 84254), (43, 84353), (44, 84368), (46, 84398), (48, 84413), (49, 84425), (54, 84464), (60, 84542), (61, 84557), (67, 84638),

Gene: Hannaconda_151 Start: 84288, Stop: 84998, Start Num: 4

Candidate Starts for Hannaconda_151:

(Start: 4 @84288 has 40 MA's), (30, 84510), (32, 84534), (34, 84537), (36, 84546), (46, 84690), (47, 84696), (48, 84705), (49, 84717), (53, 84753), (54, 84756), (61, 84849), (67, 84930), (69, 84966),

Gene: HokkenD_153 Start: 85553, Stop: 86263, Start Num: 4

Candidate Starts for HokkenD_153:

(Start: 4 @85553 has 40 MA's), (30, 85775), (32, 85799), (34, 85802), (36, 85811), (43, 85910), (44, 85925), (46, 85955), (47, 85961), (48, 85970), (49, 85982), (54, 86021), (61, 86114), (67, 86195), (69, 86231),

Gene: Hughesyang_158 Start: 84577, Stop: 85284, Start Num: 4

Candidate Starts for Hughesyang_158:

(1, 84514), (2, 84529), (Start: 4 @84577 has 40 MA's), (19, 84652), (30, 84799), (36, 84832), (42, 84919), (44, 84946), (46, 84976), (47, 84982), (48, 84991), (49, 85003), (54, 85042), (60, 85120), (61, 85135), (66, 85213), (67, 85216), (69, 85252), (72, 85267),

Gene: Itos_90 Start: 56570, Stop: 57238, Start Num: 12

Candidate Starts for Itos_90:

(Start: 11 @56567 has 4 MA's), (Start: 12 @56570 has 5 MA's), (23, 56660), (27, 56714), (30, 56744), (38, 56816), (39, 56822), (44, 56894), (45, 56918), (46, 56924), (48, 56939), (49, 56951), (51, 56966), (55, 57011), (60, 57068), (68, 57176), (70, 57206), (72, 57215),

Gene: Jobypre_87 Start: 57327, Stop: 57977, Start Num: 17

Candidate Starts for Jobypre_87:

(Start: 17 @57327 has 20 MA's), (20, 57363), (23, 57399), (27, 57453), (28, 57456), (30, 57483), (35, 57519), (38, 57555), (44, 57633), (46, 57663), (47, 57669), (49, 57690), (50, 57699), (51, 57705), (55, 57750), (56, 57753), (60, 57807), (63, 57852), (64, 57873), (68, 57915), (71, 57951), (72, 57954),

Gene: Jubie_86 Start: 57462, Stop: 58112, Start Num: 17

Candidate Starts for Jubie_86:

(Start: 17 @57462 has 20 MA's), (20, 57498), (23, 57534), (27, 57588), (28, 57591), (30, 57618), (35, 57654), (38, 57690), (44, 57768), (46, 57798), (47, 57804), (49, 57825), (50, 57834), (51, 57840), (55, 57885), (56, 57888), (60, 57942), (63, 57987), (64, 58008), (68, 58050), (71, 58086), (72, 58089),

Gene: JuicyJay_153 Start: 85200, Stop: 85910, Start Num: 4

Candidate Starts for JuicyJay_153:

(Start: 4 @85200 has 40 MA's), (30, 85422), (32, 85446), (34, 85449), (36, 85458), (43, 85557), (44, 85572), (46, 85602), (47, 85608), (48, 85617), (49, 85629), (54, 85668), (61, 85761), (67, 85842), (69, 85878),

Gene: Kahlid_89 Start: 57414, Stop: 58097, Start Num: 9

Candidate Starts for Kahlid_89:

(Start: 9 @57414 has 12 MA's), (Start: 14 @57438 has 1 MA's), (20, 57483), (23, 57519), (27, 57573), (30, 57603), (38, 57675), (39, 57681), (44, 57753), (45, 57777), (46, 57783), (48, 57798), (49, 57810), (51, 57825), (55, 57870), (60, 57927), (68, 58035), (70, 58065), (72, 58074),

Gene: Kalah2_150 Start: 83707, Stop: 84414, Start Num: 4

Candidate Starts for Kalah2_150:

(1, 83644), (2, 83659), (Start: 4 @83707 has 40 MA's), (19, 83782), (30, 83929), (36, 83962), (42, 84049), (44, 84076), (46, 84106), (47, 84112), (48, 84121), (49, 84133), (54, 84172), (60, 84250), (61, 84265), (67, 84346),

Gene: KashFlow_156 Start: 84101, Stop: 84811, Start Num: 4

Candidate Starts for KashFlow_156:

(Start: 4 @84101 has 40 MA's), (30, 84323), (32, 84347), (34, 84350), (36, 84359), (46, 84503), (47, 84509), (48, 84518), (49, 84530), (53, 84566), (54, 84569), (61, 84662), (65, 84728), (67, 84743), (69, 84779),

Gene: Kingsolomon_85 Start: 57433, Stop: 58086, Start Num: 17

Candidate Starts for Kingsolomon_85:

(Start: 17 @57433 has 20 MA's), (20, 57472), (23, 57508), (27, 57562), (28, 57565), (30, 57592), (35, 57628), (38, 57664), (44, 57742), (46, 57772), (47, 57778), (49, 57799), (50, 57808), (51, 57814), (55, 57859), (56, 57862), (60, 57916), (63, 57961), (64, 57982), (68, 58024), (71, 58060), (72, 58063),

Gene: KirDoubleO7_85 Start: 57348, Stop: 57998, Start Num: 17

Candidate Starts for KirDoubleO7_85:

(Start: 17 @57348 has 20 MA's), (23, 57420), (27, 57474), (28, 57477), (30, 57504), (35, 57540), (38, 57576), (44, 57654), (46, 57684), (47, 57690), (49, 57711), (50, 57720), (51, 57726), (53, 57747), (55, 57771), (56, 57774), (57, 57783), (60, 57828), (63, 57873), (64, 57894), (68, 57936), (71, 57972), (72, 57975), (73, 57993),

Gene: Klein_157 Start: 82067, Stop: 82774, Start Num: 4

Candidate Starts for Klein_157:

(Start: 4 @82067 has 40 MA's), (30, 82289), (36, 82322), (42, 82409), (44, 82436), (46, 82466), (47, 82472), (48, 82481), (49, 82493), (54, 82532), (60, 82610), (61, 82625), (66, 82703), (67, 82706), (69, 82742), (72, 82757),

Gene: Kropertea_85 Start: 56642, Stop: 57334, Start Num: 9

Candidate Starts for Kropertea_85:

(Start: 9 @56642 has 12 MA's), (24, 56771), (27, 56807), (28, 56810), (30, 56837), (31, 56852), (35, 56873), (37, 56891), (38, 56909), (47, 57023), (48, 57032), (49, 57044), (50, 57053), (51, 57059), (55, 57104), (57, 57116), (59, 57149), (60, 57161), (72, 57308),

Gene: Krypton555_88 Start: 57701, Stop: 58354, Start Num: 17

Candidate Starts for Krypton555_88:

(Start: 17 @57701 has 20 MA's), (23, 57776), (27, 57830), (28, 57833), (30, 57860), (38, 57932), (44, 58010), (46, 58040), (47, 58046), (49, 58067), (50, 58076), (51, 58082), (55, 58127), (56, 58130), (60, 58184), (63, 58229), (64, 58250), (68, 58292), (71, 58328), (72, 58331),

Gene: Lewan_91 Start: 57620, Stop: 58306, Start Num: 9

Candidate Starts for Lewan_91:

(Start: 9 @57620 has 12 MA's), (Start: 14 @57644 has 1 MA's), (23, 57725), (27, 57779), (30, 57809), (38, 57881), (39, 57887), (44, 57959), (45, 57983), (46, 57989), (48, 58004), (49, 58016), (51, 58031), (55, 58076), (60, 58133), (68, 58241), (70, 58271), (72, 58280),

Gene: LilDestine_88 Start: 57333, Stop: 57986, Start Num: 17

Candidate Starts for LilDestine_88:

(Start: 17 @57333 has 20 MA's), (23, 57405), (27, 57459), (30, 57489), (38, 57561), (39, 57567), (41, 57606), (44, 57639), (45, 57663), (46, 57669), (48, 57684), (49, 57696), (50, 57705), (55, 57756), (60, 57813), (68, 57921), (72, 57960), (73, 57978),

Gene: LittleE_159 Start: 83924, Stop: 84634, Start Num: 4

Candidate Starts for LittleE_159:

(1, 83861), (3, 83879), (Start: 4 @83924 has 40 MA's), (19, 83999), (30, 84146), (32, 84170), (34, 84173), (36, 84182), (44, 84296), (46, 84326), (47, 84332), (48, 84341), (49, 84353), (53, 84389), (54, 84392), (59, 84458), (61, 84485), (67, 84566), (69, 84602), (72, 84617),

Gene: LiyuLake_86 Start: 57421, Stop: 58071, Start Num: 17

Candidate Starts for LiyuLake_86:

(Start: 17 @57421 has 20 MA's), (23, 57493), (27, 57547), (28, 57550), (30, 57577), (35, 57613), (38, 57649), (44, 57727), (46, 57757), (47, 57763), (49, 57784), (50, 57793), (51, 57799), (53, 57820), (55, 57844), (56, 57847), (57, 57856), (60, 57901), (63, 57946), (64, 57967), (68, 58009), (71, 58045), (72, 58048), (73, 58066),

Gene: Loadrie_89 Start: 57831, Stop: 58499, Start Num: 12

Candidate Starts for Loadrie_89:

(Start: 11 @57828 has 4 MA's), (Start: 12 @57831 has 5 MA's), (23, 57921), (27, 57975), (30, 58005), (38, 58077), (39, 58083), (44, 58155), (45, 58179), (46, 58185), (48, 58200), (49, 58212), (51, 58227), (55, 58272), (60, 58329), (68, 58437), (70, 58467), (72, 58476),

Gene: Lolly9_86 Start: 57509, Stop: 58162, Start Num: 17

Candidate Starts for Lolly9_86:

(Start: 17 @57509 has 20 MA's), (23, 57584), (27, 57638), (28, 57641), (30, 57668), (31, 57683), (35, 57704), (38, 57740), (40, 57776), (44, 57818), (46, 57848), (47, 57854), (49, 57875), (50, 57884), (51, 57890), (55, 57935), (56, 57938), (60, 57992), (63, 58037), (64, 58058), (68, 58100), (71, 58136), (72, 58139),

Gene: Lucky2013_149 Start: 79061, Stop: 79771, Start Num: 4

Candidate Starts for Lucky2013_149:

(Start: 4 @79061 has 40 MA's), (30, 79283), (32, 79307), (34, 79310), (36, 79319), (46, 79463), (47, 79469), (48, 79478), (49, 79490), (54, 79529), (60, 79607), (61, 79622), (67, 79703),

Gene: Lumos_87 Start: 57324, Stop: 57974, Start Num: 17

Candidate Starts for Lumos_87:

(Start: 17 @57324 has 20 MA's), (20, 57360), (23, 57396), (27, 57450), (28, 57453), (30, 57480), (35, 57516), (38, 57552), (44, 57630), (46, 57660), (47, 57666), (49, 57687), (50, 57696), (51, 57702), (55, 57747), (56, 57750), (60, 57804), (63, 57849), (64, 57870), (68, 57912), (71, 57948), (72, 57951),

Gene: Marleymoo_142 Start: 81207, Stop: 81917, Start Num: 4

Candidate Starts for Marleymoo_142:

(Start: 4 @81207 has 40 MA's), (19, 81282), (30, 81429), (32, 81453), (34, 81456), (36, 81465), (39, 81507), (44, 81579), (46, 81609), (48, 81624), (49, 81636), (54, 81675), (61, 81768), (65, 81834), (67, 81849), (69, 81885),

Gene: MiaZeal_156 Start: 80208, Stop: 80918, Start Num: 4

Candidate Starts for MiaZeal_156:

(Start: 4 @80208 has 40 MA's), (30, 80430), (32, 80454), (34, 80457), (36, 80466), (46, 80610), (47, 80616), (48, 80625), (49, 80637), (54, 80676), (60, 80754), (61, 80769), (67, 80850),

Gene: Miley16_90 Start: 58042, Stop: 58695, Start Num: 16

Candidate Starts for Miley16_90:

(Start: 16 @58042 has 6 MA's), (23, 58117), (27, 58171), (30, 58201), (38, 58273), (39, 58279), (44, 58351), (45, 58375), (46, 58381), (48, 58396), (49, 58408), (51, 58423), (55, 58468), (60, 58525), (68, 58633), (70, 58663), (72, 58672),

Gene: Minerva_157 Start: 83303, Stop: 84013, Start Num: 4

Candidate Starts for Minerva_157:

(Start: 4 @83303 has 40 MA's), (30, 83525), (32, 83549), (34, 83552), (36, 83561), (43, 83660), (44, 83675), (46, 83705), (48, 83720), (49, 83732), (54, 83771), (60, 83849), (61, 83864), (67, 83945),

Gene: MiniLon_91 Start: 57510, Stop: 58163, Start Num: 17

Candidate Starts for MiniLon_91:

(Start: 17 @57510 has 20 MA's), (23, 57585), (27, 57639), (28, 57642), (30, 57669), (31, 57684), (35, 57705), (38, 57741), (40, 57777), (44, 57819), (46, 57849), (47, 57855), (49, 57876), (50, 57885), (51, 57891), (55, 57936), (56, 57939), (60, 57993), (63, 58038), (64, 58059), (68, 58101), (71, 58137), (72, 58140),

Gene: MiniMac_91 Start: 57505, Stop: 58158, Start Num: 17

Candidate Starts for MiniMac_91:

(Start: 17 @57505 has 20 MA's), (23, 57580), (27, 57634), (28, 57637), (30, 57664), (31, 57679), (35, 57700), (38, 57736), (40, 57772), (44, 57814), (46, 57844), (47, 57850), (49, 57871), (50, 57880), (51, 57886), (55, 57931), (56, 57934), (60, 57988), (63, 58033), (64, 58054), (68, 58096), (71, 58132), (72, 58135),

Gene: MkaliMitinis3_92 Start: 57779, Stop: 58462, Start Num: 9

Candidate Starts for MkaliMitinis3_92:

(Start: 9 @57779 has 12 MA's), (Start: 14 @57803 has 1 MA's), (20, 57848), (23, 57884), (27, 57938), (30, 57968), (38, 58040), (39, 58046), (44, 58118), (45, 58142), (46, 58148), (48, 58163), (49, 58175), (51, 58190), (55, 58235), (60, 58292), (68, 58400), (70, 58430), (72, 58439),

Gene: Moostard_85 Start: 57428, Stop: 58081, Start Num: 17

Candidate Starts for Moostard_85:

(Start: 17 @57428 has 20 MA's), (20, 57467), (23, 57503), (27, 57557), (28, 57560), (30, 57587), (35, 57623), (38, 57659), (44, 57737), (46, 57767), (47, 57773), (49, 57794), (50, 57803), (51, 57809), (55, 57854), (56, 57857), (60, 57911), (63, 57956), (64, 57977), (68, 58019), (71, 58055), (72, 58058),

Gene: MsGreen_87 Start: 57326, Stop: 57976, Start Num: 17

Candidate Starts for MsGreen_87:

(Start: 17 @57326 has 20 MA's), (20, 57362), (23, 57398), (27, 57452), (28, 57455), (30, 57482), (35, 57518), (38, 57554), (44, 57632), (46, 57662), (47, 57668), (49, 57689), (50, 57698), (51, 57704), (55, 57749), (56, 57752), (60, 57806), (63, 57851), (64, 57872), (68, 57914), (71, 57950), (72, 57953),

Gene: Nebkiss_119 Start: 65215, Stop: 65913, Start Num: 8

Candidate Starts for Nebkiss_119:

(7, 65212), (Start: 8 @65215 has 2 MA's), (13, 65239), (15, 65248), (29, 65404), (30, 65425), (31, 65440), (33, 65449), (34, 65452), (36, 65461), (37, 65479), (41, 65542), (43, 65560), (49, 65632), (51, 65647), (52, 65662), (55, 65692), (58, 65719), (59, 65737), (60, 65749), (62, 65767), (63, 65794), (69, 65881), (72, 65896),

Gene: Nekros_155 Start: 83601, Stop: 84311, Start Num: 4

Candidate Starts for Nekros_155:

(Start: 4 @83601 has 40 MA's), (30, 83823), (32, 83847), (34, 83850), (36, 83859), (46, 84003), (47, 84009), (48, 84018), (49, 84030), (53, 84066), (54, 84069), (61, 84162), (67, 84243), (69, 84279),

Gene: Netyap_89 Start: 57662, Stop: 58333, Start Num: 11

Candidate Starts for Netyap_89:

(Start: 11 @57662 has 4 MA's), (Start: 12 @57665 has 5 MA's), (23, 57755), (27, 57809), (30, 57839), (38, 57911), (39, 57917), (44, 57989), (45, 58013), (46, 58019), (48, 58034), (49, 58046), (51, 58061), (55, 58106), (60, 58163), (68, 58271), (70, 58301), (72, 58310),

Gene: Nicholas_85 Start: 57433, Stop: 58086, Start Num: 17

Candidate Starts for Nicholas_85:

(Start: 17 @57433 has 20 MA's), (20, 57472), (23, 57508), (27, 57562), (28, 57565), (30, 57592), (35, 57628), (38, 57664), (44, 57742), (46, 57772), (47, 57778), (49, 57799), (50, 57808), (51, 57814), (55, 57859), (56, 57862), (60, 57916), (63, 57961), (64, 57982), (68, 58024), (71, 58060), (72, 58063),

Gene: Nicholasp3_90 Start: 57496, Stop: 58179, Start Num: 9

Candidate Starts for Nicholasp3_90:

(Start: 9 @57496 has 12 MA's), (Start: 14 @57520 has 1 MA's), (20, 57565), (23, 57601), (27, 57655), (30, 57685), (38, 57757), (44, 57835), (45, 57859), (46, 57865), (48, 57880), (49, 57892), (51, 57907), (55, 57952), (60, 58009), (68, 58117), (70, 58147), (72, 58156),

Gene: NihilNomen_160 Start: 83326, Stop: 84036, Start Num: 4

Candidate Starts for NihilNomen_160:

(Start: 4 @83326 has 40 MA's), (30, 83548), (32, 83572), (34, 83575), (36, 83584), (43, 83683), (44, 83698), (46, 83728), (47, 83734), (48, 83743), (49, 83755), (54, 83794), (61, 83887), (67, 83968), (69, 84004),

Gene: Odette_162 Start: 85622, Stop: 86332, Start Num: 4

Candidate Starts for Odette_162:

(Start: 4 @85622 has 40 MA's), (30, 85844), (32, 85868), (34, 85871), (36, 85880), (44, 85994), (46, 86024), (47, 86030), (48, 86039), (49, 86051), (53, 86087), (54, 86090), (61, 86183), (65, 86249), (67, 86264), (69, 86300),

Gene: Omega_163 Start: 85097, Stop: 85807, Start Num: 4

Candidate Starts for Omega_163:

(Start: 4 @85097 has 40 MA's), (19, 85172), (30, 85319), (32, 85343), (34, 85346), (36, 85355), (39, 85397), (46, 85499), (48, 85514), (49, 85526), (54, 85565), (60, 85643), (61, 85658), (67, 85739),

Gene: Optimus_150 Start: 82593, Stop: 83303, Start Num: 4

Candidate Starts for Optimus_150:

(Start: 4 @82593 has 40 MA's), (30, 82815), (32, 82839), (34, 82842), (36, 82851), (46, 82995), (47, 83001), (48, 83010), (49, 83022), (54, 83061), (60, 83139), (61, 83154), (67, 83235),

Gene: PYPDinur_91 Start: 57773, Stop: 58462, Start Num: 9

Candidate Starts for PYPDinur_91:

(Start: 9 @57773 has 12 MA's), (23, 57881), (26, 57920), (27, 57935), (28, 57938), (31, 57980), (35, 58001), (38, 58037), (45, 58139), (47, 58151), (48, 58160), (49, 58172), (50, 58181), (51, 58187), (55, 58232), (57, 58244), (59, 58277), (60, 58289), (72, 58436),

Gene: Phoebus_159 Start: 87013, Stop: 87723, Start Num: 4

Candidate Starts for Phoebus_159:

(Start: 4 @87013 has 40 MA's), (30, 87235), (32, 87259), (34, 87262), (36, 87271), (43, 87370), (44, 87385), (46, 87415), (47, 87421), (48, 87430), (49, 87442), (54, 87481), (61, 87574), (67, 87655), (69, 87691),

Gene: Porcelain_153 Start: 80007, Stop: 80717, Start Num: 4

Candidate Starts for Porcelain_153:

(Start: 4 @80007 has 40 MA's), (30, 80229), (32, 80253), (34, 80256), (36, 80265), (46, 80409), (47, 80415), (48, 80424), (49, 80436), (54, 80475), (60, 80553), (61, 80568), (67, 80649),

Gene: Pound_150 Start: 82016, Stop: 82726, Start Num: 4

Candidate Starts for Pound_150:

(Start: 4 @82016 has 40 MA's), (19, 82091), (30, 82238), (34, 82265), (36, 82274), (39, 82316), (44, 82388), (46, 82418), (48, 82433), (49, 82445), (54, 82484), (61, 82577), (65, 82643), (67, 82658), (69, 82694),

Gene: Quby_91 Start: 57008, Stop: 57697, Start Num: 9

Candidate Starts for Quby_91:

(Start: 9 @57008 has 12 MA's), (23, 57116), (26, 57155), (27, 57170), (28, 57173), (31, 57215), (35, 57236), (38, 57272), (45, 57374), (47, 57386), (48, 57395), (49, 57407), (50, 57416), (51, 57422), (55, 57467), (57, 57479), (59, 57512), (60, 57524), (72, 57671),

Gene: Rearden_151 Start: 80837, Stop: 81547, Start Num: 4

Candidate Starts for Rearden_151:

(Start: 4 @80837 has 40 MA's), (30, 81059), (32, 81083), (34, 81086), (36, 81095), (46, 81239), (47, 81245), (48, 81254), (49, 81266), (53, 81302), (54, 81305), (61, 81398), (67, 81479), (69, 81515),

Gene: Red305_88 Start: 57327, Stop: 57977, Start Num: 17

Candidate Starts for Red305_88:

(Start: 17 @57327 has 20 MA's), (20, 57363), (23, 57399), (27, 57453), (28, 57456), (30, 57483), (35, 57519), (38, 57555), (44, 57633), (46, 57663), (47, 57669), (49, 57690), (50, 57699), (51, 57705), (55, 57750), (56, 57753), (60, 57807), (63, 57852), (64, 57873), (68, 57915), (71, 57951), (72, 57954),

Gene: Redno2_152 Start: 81126, Stop: 81836, Start Num: 4

Candidate Starts for Redno2_152:

(Start: 4 @81126 has 40 MA's), (30, 81348), (32, 81372), (34, 81375), (36, 81384), (43, 81483), (44, 81498), (46, 81528), (47, 81534), (48, 81543), (49, 81555), (54, 81594), (61, 81687), (67, 81768), (69,

81804),

Gene: Rumpelstiltskin_86 Start: 57289, Stop: 57972, Start Num: 9

Candidate Starts for Rumpelstiltskin_86:

(Start: 9 @57289 has 12 MA's), (Start: 14 @57313 has 1 MA's), (20, 57358), (23, 57394), (27, 57448), (30, 57478), (38, 57550), (44, 57628), (45, 57652), (46, 57658), (48, 57673), (49, 57685), (51, 57700), (55, 57745), (60, 57802), (68, 57910), (70, 57940), (72, 57949),

Gene: Samty_86 Start: 57421, Stop: 58074, Start Num: 17

Candidate Starts for Samty_86:

(Start: 17 @57421 has 20 MA's), (20, 57460), (23, 57496), (27, 57550), (28, 57553), (30, 57580), (35, 57616), (38, 57652), (44, 57730), (46, 57760), (47, 57766), (49, 57787), (50, 57796), (51, 57802), (55, 57847), (56, 57850), (60, 57904), (63, 57949), (64, 57970), (68, 58012), (71, 58048), (72, 58051),

Gene: Sarshaun_91 Start: 58437, Stop: 59090, Start Num: 16

Candidate Starts for Sarshaun_91:

(Start: 16 @58437 has 6 MA's), (23, 58512), (27, 58566), (30, 58596), (38, 58668), (39, 58674), (44, 58746), (45, 58770), (46, 58776), (48, 58791), (49, 58803), (51, 58818), (55, 58863), (60, 58920), (68, 59028), (70, 59058), (72, 59067),

Gene: Schatzie_153 Start: 83676, Stop: 84386, Start Num: 4

Candidate Starts for Schatzie_153:

(Start: 4 @83676 has 40 MA's), (30, 83898), (32, 83922), (34, 83925), (36, 83934), (44, 84048), (46, 84078), (47, 84084), (48, 84093), (49, 84105), (53, 84141), (54, 84144), (61, 84237), (65, 84303), (67, 84318), (69, 84354),

Gene: Shaboozey_154 Start: 80611, Stop: 81321, Start Num: 4

Candidate Starts for Shaboozey_154:

(Start: 4 @80611 has 40 MA's), (30, 80833), (32, 80857), (34, 80860), (36, 80869), (46, 81013), (47, 81019), (48, 81028), (49, 81040), (53, 81076), (54, 81079), (61, 81172), (65, 81238), (67, 81253), (69, 81289),

Gene: Sheng711_92 Start: 57249, Stop: 57938, Start Num: 9

Candidate Starts for Sheng711_92:

(Start: 9 @57249 has 12 MA's), (23, 57357), (26, 57396), (27, 57411), (28, 57414), (31, 57456), (35, 57477), (38, 57513), (45, 57615), (47, 57627), (48, 57636), (49, 57648), (50, 57657), (51, 57663), (55, 57708), (57, 57720), (59, 57753), (60, 57765), (72, 57912),

Gene: Snenia_86 Start: 57328, Stop: 57978, Start Num: 17

Candidate Starts for Snenia_86:

(Start: 17 @57328 has 20 MA's), (20, 57364), (23, 57400), (27, 57454), (28, 57457), (30, 57484), (35, 57520), (38, 57556), (44, 57634), (46, 57664), (47, 57670), (49, 57691), (50, 57700), (51, 57706), (55, 57751), (56, 57754), (60, 57808), (63, 57853), (64, 57874), (68, 57916), (71, 57952), (72, 57955),

Gene: SoJulia_92 Start: 59160, Stop: 59855, Start Num: 6

Candidate Starts for SoJulia_92:

(5, 59157), (6, 59160), (Start: 9 @59169 has 12 MA's), (Start: 10 @59175 has 1 MA's), (Start: 16 @59199 has 6 MA's), (18, 59208), (23, 59277), (27, 59331), (30, 59361), (38, 59433), (39, 59439), (44, 59511), (45, 59535), (46, 59541), (48, 59556), (49, 59568), (51, 59583), (55, 59628), (60, 59685), (68, 59793), (70, 59823), (72, 59832),

Gene: Soap141_90 Start: 58437, Stop: 59090, Start Num: 16

Candidate Starts for Soap141_90:

(Start: 16 @58437 has 6 MA's), (23, 58512), (27, 58566), (30, 58596), (38, 58668), (39, 58674), (44, 58746), (45, 58770), (46, 58776), (48, 58791), (49, 58803), (51, 58818), (55, 58863), (60, 58920), (68, 59028), (70, 59058), (72, 59067),

Gene: Squint_149 Start: 79996, Stop: 80706, Start Num: 4

Candidate Starts for Squint_149:

(Start: 4 @79996 has 40 MA's), (30, 80218), (32, 80242), (34, 80245), (36, 80254), (46, 80398), (47, 80404), (48, 80413), (49, 80425), (53, 80461), (54, 80464), (61, 80557), (67, 80638), (69, 80674),

Gene: Superphikiman_154 Start: 80469, Stop: 81179, Start Num: 4

Candidate Starts for Superphikiman_154:

(Start: 4 @80469 has 40 MA's), (30, 80691), (32, 80715), (34, 80718), (36, 80727), (44, 80841), (46, 80871), (47, 80877), (48, 80886), (49, 80898), (53, 80934), (54, 80937), (59, 81003), (61, 81030), (67, 81111), (69, 81147),

Gene: Thibault_140 Start: 80399, Stop: 81109, Start Num: 4

Candidate Starts for Thibault_140:

(Start: 4 @80399 has 40 MA's), (30, 80621), (32, 80645), (34, 80648), (36, 80657), (39, 80699), (44, 80771), (46, 80801), (48, 80816), (49, 80828), (54, 80867), (60, 80945), (61, 80960), (67, 81041),

Gene: ThreeRngTarjay_154 Start: 84534, Stop: 85244, Start Num: 4

Candidate Starts for ThreeRngTarjay_154:

(1, 84471), (2, 84486), (Start: 4 @84534 has 40 MA's), (19, 84609), (30, 84756), (32, 84780), (34, 84783), (36, 84792), (46, 84936), (47, 84942), (48, 84951), (49, 84963), (53, 84999), (54, 85002), (61, 85095), (67, 85176), (69, 85212),

Gene: Tourach_90 Start: 58204, Stop: 58875, Start Num: 12

Candidate Starts for Tourach_90:

(Start: 11 @58201 has 4 MA's), (Start: 12 @58204 has 5 MA's), (23, 58294), (27, 58348), (30, 58378), (38, 58450), (44, 58528), (45, 58552), (46, 58558), (49, 58585), (50, 58594), (55, 58645), (60, 58702), (63, 58747), (68, 58810), (72, 58849), (73, 58867),

Gene: TriFive_87 Start: 57440, Stop: 58090, Start Num: 17

Candidate Starts for TriFive_87:

(Start: 17 @57440 has 20 MA's), (20, 57476), (23, 57512), (27, 57566), (28, 57569), (30, 57596), (35, 57632), (38, 57668), (44, 57746), (46, 57776), (47, 57782), (49, 57803), (50, 57812), (51, 57818), (55, 57863), (56, 57866), (60, 57920), (63, 57965), (64, 57986), (68, 58028), (71, 58064), (72, 58067),

Gene: Underpass_80 Start: 52532, Stop: 53215, Start Num: 9

Candidate Starts for Underpass_80:

(Start: 9 @52532 has 12 MA's), (Start: 14 @52556 has 1 MA's), (20, 52601), (23, 52637), (27, 52691), (30, 52721), (38, 52793), (44, 52871), (45, 52895), (46, 52901), (48, 52916), (49, 52928), (51, 52943), (55, 52988), (60, 53045), (68, 53153), (70, 53183), (72, 53192),

Gene: Vetric_88 Start: 57273, Stop: 57953, Start Num: 10

Candidate Starts for Vetric_88:

(5, 57255), (6, 57258), (Start: 9 @57267 has 12 MA's), (Start: 10 @57273 has 1 MA's), (Start: 16 @57297 has 6 MA's), (18, 57306), (23, 57375), (27, 57429), (30, 57459), (38, 57531), (39, 57537), (44, 57609), (45, 57633), (46, 57639), (48, 57654), (49, 57666), (51, 57681), (55, 57726), (60, 57783), (68, 57891), (70, 57921), (72, 57930),

Gene: Wanda_157 Start: 81775, Stop: 82485, Start Num: 4

Candidate Starts for Wanda_157:

(Start: 4 @81775 has 40 MA's), (30, 81997), (32, 82021), (34, 82024), (36, 82033), (43, 82132), (44, 82147), (46, 82177), (48, 82192), (49, 82204), (54, 82243), (60, 82321), (61, 82336), (67, 82417),

Gene: Whirlwind_88 Start: 57664, Stop: 58317, Start Num: 17

Candidate Starts for Whirlwind_88:

(Start: 17 @57664 has 20 MA's), (23, 57739), (27, 57793), (28, 57796), (30, 57823), (38, 57895), (44, 57973), (46, 58003), (47, 58009), (49, 58030), (50, 58039), (51, 58045), (55, 58090), (56, 58093), (60, 58147), (63, 58192), (64, 58213), (68, 58255), (71, 58291), (72, 58294),

Gene: Wigglewigggle_90 Start: 57572, Stop: 58255, Start Num: 9

Candidate Starts for Wigglewigggle_90:

(Start: 9 @57572 has 12 MA's), (Start: 14 @57596 has 1 MA's), (20, 57641), (23, 57677), (27, 57731), (30, 57761), (38, 57833), (39, 57839), (44, 57911), (45, 57935), (46, 57941), (48, 57956), (49, 57968), (51, 57983), (55, 58028), (60, 58085), (68, 58193), (70, 58223), (72, 58232),

Gene: Wilder_91 Start: 57414, Stop: 58097, Start Num: 9

Candidate Starts for Wilder_91:

(Start: 9 @57414 has 12 MA's), (Start: 14 @57438 has 1 MA's), (20, 57483), (23, 57519), (27, 57573), (30, 57603), (38, 57675), (39, 57681), (44, 57753), (45, 57777), (46, 57783), (48, 57798), (49, 57810), (51, 57825), (55, 57870), (60, 57927), (68, 58035), (70, 58065), (72, 58074),

Gene: Winky_90 Start: 58042, Stop: 58695, Start Num: 16

Candidate Starts for Winky_90:

(Start: 16 @58042 has 6 MA's), (23, 58117), (27, 58171), (30, 58201), (38, 58273), (39, 58279), (44, 58351), (45, 58375), (46, 58381), (48, 58396), (49, 58408), (51, 58423), (55, 58468), (60, 58525), (68, 58633), (70, 58663), (72, 58672),

Gene: Yeet_151 Start: 83070, Stop: 83780, Start Num: 4

Candidate Starts for Yeet_151:

(Start: 4 @83070 has 40 MA's), (30, 83292), (32, 83316), (34, 83319), (36, 83328), (43, 83427), (44, 83442), (46, 83472), (47, 83478), (48, 83487), (49, 83499), (54, 83538), (61, 83631), (67, 83712), (69, 83748),

Gene: Zakai_91 Start: 58069, Stop: 58740, Start Num: 11

Candidate Starts for Zakai_91:

(Start: 11 @58069 has 4 MA's), (Start: 12 @58072 has 5 MA's), (23, 58162), (27, 58216), (30, 58246), (38, 58318), (39, 58324), (44, 58396), (45, 58420), (46, 58426), (48, 58441), (49, 58453), (51, 58468), (55, 58513), (60, 58570), (68, 58678), (70, 58708), (72, 58717),

Gene: Zelink_152 Start: 83501, Stop: 84208, Start Num: 4

Candidate Starts for Zelink_152:

(Start: 4 @83501 has 40 MA's), (21, 83606), (25, 83663), (30, 83723), (36, 83756), (42, 83843), (44, 83870), (46, 83900), (48, 83915), (49, 83927), (54, 83966), (60, 84044), (61, 84059), (67, 84140),

Gene: ZhongYanYuan_87 Start: 57476, Stop: 58129, Start Num: 17

Candidate Starts for ZhongYanYuan_87:

(Start: 17 @57476 has 20 MA's), (23, 57548), (27, 57602), (30, 57632), (38, 57704), (39, 57710), (41, 57749), (44, 57782), (45, 57806), (46, 57812), (48, 57827), (49, 57839), (50, 57848), (55, 57899), (60, 57956), (68, 58064), (72, 58103), (73, 58121),