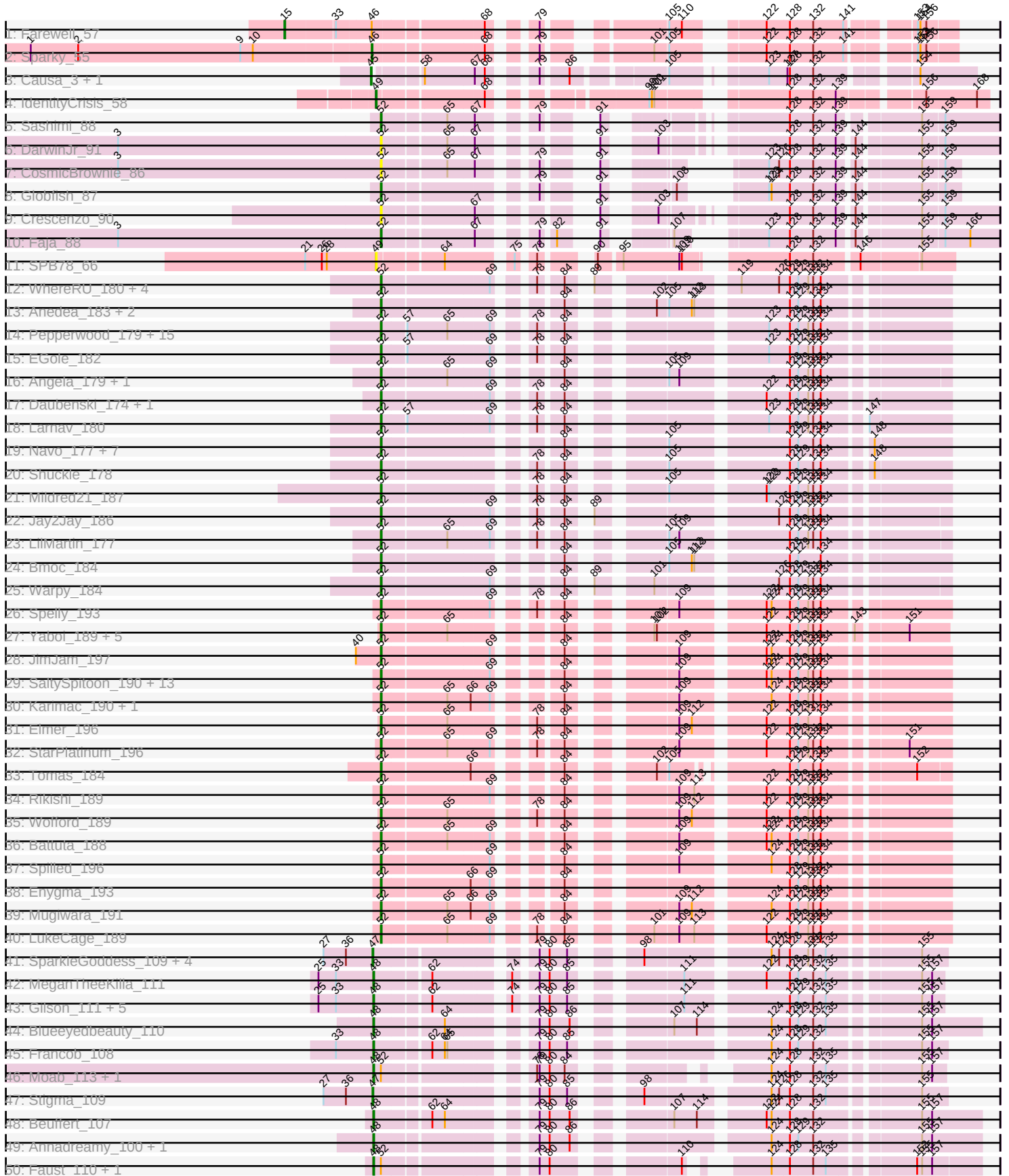
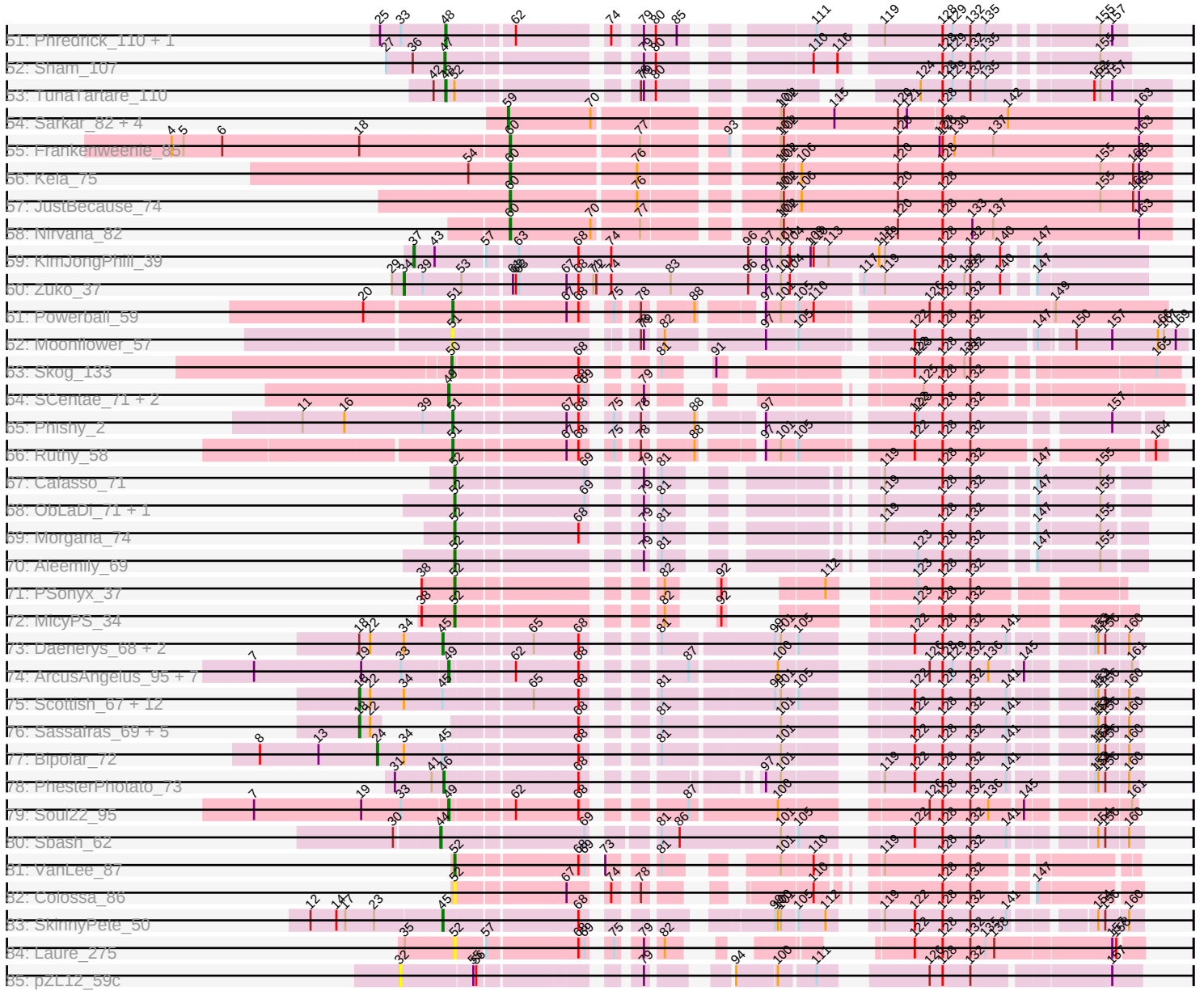


Pham 275934



Pham 275934



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 275934 Report

This analysis was run 02/07/26 on database version 634.

Pham number 275934 has 181 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Farewell_57
- Track 2 : Sparky_55
- Track 3 : Causa_3, StAugustine_3
- Track 4 : IdentityCrisis_58
- Track 5 : Sashimi_88
- Track 6 : DarwinJr_91
- Track 7 : CosmicBrownie_86
- Track 8 : Globfish_87
- Track 9 : Crescenzo_90
- Track 10 : Faja_88
- Track 11 : SPB78_66
- Track 12 : WhereRU_180, Evy_171, Targaryen_179, Davielle_181, Persimmon_181
- Track 13 : Anedea_183, Riptide_176, LilSaint_186
- Track 14 : Pepperwood_179, Leo04_182, Cross_180, Coogler_179, Cursive_179, Deutsch_179, Samisti12_182, BlueOtter_179, Watermoore_179, Sushi23_181, Peebs_178, Tribute_178, Scheme_183, Lululemon_179, PacManQ_179, HangryHippo_179
- Track 15 : EGole_182
- Track 16 : Angela_179, MulchMansion_178
- Track 17 : Daubenski_174, Cadmus_175
- Track 18 : Larnav_180
- Track 19 : Navo_177, Braelyn_179, Bartholomune_179, Squillium_181, PinkiePie_178, NootNoot_177, Paradiddles_174, Liandry_179
- Track 20 : Shuckle_178
- Track 21 : Mildred21_187
- Track 22 : Jay2Jay_186
- Track 23 : LilMartin_177
- Track 24 : Bmoc_184
- Track 25 : Warpy_184
- Track 26 : Spelly_193
- Track 27 : Yaboi_189, Sollertia_186, Stanimal_185, BoomerJR_185, AngryGiraffe_184, Genie2_185
- Track 28 : JimJam_197
- Track 29 : SaltySpittoon_190, Bordeaux_189, Amabiko_194, Jollison_187, Quarant19_190, KentuckyRacer_195, IchabodCrane_186, Birchlyn_189, MindFlayer_183, PumpkinSpice_192, AcciDwight_198, Wipeout_182, Starbow_188, Gibbi_197

- Track 30 : Karimac_190, Brizzy_190
- Track 31 : Elmer_196
- Track 32 : StarPlatinum_196
- Track 33 : Tomas_184
- Track 34 : Rikishi_189
- Track 35 : Wofford_189
- Track 36 : Battuta_188
- Track 37 : Spilled_196
- Track 38 : Enygma_193
- Track 39 : Mugiwara_191
- Track 40 : LukeCage_189
- Track 41 : SparkleGoddess_109, Belfort_111, Comrade_108, Karp_107, Westy_113
- Track 42 : MeganTheeKilla_111
- Track 43 : Gilson_111, Maupel_111, Emma1919_112, DeluluLabubu_113, Jada_112, Forrest_116
- Track 44 : Blueeyedbeauty_110
- Track 45 : Francob_108
- Track 46 : Moab_113, Patelgo_114
- Track 47 : Stigma_109
- Track 48 : Beuffert_107
- Track 49 : Annadreamy_100, Limpid_109
- Track 50 : Faust_110, SeresaTree_110
- Track 51 : Phredrick_110, Kenrey_114
- Track 52 : Sham_107
- Track 53 : TunaTartare_110
- Track 54 : Sarkar_82, EhyElimayoE_78, Quantum_77, Kradal_78, Satis_78
- Track 55 : Frankenweenie_85
- Track 56 : Kela_75
- Track 57 : JustBecause_74
- Track 58 : Nirvana_82
- Track 59 : KimJongPhill_39
- Track 60 : Zuko_37
- Track 61 : Powerball_59
- Track 62 : Moonflower_57
- Track 63 : Skog_133
- Track 64 : SCentae_71, CherryTomatoes_73, Pupper_72
- Track 65 : Phishy_2
- Track 66 : Ruthy_58
- Track 67 : Cafasso_71
- Track 68 : ObLaDi_71, ModicumRichard_71
- Track 69 : Morgana_74
- Track 70 : Aleemily_69
- Track 71 : PSonyx_37
- Track 72 : MicyPS_34
- Track 73 : Daenerys_68, Fruitloop_65, Deb65_63
- Track 74 : ArcusAngelus_95, Nitze_88, Che8_101, CheesePuff_99, Rita_95, MinionDave_93, OwlsT2W_93, Chevrolet_99
- Track 75 : Scottish_67, SiSi_68, JoeyJr_69, Nimbo_62, PHappiness_69, KingMidas_68, Geralt_63, Leperchaun_66, OldBen_66, Polka14_72, Empress_67, DaddyRickover_70, RitaG_69
- Track 76 : Sassafras_69, Doomphist_71, Poenanya_71, Inventum_66, RedBird_69, Dorothy_69
- Track 77 : Bipolar_72

- Track 78 : PhesterPhotato_73
- Track 79 : Soul22_95
- Track 80 : Sbash_62
- Track 81 : VanLee_87
- Track 82 : Colossa_86
- Track 83 : SkinnyPete_50
- Track 84 : Laure_275
- Track 85 : pZL12_59c

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

The start number called the most often in the published annotations is 52, it was called in 85 of the 164 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AcciDwight_198, Aleemily_69, Amabiko_194, Anedea_183, Angela_179, AngryGiraffe_184, Bartholomune_179, Battuta_188, Birchlyn_189, BlueOtter_179, Bmoc_184, BoomerJR_185, Bordeaux_189, Braelyn_179, Brizzy_190, Cadmus_175, Cafasso_71, Colossa_86, Coogler_179, CosmicBrownie_86, Crescenzo_90, Cross_180, Cursive_179, DarwinJr_91, Daubenski_174, Davielle_181, EGole_182, Elmer_196, Enygma_193, Evy_171, Faja_88, Genie2_185, Gibbi_197, Globfish_87, HangryHippo_179, IchabodCrane_186, Jay2Jay_186, JimJam_197, Jollison_187, Karimac_190, KentuckyRacer_195, Larnav_180, Laure_275, Leo04_182, Liandry_179, LilMartin_177, LilSaint_186, LukeCage_189, Lululemon_179, MicyPS_34, Mildred21_187, MindFlayer_183, ModicumRichard_71, Morgana_74, Mugiwara_191, MulchMansion_178, Navo_177, NootNoot_177, ObLaDi_71, PSonyx_37, PacManQ_179, Paradiddles_174, Peebs_178, Pepperwood_179, Persimmon_181, PinkiePie_178, PumpkinSpice_192, Quarant19_190, Rikishi_189, Riptide_176, SaltySpitoon_190, Samisti12_182, Sashimi_88, Scheme_183, Shuckle_178, Sollertia_186, Spelly_193, Spilled_196, Squillum_181, Stanimal_185, StarPlatinum_196, Starbow_188, Sushi23_181, Targaryen_179, Teutsch_179, Tomas_184, Tribute_178, VanLee_87, Warpy_184, Watermoore_179, WhereRU_180, Wipeout_182, Wofford_189, Yaboi_189,

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

- Faust_110, Moab_113, Patelgo_114, SeresaTree_110, TunaTartare_110,

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

- Annadreamy_100, ArcusAngelus_95, Belfort_111, Beuffert_107, Bipolar_72, Blueeyedbeauty_110, Causa_3, Che8_101, Cheesepuff_99, CherryTomatoes_73, Chevrolet_99, Comrade_108, DaddyRickover_70, Daenerys_68, Deb65_63, DeluluLabubu_113, Doomphist_71, Dorothy_69, EhyElimayoE_78, Emma1919_112, Empress_67, Farewell_57, Forrest_116, Francob_108, Frankenweenie_85, Fruitloop_65, Geralt_63, Gilson_111, IdentityCrisis_58, Inventum_66, Jada_112, JoeyJr_69, JustBecause_74, Karp_107, Kela_75, Kenrey_114, KimJongPhill_39, KingMidas_68, Kradal_78, Leperchaun_66, Limpid_109, Maupel_111, MeganTheeKilla_111, MinionDave_93, Moonflower_57, Nimbo_62, Nirvana_82, Nitzel_88, OldBen_66, OwlST2W_93, PHappiness_69, PhesterPhotato_73, Phishy_2, Phredrick_110, Poenanya_71, Polka14_72, Powerball_59, Pupper_72, Quantum_77, RedBird_69, RitaG_69, Rita_95, Ruthy_58, SCentae_71, SPB78_66, Sarkar_82,

Sassafras_69, Satis_78, Sbash_62, Scottish_67, Sham_107, SiSi_68, SkinnyPete_50, Skog_133, Soul22_95, SparkleGoddess_109, Sparky_55, StAugustine_3, Stigma_109, Westy_113, Zuko_37, pZL12_59c,

Summary by start number:

Start 15:

- Found in 1 of 181 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Farewell_57 (AF),

Start 18:

- Found in 23 of 181 (12.7%) of genes in pham
- Manual Annotations of this start: 18 of 164
- Called 82.6% of time when present
- Phage (with cluster) where this start called: DaddyRickover_70 (F1), Doomphist_71 (F1), Dorothy_69 (F1), Empress_67 (F1), Geralt_63 (F1), Inventum_66 (F1), JoeyJr_69 (F1), KingMidas_68 (F1), Leperchaun_66 (F1), Nimbo_62 (F1), OldBen_66 (F1), PHappiness_69 (F1), Poenanya_71 (F1), Polka14_72 (F1), RedBird_69 (F1), RitaG_69 (F1), Sassafras_69 (F1), Scottish_67 (F1), SiSi_68 (F1),

Start 24:

- Found in 1 of 181 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipolar_72 (F1),

Start 32:

- Found in 1 of 181 (0.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: pZL12_59c (singleton),

Start 34:

- Found in 18 of 181 (9.9%) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Zuko_37 (BR),

Start 37:

- Found in 1 of 181 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KimJongPhill_39 (BR),

Start 44:

- Found in 1 of 181 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sbash_62 (I2),

Start 45:

- Found in 20 of 181 (11.0%) of genes in pham
- Manual Annotations of this start: 6 of 164
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Causa_3 (AI), Daenerys_68 (F1), Deb65_63 (F1), Fruitloop_65 (F1), SkinnyPete_50 (N), StAugustine_3 (AI),

Start 46:

- Found in 3 of 181 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 164
- Called 66.7% of time when present
- Phage (with cluster) where this start called: PhesterPhotato_73 (F1), Sparky_55 (AF),

Start 47:

- Found in 7 of 181 (3.9%) of genes in pham
- Manual Annotations of this start: 7 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belfort_111 (BK1), Comrade_108 (BK1), Karp_107 (BK1), Sham_107 (BK1), SparkleGoddess_109 (BK1), Stigma_109 (BK1), Westy_113 (BK1),

Start 48:

- Found in 19 of 181 (10.5%) of genes in pham
- Manual Annotations of this start: 16 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annadreamy_100 (BK1), Beuffert_107 (BK1), Blueeyedbeauty_110 (BK1), DeluluLabubu_113 (BK1), Emma1919_112 (BK1), Faust_110 (BK1), Forrest_116 (BK1), Francob_108 (BK1), Gilson_111 (BK1), Jada_112 (BK1), Kenrey_114 (BK1), Limpid_109 (BK1), Maupel_111 (BK1), MeganTheeKilla_111 (BK1), Moab_113 (BK1), Patelgo_114 (BK1), Phredrick_110 (BK1), SeresaTree_110 (BK1), TunaTartare_110 (BK1),

Start 49:

- Found in 14 of 181 (7.7%) of genes in pham
- Manual Annotations of this start: 13 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArcusAngelus_95 (F1), Che8_101 (F1), Cheesepuff_99 (F1), CherryTomatoes_73 (DO), Chevrolet_99 (F1), IdentityCrisis_58 (AJ), MinionDave_93 (F1), Nitzel_88 (F1), OwlsT2W_93 (F1), Pupper_72 (DO), Rita_95 (F1), SCentae_71 (DO), SPB78_66 (BA), Soul22_95 (F2),

Start 50:

- Found in 1 of 181 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Skog_133 (DO),

Start 51:

- Found in 4 of 181 (2.2%) of genes in pham
- Manual Annotations of this start: 3 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Moonflower_57 (DB), Phishy_2 (DT), Powerball_59 (CZ4), Ruthy_58 (DW),

Start 52:

- Found in 99 of 181 (54.7%) of genes in pham
- Manual Annotations of this start: 85 of 164
- Called 94.9% of time when present
- Phage (with cluster) where this start called: AcciDwight_198 (BE2), Aleemily_69 (DZ), Amabiko_194 (BE2), Anedea_183 (BE1), Angela_179 (BE1), AngryGiraffe_184 (BE2), Bartholomune_179 (BE1), Battuta_188 (BE2), Birchlyn_189 (BE2), BlueOtter_179 (BE1), Bmoc_184 (BE1), BoomerJR_185 (BE2), Bordeaux_189 (BE2), Braelyn_179 (BE1), Brizzy_190 (BE2), Cadmus_175 (BE1), Cafasso_71 (DZ), Colossa_86 (KA), Coogler_179 (BE1), CosmicBrownie_86 (AY), Crescenzo_90 (AY), Cross_180 (BE1), Cursive_179 (BE1), DarwinJr_91 (AY), Daubenski_174 (BE1), Davielle_181 (BE1), EGole_182 (BE1), Elmer_196 (BE2), Enygma_193 (BE2), Evy_171 (BE1), Faja_88 (AY), Genie2_185 (BE2), Gibbi_197 (BE2), Globfish_87 (AY), HangryHippo_179 (BE1), IchabodCrane_186 (BE2), Jay2Jay_186 (BE1), JimJam_197 (BE2), Jollison_187 (BE2), Karimac_190 (BE2), KentuckyRacer_195 (BE2), Larnav_180 (BE1), Laure_275 (UNK), Leo04_182 (BE1), Liandry_179 (BE1), LilMartin_177 (BE1), LilSaint_186 (BE1), LukeCage_189 (BE2), Lululemon_179 (BE1), MicyPS_34 (EQ), Mildred21_187 (BE1), MindFlayer_183 (BE2), ModicumRichard_71 (DZ), Morgana_74 (DZ), Mugiwara_191 (BE2), MulchMansion_178 (BE1), Navo_177 (BE1), NootNoot_177 (BE1), ObLaDi_71 (DZ), PSonyx_37 (EQ), PacManQ_179 (BE1), Paradiddles_174 (BE1), Peebs_178 (BE1), Pepperwood_179 (BE1), Persimmon_181 (BE1), PinkiePie_178 (BE1), PumpkinSpice_192 (BE2), Quarant19_190 (BE2), Rikishi_189 (BE2), Riptide_176 (BE1), SaltySpittoon_190 (BE2), Samisti12_182 (BE1), Sashimi_88 (AY), Scheme_183 (BE1), Shuckle_178 (BE1), Sollertia_186 (BE2), Spelly_193 (BE2), Spilled_196 (BE2), Squillium_181 (BE1), Stanimal_185 (BE2), StarPlatinum_196 (BE2), Starbow_188 (BE2), Sushi23_181 (BE1), Targaryen_179 (BE1), Deutsch_179 (BE1), Tomas_184 (BE2), Tribute_178 (BE1), VanLee_87 (KA), Warpy_184 (BE1), Watermoore_179 (BE1), WhereRU_180 (BE1), Wipeout_182 (BE2), Wofford_189 (BE2), Yaboi_189 (BE2),

Start 59:

- Found in 5 of 181 (2.8%) of genes in pham
- Manual Annotations of this start: 4 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EhyElimayoE_78 (BM), Kradal_78 (BM), Quantum_77 (BM), Sarkar_82 (BM), Satis_78 (BM),

Start 60:

- Found in 4 of 181 (2.2%) of genes in pham
- Manual Annotations of this start: 4 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Frankenweenie_85 (BM), JustBecause_74 (BM), Kela_75 (BM), Nirvana_82 (BM),

Summary by clusters:

There are 24 clusters represented in this pham: DO, singleton, BA, BM, DB, CZ4, DZ, BR, DW, DT, I2, AF, AI, AJ, KA, N, BK1, AY, UNK, EQ, F1, F2, BE2, BE1,

Info for manual annotations of cluster AF:

- Start number 15 was manually annotated 1 time for cluster AF.

- Start number 46 was manually annotated 1 time for cluster AF.

Info for manual annotations of cluster AI:

- Start number 45 was manually annotated 2 times for cluster AI.

Info for manual annotations of cluster AJ:

- Start number 49 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster AY:

- Start number 52 was manually annotated 3 times for cluster AY.

Info for manual annotations of cluster BE1:

- Start number 52 was manually annotated 43 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 52 was manually annotated 32 times for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 47 was manually annotated 7 times for cluster BK1.
- Start number 48 was manually annotated 16 times for cluster BK1.

Info for manual annotations of cluster BM:

- Start number 59 was manually annotated 4 times for cluster BM.
- Start number 60 was manually annotated 4 times for cluster BM.

Info for manual annotations of cluster BR:

- Start number 34 was manually annotated 1 time for cluster BR.
- Start number 37 was manually annotated 1 time for cluster BR.

Info for manual annotations of cluster CZ4:

- Start number 51 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster DO:

- Start number 49 was manually annotated 3 times for cluster DO.
- Start number 50 was manually annotated 1 time for cluster DO.

Info for manual annotations of cluster DT:

- Start number 51 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster DW:

- Start number 51 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster DZ:

- Start number 52 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EQ:

- Start number 52 was manually annotated 2 times for cluster EQ.

Info for manual annotations of cluster F1:

- Start number 18 was manually annotated 18 times for cluster F1.
- Start number 24 was manually annotated 1 time for cluster F1.

- Start number 45 was manually annotated 3 times for cluster F1.
- Start number 46 was manually annotated 1 time for cluster F1.
- Start number 49 was manually annotated 8 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 49 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster I2:

- Start number 44 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster KA:

- Start number 52 was manually annotated 1 time for cluster KA.

Info for manual annotations of cluster N:

- Start number 45 was manually annotated 1 time for cluster N.

Gene Information:

Gene: AcciDwight_198 Start: 96931, Stop: 97488, Start Num: 52

Candidate Starts for AcciDwight_198:

(Start: 52 @96931 has 85 MA's), (69, 97054), (84, 97108), (109, 97201), (122, 97288), (124, 97294), (128, 97315), (129, 97324), (131, 97336), (132, 97342), (134, 97351),

Gene: Aleemily_69 Start: 45785, Stop: 46318, Start Num: 52

Candidate Starts for Aleemily_69:

(Start: 52 @45785 has 85 MA's), (79, 45932), (81, 45941), (123, 46115), (128, 46139), (132, 46166), (147, 46217), (155, 46277),

Gene: Amabiko_194 Start: 96749, Stop: 97306, Start Num: 52

Candidate Starts for Amabiko_194:

(Start: 52 @96749 has 85 MA's), (69, 96872), (84, 96926), (109, 97019), (122, 97106), (124, 97112), (128, 97133), (129, 97142), (131, 97154), (132, 97160), (134, 97169),

Gene: Anedea_183 Start: 95656, Stop: 96213, Start Num: 52

Candidate Starts for Anedea_183:

(Start: 52 @95656 has 85 MA's), (84, 95833), (102, 95902), (105, 95914), (112, 95941), (113, 95944), (128, 96040), (129, 96049), (132, 96067), (134, 96076),

Gene: Angela_179 Start: 95320, Stop: 95874, Start Num: 52

Candidate Starts for Angela_179:

(Start: 52 @95320 has 85 MA's), (65, 95395), (69, 95443), (84, 95497), (105, 95578), (109, 95590), (128, 95704), (129, 95713), (131, 95725), (132, 95731), (134, 95740),

Gene: AngryGiraffe_184 Start: 95590, Stop: 96144, Start Num: 52

Candidate Starts for AngryGiraffe_184:

(Start: 52 @95590 has 85 MA's), (65, 95665), (84, 95767), (101, 95833), (102, 95836), (122, 95947), (128, 95974), (129, 95983), (131, 95995), (132, 96001), (134, 96010), (143, 96043), (151, 96097),

Gene: Annadreamy_100 Start: 67632, Stop: 68237, Start Num: 48

Candidate Starts for Annadreamy_100:

(Start: 48 @67632 has 16 MA's), (79, 67788), (80, 67800), (86, 67824), (124, 68007), (128, 68028), (129, 68037), (132, 68055), (155, 68166), (157, 68178),

Gene: ArcusAngelus_95 Start: 53408, Stop: 53965, Start Num: 49

Candidate Starts for ArcusAngelus_95:

(7, 53216), (19, 53324), (33, 53363), (Start: 49 @53408 has 13 MA's), (62, 53462), (68, 53522), (87, 53594), (100, 53675), (126, 53789), (128, 53801), (129, 53810), (132, 53828), (136, 53846), (145, 53876), (161, 53960),

Gene: Bartholomune_179 Start: 95153, Stop: 95710, Start Num: 52

Candidate Starts for Bartholomune_179:

(Start: 52 @95153 has 85 MA's), (84, 95330), (105, 95411), (128, 95537), (129, 95546), (132, 95564), (134, 95573), (148, 95621),

Gene: Battuta_188 Start: 96065, Stop: 96622, Start Num: 52

Candidate Starts for Battuta_188:

(Start: 52 @96065 has 85 MA's), (65, 96140), (69, 96188), (84, 96242), (109, 96335), (122, 96422), (124, 96428), (128, 96449), (129, 96458), (131, 96470), (132, 96476), (134, 96485),

Gene: Belfort_111 Start: 73479, Stop: 74042, Start Num: 47

Candidate Starts for Belfort_111:

(27, 73422), (36, 73449), (Start: 47 @73479 has 7 MA's), (79, 73635), (80, 73647), (85, 73668), (98, 73722), (124, 73854), (126, 73863), (128, 73875), (131, 73896), (132, 73902), (135, 73917), (155, 74013),

Gene: Beuffert_107 Start: 72453, Stop: 73058, Start Num: 48

Candidate Starts for Beuffert_107:

(Start: 48 @72453 has 16 MA's), (62, 72513), (64, 72528), (79, 72609), (80, 72621), (86, 72645), (107, 72729), (114, 72756), (122, 72822), (124, 72828), (128, 72849), (132, 72876), (155, 72987), (157, 72999),

Gene: Bipolar_72 Start: 44668, Stop: 45300, Start Num: 24

Candidate Starts for Bipolar_72:

(8, 44554), (13, 44611), (Start: 24 @44668 has 1 MA's), (Start: 34 @44695 has 1 MA's), (Start: 45 @44734 has 6 MA's), (68, 44854), (81, 44899), (101, 45004), (122, 45100), (128, 45127), (132, 45154), (141, 45190), (153, 45256), (154, 45259), (156, 45265), (160, 45286),

Gene: Birchlyn_189 Start: 93997, Stop: 94554, Start Num: 52

Candidate Starts for Birchlyn_189:

(Start: 52 @93997 has 85 MA's), (69, 94120), (84, 94174), (109, 94267), (122, 94354), (124, 94360), (128, 94381), (129, 94390), (131, 94402), (132, 94408), (134, 94417),

Gene: BlueOtter_179 Start: 96373, Stop: 96930, Start Num: 52

Candidate Starts for BlueOtter_179:

(Start: 52 @96373 has 85 MA's), (57, 96400), (65, 96448), (69, 96496), (78, 96526), (84, 96550), (123, 96733), (128, 96757), (129, 96766), (131, 96778), (132, 96784), (134, 96793),

Gene: Blueeyedbeauty_110 Start: 71549, Stop: 72154, Start Num: 48

Candidate Starts for Blueeyedbeauty_110:

(Start: 48 @71549 has 16 MA's), (64, 71624), (79, 71705), (80, 71717), (86, 71741), (107, 71825), (114, 71852), (124, 71924), (128, 71945), (129, 71954), (132, 71972), (135, 71987), (155, 72083), (157, 72095),

Gene: Bmoc_184 Start: 96405, Stop: 96962, Start Num: 52

Candidate Starts for Bmoc_184:

(Start: 52 @96405 has 85 MA's), (84, 96582), (105, 96663), (112, 96690), (113, 96693), (128, 96789), (129, 96798), (134, 96825),

Gene: BoomerJR_185 Start: 96024, Stop: 96578, Start Num: 52

Candidate Starts for BoomerJR_185:

(Start: 52 @96024 has 85 MA's), (65, 96099), (84, 96201), (101, 96267), (102, 96270), (122, 96381), (128, 96408), (129, 96417), (131, 96429), (132, 96435), (134, 96444), (143, 96477), (151, 96531),

Gene: Bordeaux_189 Start: 96647, Stop: 97204, Start Num: 52

Candidate Starts for Bordeaux_189:

(Start: 52 @96647 has 85 MA's), (69, 96770), (84, 96824), (109, 96917), (122, 97004), (124, 97010), (128, 97031), (129, 97040), (131, 97052), (132, 97058), (134, 97067),

Gene: Braelyn_179 Start: 96152, Stop: 96709, Start Num: 52

Candidate Starts for Braelyn_179:

(Start: 52 @96152 has 85 MA's), (84, 96329), (105, 96410), (128, 96536), (129, 96545), (132, 96563), (134, 96572), (148, 96620),

Gene: Brizzy_190 Start: 97193, Stop: 97750, Start Num: 52

Candidate Starts for Brizzy_190:

(Start: 52 @97193 has 85 MA's), (65, 97268), (66, 97295), (69, 97316), (84, 97370), (109, 97463), (124, 97556), (128, 97577), (129, 97586), (131, 97598), (132, 97604), (134, 97613),

Gene: Cadmus_175 Start: 95641, Stop: 96198, Start Num: 52

Candidate Starts for Cadmus_175:

(Start: 52 @95641 has 85 MA's), (69, 95764), (78, 95794), (84, 95818), (122, 95998), (128, 96025), (129, 96034), (131, 96046), (132, 96052), (134, 96061),

Gene: Cafasso_71 Start: 46457, Stop: 46990, Start Num: 52

Candidate Starts for Cafasso_71:

(Start: 52 @46457 has 85 MA's), (69, 46574), (79, 46604), (81, 46613), (119, 46754), (128, 46811), (132, 46838), (147, 46889), (155, 46949),

Gene: Causa_3 Start: 1052, Stop: 1630, Start Num: 45

Candidate Starts for Causa_3:

(Start: 45 @1052 has 6 MA's), (58, 1097), (67, 1154), (68, 1166), (79, 1202), (86, 1229), (105, 1325), (123, 1412), (127, 1433), (128, 1436), (132, 1463), (154, 1565),

Gene: Che8_101 Start: 54031, Stop: 54588, Start Num: 49

Candidate Starts for Che8_101:

(7, 53839), (19, 53947), (33, 53986), (Start: 49 @54031 has 13 MA's), (62, 54085), (68, 54145), (87, 54217), (100, 54298), (126, 54412), (128, 54424), (129, 54433), (132, 54451), (136, 54469), (145, 54499), (161, 54583),

Gene: Cheesepuff_99 Start: 52216, Stop: 52773, Start Num: 49

Candidate Starts for Cheesepuff_99:

(7, 52024), (19, 52132), (33, 52171), (Start: 49 @52216 has 13 MA's), (62, 52270), (68, 52330), (87, 52402), (100, 52483), (126, 52597), (128, 52609), (129, 52618), (132, 52636), (136, 52654), (145, 52684), (161, 52768),

Gene: CherryTomatoes_73 Start: 25264, Stop: 25827, Start Num: 49

Candidate Starts for CherryTomatoes_73:

(Start: 49 @25264 has 13 MA's), (68, 25381), (69, 25387), (79, 25417), (125, 25594), (128, 25612), (132, 25639),

Gene: Chevrolet_99 Start: 53409, Stop: 53966, Start Num: 49

Candidate Starts for Chevrolet_99:

(7, 53217), (19, 53325), (33, 53364), (Start: 49 @53409 has 13 MA's), (62, 53463), (68, 53523), (87, 53595), (100, 53676), (126, 53790), (128, 53802), (129, 53811), (132, 53829), (136, 53847), (145, 53877), (161, 53961),

Gene: Colossa_86 Start: 47469, Stop: 47990, Start Num: 52

Candidate Starts for Colossa_86:

(Start: 52 @47469 has 85 MA's), (67, 47568), (74, 47595), (78, 47613), (110, 47724), (128, 47817), (132, 47844), (147, 47895),

Gene: Comrade_108 Start: 72796, Stop: 73359, Start Num: 47

Candidate Starts for Comrade_108:

(27, 72739), (36, 72766), (Start: 47 @72796 has 7 MA's), (79, 72952), (80, 72964), (85, 72985), (98, 73039), (124, 73171), (126, 73180), (128, 73192), (131, 73213), (132, 73219), (135, 73234), (155, 73330),

Gene: Coogler_179 Start: 97042, Stop: 97599, Start Num: 52

Candidate Starts for Coogler_179:

(Start: 52 @97042 has 85 MA's), (57, 97069), (65, 97117), (69, 97165), (78, 97195), (84, 97219), (123, 97402), (128, 97426), (129, 97435), (131, 97447), (132, 97453), (134, 97462),

Gene: CosmicBrownie_86 Start: 47611, Stop: 48096, Start Num: 52

Candidate Starts for CosmicBrownie_86:

(3, 47296), (Start: 52 @47611 has 85 MA's), (65, 47680), (67, 47710), (79, 47758), (91, 47788), (123, 47893), (126, 47905), (128, 47917), (132, 47944), (139, 47971), (144, 47986), (155, 48055), (159, 48079),

Gene: Crescenzo_90 Start: 50179, Stop: 50736, Start Num: 52

Candidate Starts for Crescenzo_90:

(Start: 52 @50179 has 85 MA's), (67, 50278), (91, 50356), (103, 50395), (128, 50509), (132, 50536), (139, 50563), (144, 50578), (155, 50647), (159, 50671),

Gene: Cross_180 Start: 97018, Stop: 97575, Start Num: 52

Candidate Starts for Cross_180:

(Start: 52 @97018 has 85 MA's), (57, 97045), (65, 97093), (69, 97141), (78, 97171), (84, 97195), (123, 97378), (128, 97402), (129, 97411), (131, 97423), (132, 97429), (134, 97438),

Gene: Cursive_179 Start: 95227, Stop: 95784, Start Num: 52

Candidate Starts for Cursive_179:

(Start: 52 @95227 has 85 MA's), (57, 95254), (65, 95302), (69, 95350), (78, 95380), (84, 95404), (123, 95587), (128, 95611), (129, 95620), (131, 95632), (132, 95638), (134, 95647),

Gene: DaddyRickover_70 Start: 44130, Stop: 44783, Start Num: 18

Candidate Starts for DaddyRickover_70:

(Start: 18 @44130 has 18 MA's), (22, 44139), (Start: 34 @44172 has 1 MA's), (Start: 45 @44211 has 6 MA's), (65, 44289), (68, 44331), (81, 44376), (99, 44481), (101, 44487), (105, 44502), (122, 44583), (128, 44610), (132, 44637), (141, 44673), (153, 44739), (154, 44742), (156, 44748), (160, 44769),

Gene: Daenerys_68 Start: 44330, Stop: 44902, Start Num: 45

Candidate Starts for Daenerys_68:

(Start: 18 @44249 has 18 MA's), (22, 44258), (Start: 34 @44291 has 1 MA's), (Start: 45 @44330 has 6 MA's), (65, 44408), (68, 44450), (81, 44495), (99, 44600), (101, 44606), (105, 44621), (122, 44702), (128, 44729), (132, 44756), (141, 44792), (153, 44858), (154, 44861), (156, 44867), (160, 44888),

Gene: DarwinJr_91 Start: 50293, Stop: 50850, Start Num: 52

Candidate Starts for DarwinJr_91:

(3, 49978), (Start: 52 @50293 has 85 MA's), (65, 50362), (67, 50392), (91, 50470), (103, 50509), (128, 50623), (132, 50650), (139, 50677), (144, 50692), (155, 50761), (159, 50785),

Gene: Daubenski_174 Start: 96878, Stop: 97435, Start Num: 52

Candidate Starts for Daubenski_174:

(Start: 52 @96878 has 85 MA's), (69, 97001), (78, 97031), (84, 97055), (122, 97235), (128, 97262), (129, 97271), (131, 97283), (132, 97289), (134, 97298),

Gene: Davielle_181 Start: 96302, Stop: 96859, Start Num: 52

Candidate Starts for Davielle_181:

(Start: 52 @96302 has 85 MA's), (69, 96425), (78, 96455), (84, 96479), (89, 96494), (119, 96629), (126, 96674), (128, 96686), (129, 96695), (131, 96707), (132, 96713), (134, 96722),

Gene: Deb65_63 Start: 42050, Stop: 42622, Start Num: 45

Candidate Starts for Deb65_63:

(Start: 18 @41969 has 18 MA's), (22, 41978), (Start: 34 @42011 has 1 MA's), (Start: 45 @42050 has 6 MA's), (65, 42128), (68, 42170), (81, 42215), (99, 42320), (101, 42326), (105, 42341), (122, 42422), (128, 42449), (132, 42476), (141, 42512), (153, 42578), (154, 42581), (156, 42587), (160, 42608),

Gene: DeluluLabubu_113 Start: 72925, Stop: 73485, Start Num: 48

Candidate Starts for DeluluLabubu_113:

(25, 72859), (33, 72880), (Start: 48 @72925 has 16 MA's), (62, 72985), (74, 73060), (79, 73081), (80, 73093), (85, 73114), (111, 73213), (128, 73321), (129, 73330), (132, 73348), (135, 73363), (155, 73459), (157, 73471),

Gene: Doomphist_71 Start: 44678, Stop: 45256, Start Num: 18

Candidate Starts for Doomphist_71:

(Start: 18 @44678 has 18 MA's), (22, 44687), (68, 44810), (81, 44855), (101, 44960), (122, 45056), (128, 45083), (132, 45110), (141, 45146), (153, 45212), (154, 45215), (156, 45221), (160, 45242),

Gene: Dorothy_69 Start: 43304, Stop: 43882, Start Num: 18

Candidate Starts for Dorothy_69:

(Start: 18 @43304 has 18 MA's), (22, 43313), (68, 43436), (81, 43481), (101, 43586), (122, 43682), (128, 43709), (132, 43736), (141, 43772), (153, 43838), (154, 43841), (156, 43847), (160, 43868),

Gene: EGole_182 Start: 98035, Stop: 98592, Start Num: 52

Candidate Starts for EGole_182:

(Start: 52 @98035 has 85 MA's), (57, 98062), (69, 98158), (78, 98188), (84, 98212), (123, 98395), (128, 98419), (129, 98428), (131, 98440), (132, 98446), (134, 98455),

Gene: EhyElimayoE_78 Start: 57043, Stop: 56420, Start Num: 59

Candidate Starts for EhyElimayoE_78:

(Start: 59 @57043 has 4 MA's), (70, 56962), (101, 56806), (102, 56803), (115, 56755), (120, 56692), (121, 56683), (128, 56650), (142, 56584), (163, 56452),

Gene: Elmer_196 Start: 99545, Stop: 100102, Start Num: 52

Candidate Starts for Elmer_196:

(Start: 52 @99545 has 85 MA's), (65, 99620), (78, 99698), (84, 99722), (109, 99815), (112, 99830), (122, 99902), (128, 99929), (129, 99938), (131, 99950), (134, 99965),

Gene: Emma1919_112 Start: 72256, Stop: 72816, Start Num: 48

Candidate Starts for Emma1919_112:

(25, 72190), (33, 72211), (Start: 48 @72256 has 16 MA's), (62, 72316), (74, 72391), (79, 72412), (80, 72424), (85, 72445), (111, 72544), (128, 72652), (129, 72661), (132, 72679), (135, 72694), (155, 72790), (157, 72802),

Gene: Empress_67 Start: 43413, Stop: 44066, Start Num: 18

Candidate Starts for Empress_67:

(Start: 18 @43413 has 18 MA's), (22, 43422), (Start: 34 @43455 has 1 MA's), (Start: 45 @43494 has 6 MA's), (65, 43572), (68, 43614), (81, 43659), (99, 43764), (101, 43770), (105, 43785), (122, 43866), (128, 43893), (132, 43920), (141, 43956), (153, 44022), (154, 44025), (156, 44031), (160, 44052),

Gene: Enygma_193 Start: 98898, Stop: 99455, Start Num: 52

Candidate Starts for Enygma_193:

(Start: 52 @98898 has 85 MA's), (66, 99000), (69, 99021), (84, 99075), (128, 99282), (129, 99291), (131, 99303), (132, 99309), (134, 99318),

Gene: Evy_171 Start: 96433, Stop: 96990, Start Num: 52

Candidate Starts for Evy_171:

(Start: 52 @96433 has 85 MA's), (69, 96556), (78, 96586), (84, 96610), (89, 96625), (119, 96760), (126, 96805), (128, 96817), (129, 96826), (131, 96838), (132, 96844), (134, 96853),

Gene: Faja_88 Start: 49167, Stop: 49709, Start Num: 52

Candidate Starts for Faja_88:

(3, 48852), (Start: 52 @49167 has 85 MA's), (67, 49266), (79, 49314), (82, 49326), (91, 49344), (107, 49395), (123, 49458), (128, 49482), (132, 49509), (139, 49536), (144, 49551), (155, 49620), (159, 49644), (166, 49674),

Gene: Farewell_57 Start: 38417, Stop: 39061, Start Num: 15

Candidate Starts for Farewell_57:

(Start: 15 @38417 has 1 MA's), (33, 38474), (Start: 46 @38513 has 2 MA's), (68, 38633), (79, 38669), (105, 38780), (110, 38795), (122, 38861), (128, 38888), (132, 38915), (141, 38951), (153, 39017), (154, 39020), (156, 39026),

Gene: Faust_110 Start: 73136, Stop: 73705, Start Num: 48

Candidate Starts for Faust_110:

(Start: 48 @73136 has 16 MA's), (Start: 52 @73145 has 85 MA's), (79, 73292), (80, 73304), (110, 73421), (124, 73478), (128, 73499), (132, 73526), (135, 73541), (152, 73631), (155, 73637), (157, 73649),

Gene: Forrest_116 Start: 74569, Stop: 75129, Start Num: 48

Candidate Starts for Forrest_116:

(25, 74503), (33, 74524), (Start: 48 @74569 has 16 MA's), (62, 74629), (74, 74704), (79, 74725), (80, 74737), (85, 74758), (111, 74857), (128, 74965), (129, 74974), (132, 74992), (135, 75007), (155, 75103), (157, 75115),

Gene: Francob_108 Start: 72289, Stop: 72852, Start Num: 48

Candidate Starts for Francob_108:

(33, 72244), (Start: 48 @72289 has 16 MA's), (62, 72349), (64, 72364), (65, 72367), (79, 72445), (80, 72457), (85, 72478), (124, 72664), (128, 72685), (129, 72694), (132, 72712), (155, 72823), (157, 72835),

Gene: Frankenweenie_85 Start: 60895, Stop: 60269, Start Num: 60

Candidate Starts for Frankenweenie_85:

(4, 61231), (5, 61219), (6, 61180), (Start: 18 @61042 has 18 MA's), (Start: 60 @60895 has 4 MA's), (77, 60772), (93, 60697), (101, 60658), (102, 60655), (120, 60544), (127, 60502), (128, 60499), (130, 60487), (137, 60448), (163, 60301),

Gene: Fruitloop_65 Start: 43885, Stop: 44457, Start Num: 45

Candidate Starts for Fruitloop_65:

(Start: 18 @43804 has 18 MA's), (22, 43813), (Start: 34 @43846 has 1 MA's), (Start: 45 @43885 has 6 MA's), (65, 43963), (68, 44005), (81, 44050), (99, 44155), (101, 44161), (105, 44176), (122, 44257), (128, 44284), (132, 44311), (141, 44347), (153, 44413), (154, 44416), (156, 44422), (160, 44443),

Gene: Genie2_185 Start: 96138, Stop: 96692, Start Num: 52

Candidate Starts for Genie2_185:

(Start: 52 @96138 has 85 MA's), (65, 96213), (84, 96315), (101, 96381), (102, 96384), (122, 96495), (128, 96522), (129, 96531), (131, 96543), (132, 96549), (134, 96558), (143, 96591), (151, 96645),

Gene: Geralt_63 Start: 41968, Stop: 42621, Start Num: 18

Candidate Starts for Geralt_63:

(Start: 18 @41968 has 18 MA's), (22, 41977), (Start: 34 @42010 has 1 MA's), (Start: 45 @42049 has 6 MA's), (65, 42127), (68, 42169), (81, 42214), (99, 42319), (101, 42325), (105, 42340), (122, 42421), (128, 42448), (132, 42475), (141, 42511), (153, 42577), (154, 42580), (156, 42586), (160, 42607),

Gene: Gibbi_197 Start: 96935, Stop: 97492, Start Num: 52

Candidate Starts for Gibbi_197:

(Start: 52 @96935 has 85 MA's), (69, 97058), (84, 97112), (109, 97205), (122, 97292), (124, 97298), (128, 97319), (129, 97328), (131, 97340), (132, 97346), (134, 97355),

Gene: Gilson_111 Start: 72218, Stop: 72778, Start Num: 48

Candidate Starts for Gilson_111:

(25, 72152), (33, 72173), (Start: 48 @72218 has 16 MA's), (62, 72278), (74, 72353), (79, 72374), (80, 72386), (85, 72407), (111, 72506), (128, 72614), (129, 72623), (132, 72641), (135, 72656), (155, 72752), (157, 72764),

Gene: Globfish_87 Start: 47967, Stop: 48452, Start Num: 52

Candidate Starts for Globfish_87:

(Start: 52 @47967 has 85 MA's), (79, 48114), (91, 48144), (108, 48198), (123, 48249), (124, 48252), (128, 48273), (132, 48300), (139, 48327), (144, 48342), (155, 48411), (159, 48435),

Gene: HangryHippo_179 Start: 96373, Stop: 96930, Start Num: 52

Candidate Starts for HangryHippo_179:

(Start: 52 @96373 has 85 MA's), (57, 96400), (65, 96448), (69, 96496), (78, 96526), (84, 96550), (123, 96733), (128, 96757), (129, 96766), (131, 96778), (132, 96784), (134, 96793),

Gene: IchabodCrane_186 Start: 96450, Stop: 97007, Start Num: 52

Candidate Starts for IchabodCrane_186:

(Start: 52 @96450 has 85 MA's), (69, 96573), (84, 96627), (109, 96720), (122, 96807), (124, 96813), (128, 96834), (129, 96843), (131, 96855), (132, 96861), (134, 96870),

Gene: IdentityCrisis_58 Start: 35961, Stop: 36560, Start Num: 49

Candidate Starts for IdentityCrisis_58:

(Start: 49 @35961 has 13 MA's), (68, 36075), (99, 36216), (100, 36219), (101, 36222), (128, 36345), (132, 36372), (139, 36399), (156, 36486), (168, 36546),

Gene: Inventum_66 Start: 43502, Stop: 44080, Start Num: 18

Candidate Starts for Inventum_66:

(Start: 18 @43502 has 18 MA's), (22, 43511), (68, 43634), (81, 43679), (101, 43784), (122, 43880), (128, 43907), (132, 43934), (141, 43970), (153, 44036), (154, 44039), (156, 44045), (160, 44066),

Gene: Jada_112 Start: 73499, Stop: 74059, Start Num: 48

Candidate Starts for Jada_112:

(25, 73433), (33, 73454), (Start: 48 @73499 has 16 MA's), (62, 73559), (74, 73634), (79, 73655), (80, 73667), (85, 73688), (111, 73787), (128, 73895), (129, 73904), (132, 73922), (135, 73937), (155, 74033), (157, 74045),

Gene: Jay2Jay_186 Start: 97179, Stop: 97733, Start Num: 52

Candidate Starts for Jay2Jay_186:

(Start: 52 @97179 has 85 MA's), (69, 97302), (78, 97332), (84, 97356), (89, 97371), (126, 97551), (128, 97563), (129, 97572), (131, 97584), (132, 97590), (134, 97599),

Gene: JimJam_197 Start: 98371, Stop: 98928, Start Num: 52

Candidate Starts for JimJam_197:

(40, 98341), (Start: 52 @98371 has 85 MA's), (69, 98494), (84, 98548), (109, 98641), (122, 98728), (124, 98734), (128, 98755), (129, 98764), (131, 98776), (132, 98782), (134, 98791),

Gene: JoeyJr_69 Start: 44417, Stop: 45070, Start Num: 18

Candidate Starts for JoeyJr_69:

(Start: 18 @44417 has 18 MA's), (22, 44426), (Start: 34 @44459 has 1 MA's), (Start: 45 @44498 has 6 MA's), (65, 44576), (68, 44618), (81, 44663), (99, 44768), (101, 44774), (105, 44789), (122, 44870), (128, 44897), (132, 44924), (141, 44960), (153, 45026), (154, 45029), (156, 45035), (160, 45056),

Gene: Jollison_187 Start: 96581, Stop: 97138, Start Num: 52

Candidate Starts for Jollison_187:

(Start: 52 @96581 has 85 MA's), (69, 96704), (84, 96758), (109, 96851), (122, 96938), (124, 96944), (128, 96965), (129, 96974), (131, 96986), (132, 96992), (134, 97001),

Gene: JustBecause_74 Start: 54987, Stop: 54361, Start Num: 60

Candidate Starts for JustBecause_74:

(Start: 60 @54987 has 4 MA's), (76, 54867), (101, 54750), (102, 54747), (106, 54732), (120, 54636), (128, 54591), (155, 54432), (162, 54399), (163, 54393),

Gene: Karimac_190 Start: 96775, Stop: 97332, Start Num: 52

Candidate Starts for Karimac_190:

(Start: 52 @96775 has 85 MA's), (65, 96850), (66, 96877), (69, 96898), (84, 96952), (109, 97045), (124, 97138), (128, 97159), (129, 97168), (131, 97180), (132, 97186), (134, 97195),

Gene: Karp_107 Start: 72767, Stop: 73330, Start Num: 47

Candidate Starts for Karp_107:

(27, 72710), (36, 72737), (Start: 47 @72767 has 7 MA's), (79, 72923), (80, 72935), (85, 72956), (98, 73010), (124, 73142), (126, 73151), (128, 73163), (131, 73184), (132, 73190), (135, 73205), (155, 73301),

Gene: Kela_75 Start: 54852, Stop: 54226, Start Num: 60

Candidate Starts for Kela_75:

(54, 54894), (Start: 60 @54852 has 4 MA's), (76, 54732), (101, 54615), (102, 54612), (106, 54597), (120, 54501), (128, 54456), (155, 54297), (162, 54264), (163, 54258),

Gene: Kenrey_114 Start: 73258, Stop: 73818, Start Num: 48

Candidate Starts for Kenrey_114:

(25, 73192), (33, 73213), (Start: 48 @73258 has 16 MA's), (62, 73318), (74, 73393), (79, 73414), (80, 73426), (85, 73447), (111, 73546), (119, 73597), (128, 73654), (129, 73663), (132, 73681), (135, 73696), (155, 73792), (157, 73804),

Gene: KentuckyRacer_195 Start: 98117, Stop: 98674, Start Num: 52

Candidate Starts for KentuckyRacer_195:

(Start: 52 @98117 has 85 MA's), (69, 98240), (84, 98294), (109, 98387), (122, 98474), (124, 98480), (128, 98501), (129, 98510), (131, 98522), (132, 98528), (134, 98537),

Gene: KimJongPhill_39 Start: 34284, Stop: 33583, Start Num: 37

Candidate Starts for KimJongPhill_39:

(Start: 37 @34284 has 1 MA's), (43, 34263), (57, 34215), (63, 34188), (68, 34131), (74, 34098), (96, 33960), (97, 33942), (101, 33927), (104, 33918), (109, 33900), (110, 33897), (113, 33882), (118, 33831), (119, 33825), (128, 33768), (132, 33741), (140, 33711), (147, 33690),

Gene: KingMidas_68 Start: 43829, Stop: 44482, Start Num: 18

Candidate Starts for KingMidas_68:

(Start: 18 @43829 has 18 MA's), (22, 43838), (Start: 34 @43871 has 1 MA's), (Start: 45 @43910 has 6 MA's), (65, 43988), (68, 44030), (81, 44075), (99, 44180), (101, 44186), (105, 44201), (122, 44282), (128, 44309), (132, 44336), (141, 44372), (153, 44438), (154, 44441), (156, 44447), (160, 44468),

Gene: Kradal_78 Start: 57043, Stop: 56420, Start Num: 59

Candidate Starts for Kradal_78:

(Start: 59 @57043 has 4 MA's), (70, 56962), (101, 56806), (102, 56803), (115, 56755), (120, 56692), (121, 56683), (128, 56650), (142, 56584), (163, 56452),

Gene: Larnav_180 Start: 96992, Stop: 97549, Start Num: 52

Candidate Starts for Larnav_180:

(Start: 52 @96992 has 85 MA's), (57, 97019), (69, 97115), (78, 97145), (84, 97169), (123, 97352), (128, 97376), (129, 97385), (131, 97397), (132, 97403), (134, 97412), (147, 97454),

Gene: Laure_275 Start: 153371, Stop: 153868, Start Num: 52

Candidate Starts for Laure_275:

(35, 153323), (Start: 52 @153371 has 85 MA's), (57, 153398), (68, 153482), (69, 153488), (75, 153500), (79, 153518), (82, 153530), (122, 153653), (128, 153680), (132, 153707), (135, 153722), (138, 153731), (157, 153842), (158, 153845),

Gene: Leo04_182 Start: 97383, Stop: 97940, Start Num: 52

Candidate Starts for Leo04_182:

(Start: 52 @97383 has 85 MA's), (57, 97410), (65, 97458), (69, 97506), (78, 97536), (84, 97560), (123, 97743), (128, 97767), (129, 97776), (131, 97788), (132, 97794), (134, 97803),

Gene: Leperchaun_66 Start: 43647, Stop: 44300, Start Num: 18

Candidate Starts for Leperchaun_66:

(Start: 18 @43647 has 18 MA's), (22, 43656), (Start: 34 @43689 has 1 MA's), (Start: 45 @43728 has 6 MA's), (65, 43806), (68, 43848), (81, 43893), (99, 43998), (101, 44004), (105, 44019), (122, 44100),

(128, 44127), (132, 44154), (141, 44190), (153, 44256), (154, 44259), (156, 44265), (160, 44286),

Gene: Liandry_179 Start: 95896, Stop: 96453, Start Num: 52

Candidate Starts for Liandry_179:

(Start: 52 @95896 has 85 MA's), (84, 96073), (105, 96154), (128, 96280), (129, 96289), (132, 96307), (134, 96316), (148, 96364),

Gene: LilMartin_177 Start: 94939, Stop: 95493, Start Num: 52

Candidate Starts for LilMartin_177:

(Start: 52 @94939 has 85 MA's), (65, 95014), (69, 95062), (78, 95092), (84, 95116), (105, 95197), (109, 95209), (128, 95323), (129, 95332), (131, 95344), (132, 95350), (134, 95359),

Gene: LilSaint_186 Start: 94818, Stop: 95375, Start Num: 52

Candidate Starts for LilSaint_186:

(Start: 52 @94818 has 85 MA's), (84, 94995), (102, 95064), (105, 95076), (112, 95103), (113, 95106), (128, 95202), (129, 95211), (132, 95229), (134, 95238),

Gene: Limpid_109 Start: 72875, Stop: 73480, Start Num: 48

Candidate Starts for Limpid_109:

(Start: 48 @72875 has 16 MA's), (79, 73031), (80, 73043), (86, 73067), (124, 73250), (128, 73271), (129, 73280), (132, 73298), (155, 73409), (157, 73421),

Gene: LukeCage_189 Start: 97535, Stop: 98092, Start Num: 52

Candidate Starts for LukeCage_189:

(Start: 52 @97535 has 85 MA's), (65, 97610), (69, 97658), (78, 97688), (84, 97712), (101, 97778), (109, 97805), (113, 97823), (122, 97892), (128, 97919), (129, 97928), (131, 97940), (132, 97946), (134, 97955),

Gene: Lululemon_179 Start: 95754, Stop: 96311, Start Num: 52

Candidate Starts for Lululemon_179:

(Start: 52 @95754 has 85 MA's), (57, 95781), (65, 95829), (69, 95877), (78, 95907), (84, 95931), (123, 96114), (128, 96138), (129, 96147), (131, 96159), (132, 96165), (134, 96174),

Gene: Maupel_111 Start: 72218, Stop: 72778, Start Num: 48

Candidate Starts for Maupel_111:

(25, 72152), (33, 72173), (Start: 48 @72218 has 16 MA's), (62, 72278), (74, 72353), (79, 72374), (80, 72386), (85, 72407), (111, 72506), (128, 72614), (129, 72623), (132, 72641), (135, 72656), (155, 72752), (157, 72764),

Gene: MeganTheeKilla_111 Start: 72424, Stop: 72984, Start Num: 48

Candidate Starts for MeganTheeKilla_111:

(25, 72358), (33, 72379), (Start: 48 @72424 has 16 MA's), (62, 72484), (74, 72559), (79, 72580), (80, 72592), (85, 72613), (111, 72712), (122, 72793), (128, 72820), (129, 72829), (132, 72847), (135, 72862), (155, 72958), (157, 72970),

Gene: MicyPS_34 Start: 31790, Stop: 31314, Start Num: 52

Candidate Starts for MicyPS_34:

(38, 31823), (Start: 52 @31790 has 85 MA's), (82, 31631), (92, 31613), (123, 31508), (128, 31484), (132, 31457),

Gene: Mildred21_187 Start: 95214, Stop: 95771, Start Num: 52

Candidate Starts for Mildred21_187:

(Start: 52 @95214 has 85 MA's), (78, 95367), (84, 95391), (105, 95472), (122, 95571), (123, 95574), (128, 95598), (129, 95607), (131, 95619), (132, 95625), (134, 95634),

Gene: MindFlayer_183 Start: 95966, Stop: 96523, Start Num: 52

Candidate Starts for MindFlayer_183:

(Start: 52 @95966 has 85 MA's), (69, 96089), (84, 96143), (109, 96236), (122, 96323), (124, 96329), (128, 96350), (129, 96359), (131, 96371), (132, 96377), (134, 96386),

Gene: MinionDave_93 Start: 52864, Stop: 53421, Start Num: 49

Candidate Starts for MinionDave_93:

(7, 52672), (19, 52780), (33, 52819), (Start: 49 @52864 has 13 MA's), (62, 52918), (68, 52978), (87, 53050), (100, 53131), (126, 53245), (128, 53257), (129, 53266), (132, 53284), (136, 53302), (145, 53332), (161, 53416),

Gene: Moab_113 Start: 74949, Stop: 75476, Start Num: 48

Candidate Starts for Moab_113:

(Start: 48 @74949 has 16 MA's), (Start: 52 @74958 has 85 MA's), (78, 75102), (79, 75105), (80, 75117), (84, 75135), (124, 75291), (128, 75312), (132, 75339), (135, 75354), (155, 75450), (157, 75462),

Gene: ModicumRichard_71 Start: 46606, Stop: 47139, Start Num: 52

Candidate Starts for ModicumRichard_71:

(Start: 52 @46606 has 85 MA's), (69, 46723), (79, 46753), (81, 46762), (119, 46903), (128, 46960), (132, 46987), (147, 47038), (155, 47098),

Gene: Moonflower_57 Start: 40406, Stop: 41035, Start Num: 51

Candidate Starts for Moonflower_57:

(Start: 51 @40406 has 3 MA's), (78, 40550), (79, 40553), (82, 40565), (97, 40655), (105, 40685), (122, 40781), (128, 40808), (132, 40835), (147, 40895), (150, 40925), (157, 40961), (166, 41006), (167, 41012), (169, 41024),

Gene: Morgana_74 Start: 47769, Stop: 48302, Start Num: 52

Candidate Starts for Morgana_74:

(Start: 52 @47769 has 85 MA's), (68, 47880), (79, 47916), (81, 47925), (119, 48066), (128, 48123), (132, 48150), (147, 48201), (155, 48261),

Gene: Mugiwara_191 Start: 97750, Stop: 98307, Start Num: 52

Candidate Starts for Mugiwara_191:

(Start: 52 @97750 has 85 MA's), (65, 97825), (66, 97852), (69, 97873), (84, 97927), (109, 98020), (112, 98035), (124, 98113), (128, 98134), (129, 98143), (131, 98155), (132, 98161), (134, 98170),

Gene: MulchMansion_178 Start: 95582, Stop: 96136, Start Num: 52

Candidate Starts for MulchMansion_178:

(Start: 52 @95582 has 85 MA's), (65, 95657), (69, 95705), (84, 95759), (105, 95840), (109, 95852), (128, 95966), (129, 95975), (131, 95987), (132, 95993), (134, 96002),

Gene: Navo_177 Start: 95533, Stop: 96090, Start Num: 52

Candidate Starts for Navo_177:

(Start: 52 @95533 has 85 MA's), (84, 95710), (105, 95791), (128, 95917), (129, 95926), (132, 95944), (134, 95953), (148, 96001),

Gene: Nimbo_62 Start: 41971, Stop: 42624, Start Num: 18

Candidate Starts for Nimbo_62:

(Start: 18 @41971 has 18 MA's), (22, 41980), (Start: 34 @42013 has 1 MA's), (Start: 45 @42052 has 6 MA's), (65, 42130), (68, 42172), (81, 42217), (99, 42322), (101, 42328), (105, 42343), (122, 42424), (128, 42451), (132, 42478), (141, 42514), (153, 42580), (154, 42583), (156, 42589), (160, 42610),

Gene: Nirvana_82 Start: 59297, Stop: 58671, Start Num: 60

Candidate Starts for Nirvana_82:

(Start: 60 @59297 has 4 MA's), (70, 59216), (77, 59174), (101, 59060), (102, 59057), (120, 58946), (128, 58901), (133, 58871), (137, 58850), (163, 58703),

Gene: Nitzel_88 Start: 49520, Stop: 50077, Start Num: 49

Candidate Starts for Nitzel_88:

(7, 49328), (19, 49436), (33, 49475), (Start: 49 @49520 has 13 MA's), (62, 49574), (68, 49634), (87, 49706), (100, 49787), (126, 49901), (128, 49913), (129, 49922), (132, 49940), (136, 49958), (145, 49988), (161, 50072),

Gene: NootNoot_177 Start: 94903, Stop: 95460, Start Num: 52

Candidate Starts for NootNoot_177:

(Start: 52 @94903 has 85 MA's), (84, 95080), (105, 95161), (128, 95287), (129, 95296), (132, 95314), (134, 95323), (148, 95371),

Gene: ObLaDi_71 Start: 46578, Stop: 47111, Start Num: 52

Candidate Starts for ObLaDi_71:

(Start: 52 @46578 has 85 MA's), (69, 46695), (79, 46725), (81, 46734), (119, 46875), (128, 46932), (132, 46959), (147, 47010), (155, 47070),

Gene: OldBen_66 Start: 43364, Stop: 44017, Start Num: 18

Candidate Starts for OldBen_66:

(Start: 18 @43364 has 18 MA's), (22, 43373), (Start: 34 @43406 has 1 MA's), (Start: 45 @43445 has 6 MA's), (65, 43523), (68, 43565), (81, 43610), (99, 43715), (101, 43721), (105, 43736), (122, 43817), (128, 43844), (132, 43871), (141, 43907), (153, 43973), (154, 43976), (156, 43982), (160, 44003),

Gene: OwlsT2W_93 Start: 51404, Stop: 51961, Start Num: 49

Candidate Starts for OwlsT2W_93:

(7, 51212), (19, 51320), (33, 51359), (Start: 49 @51404 has 13 MA's), (62, 51458), (68, 51518), (87, 51590), (100, 51671), (126, 51785), (128, 51797), (129, 51806), (132, 51824), (136, 51842), (145, 51872), (161, 51956),

Gene: PHappiness_69 Start: 44193, Stop: 44846, Start Num: 18

Candidate Starts for PHappiness_69:

(Start: 18 @44193 has 18 MA's), (22, 44202), (Start: 34 @44235 has 1 MA's), (Start: 45 @44274 has 6 MA's), (65, 44352), (68, 44394), (81, 44439), (99, 44544), (101, 44550), (105, 44565), (122, 44646), (128, 44673), (132, 44700), (141, 44736), (153, 44802), (154, 44805), (156, 44811), (160, 44832),

Gene: PSonyx_37 Start: 31434, Stop: 30970, Start Num: 52

Candidate Starts for PSonyx_37:

(38, 31467), (Start: 52 @31434 has 85 MA's), (82, 31275), (92, 31257), (112, 31209), (123, 31152), (128, 31128), (132, 31101),

Gene: PacManQ_179 Start: 95754, Stop: 96311, Start Num: 52

Candidate Starts for PacManQ_179:

(Start: 52 @95754 has 85 MA's), (57, 95781), (65, 95829), (69, 95877), (78, 95907), (84, 95931), (123, 96114), (128, 96138), (129, 96147), (131, 96159), (132, 96165), (134, 96174),

Gene: Paradiddles_174 Start: 97716, Stop: 98273, Start Num: 52

Candidate Starts for Paradiddles_174:

(Start: 52 @97716 has 85 MA's), (84, 97893), (105, 97974), (128, 98100), (129, 98109), (132, 98127), (134, 98136), (148, 98184),

Gene: Patelgo_114 Start: 74809, Stop: 75336, Start Num: 48

Candidate Starts for Patelgo_114:

(Start: 48 @74809 has 16 MA's), (Start: 52 @74818 has 85 MA's), (78, 74962), (79, 74965), (80, 74977), (84, 74995), (124, 75151), (128, 75172), (132, 75199), (135, 75214), (155, 75310), (157, 75322),

Gene: Peebs_178 Start: 96695, Stop: 97252, Start Num: 52

Candidate Starts for Peebs_178:

(Start: 52 @96695 has 85 MA's), (57, 96722), (65, 96770), (69, 96818), (78, 96848), (84, 96872), (123, 97055), (128, 97079), (129, 97088), (131, 97100), (132, 97106), (134, 97115),

Gene: Pepperwood_179 Start: 96639, Stop: 97196, Start Num: 52

Candidate Starts for Pepperwood_179:

(Start: 52 @96639 has 85 MA's), (57, 96666), (65, 96714), (69, 96762), (78, 96792), (84, 96816), (123, 96999), (128, 97023), (129, 97032), (131, 97044), (132, 97050), (134, 97059),

Gene: Persimmon_181 Start: 95550, Stop: 96107, Start Num: 52

Candidate Starts for Persimmon_181:

(Start: 52 @95550 has 85 MA's), (69, 95673), (78, 95703), (84, 95727), (89, 95742), (119, 95877), (126, 95922), (128, 95934), (129, 95943), (131, 95955), (132, 95961), (134, 95970),

Gene: PhesterPhotato_73 Start: 45038, Stop: 45586, Start Num: 46

Candidate Starts for PhesterPhotato_73:

(31, 44990), (41, 45026), (Start: 46 @45038 has 2 MA's), (68, 45158), (97, 45275), (101, 45290), (119, 45356), (122, 45386), (128, 45413), (132, 45440), (141, 45476), (153, 45542), (154, 45545), (156, 45551), (160, 45572),

Gene: Phishy_2 Start: 216, Stop: 800, Start Num: 51

Candidate Starts for Phishy_2:

(11, 69), (16, 111), (39, 186), (Start: 51 @216 has 3 MA's), (67, 315), (68, 327), (75, 345), (78, 363), (88, 405), (97, 453), (122, 579), (123, 582), (128, 606), (132, 633), (157, 756),

Gene: Phredrick_110 Start: 71544, Stop: 72104, Start Num: 48

Candidate Starts for Phredrick_110:

(25, 71478), (33, 71499), (Start: 48 @71544 has 16 MA's), (62, 71604), (74, 71679), (79, 71700), (80, 71712), (85, 71733), (111, 71832), (119, 71883), (128, 71940), (129, 71949), (132, 71967), (135, 71982), (155, 72078), (157, 72090),

Gene: PinkiePie_178 Start: 95896, Stop: 96453, Start Num: 52

Candidate Starts for PinkiePie_178:

(Start: 52 @95896 has 85 MA's), (84, 96073), (105, 96154), (128, 96280), (129, 96289), (132, 96307), (134, 96316), (148, 96364),

Gene: Poenanya_71 Start: 44678, Stop: 45256, Start Num: 18

Candidate Starts for Poenanya_71:

(Start: 18 @44678 has 18 MA's), (22, 44687), (68, 44810), (81, 44855), (101, 44960), (122, 45056), (128, 45083), (132, 45110), (141, 45146), (153, 45212), (154, 45215), (156, 45221), (160, 45242),

Gene: Polka14_72 Start: 45394, Stop: 46047, Start Num: 18

Candidate Starts for Polka14_72:

(Start: 18 @45394 has 18 MA's), (22, 45403), (Start: 34 @45436 has 1 MA's), (Start: 45 @45475 has 6 MA's), (65, 45553), (68, 45595), (81, 45640), (99, 45745), (101, 45751), (105, 45766), (122, 45847), (128, 45874), (132, 45901), (141, 45937), (153, 46003), (154, 46006), (156, 46012), (160, 46033),

Gene: Powerball_59 Start: 40153, Stop: 40761, Start Num: 51

Candidate Starts for Powerball_59:

(20, 40072), (Start: 51 @40153 has 3 MA's), (67, 40252), (68, 40264), (75, 40282), (78, 40300), (88, 40342), (97, 40390), (101, 40405), (105, 40420), (110, 40435), (126, 40531), (128, 40543), (132, 40570), (149, 40651),

Gene: PumpkinSpice_192 Start: 97187, Stop: 97744, Start Num: 52

Candidate Starts for PumpkinSpice_192:

(Start: 52 @97187 has 85 MA's), (69, 97310), (84, 97364), (109, 97457), (122, 97544), (124, 97550), (128, 97571), (129, 97580), (131, 97592), (132, 97598), (134, 97607),

Gene: Pupper_72 Start: 25365, Stop: 25928, Start Num: 49

Candidate Starts for Pupper_72:

(Start: 49 @25365 has 13 MA's), (68, 25482), (69, 25488), (79, 25518), (125, 25695), (128, 25713), (132, 25740),

Gene: Quantum_77 Start: 57043, Stop: 56420, Start Num: 59

Candidate Starts for Quantum_77:

(Start: 59 @57043 has 4 MA's), (70, 56962), (101, 56806), (102, 56803), (115, 56755), (120, 56692), (121, 56683), (128, 56650), (142, 56584), (163, 56452),

Gene: Quaran19_190 Start: 96628, Stop: 97185, Start Num: 52

Candidate Starts for Quaran19_190:

(Start: 52 @96628 has 85 MA's), (69, 96751), (84, 96805), (109, 96898), (122, 96985), (124, 96991), (128, 97012), (129, 97021), (131, 97033), (132, 97039), (134, 97048),

Gene: RedBird_69 Start: 43183, Stop: 43761, Start Num: 18

Candidate Starts for RedBird_69:

(Start: 18 @43183 has 18 MA's), (22, 43192), (68, 43315), (81, 43360), (101, 43465), (122, 43561), (128, 43588), (132, 43615), (141, 43651), (153, 43717), (154, 43720), (156, 43726), (160, 43747),

Gene: Rikishi_189 Start: 96739, Stop: 97296, Start Num: 52

Candidate Starts for Rikishi_189:

(Start: 52 @96739 has 85 MA's), (69, 96862), (84, 96916), (109, 97009), (113, 97027), (122, 97096), (128, 97123), (129, 97132), (131, 97144), (132, 97150), (134, 97159),

Gene: Riptide_176 Start: 94295, Stop: 94852, Start Num: 52

Candidate Starts for Riptide_176:

(Start: 52 @94295 has 85 MA's), (84, 94472), (102, 94541), (105, 94553), (112, 94580), (113, 94583), (128, 94679), (129, 94688), (132, 94706), (134, 94715),

Gene: Rita_95 Start: 53949, Stop: 54506, Start Num: 49

Candidate Starts for Rita_95:

(7, 53757), (19, 53865), (33, 53904), (Start: 49 @53949 has 13 MA's), (62, 54003), (68, 54063), (87, 54135), (100, 54216), (126, 54330), (128, 54342), (129, 54351), (132, 54369), (136, 54387), (145, 54417), (161, 54501),

Gene: RitaG_69 Start: 44538, Stop: 45191, Start Num: 18

Candidate Starts for RitaG_69:

(Start: 18 @44538 has 18 MA's), (22, 44547), (Start: 34 @44580 has 1 MA's), (Start: 45 @44619 has 6 MA's), (65, 44697), (68, 44739), (81, 44784), (99, 44889), (101, 44895), (105, 44910), (122, 44991), (128, 45018), (132, 45045), (141, 45081), (153, 45147), (154, 45150), (156, 45156), (160, 45177),

Gene: Ruthy_58 Start: 42248, Stop: 42835, Start Num: 51

Candidate Starts for Ruthy_58:

(Start: 51 @42248 has 3 MA's), (67, 42347), (68, 42359), (75, 42377), (78, 42395), (88, 42437), (97, 42485), (101, 42500), (105, 42515), (122, 42611), (128, 42638), (132, 42665), (164, 42824),

Gene: SCentae_71 Start: 25119, Stop: 25682, Start Num: 49

Candidate Starts for SCentae_71:

(Start: 49 @25119 has 13 MA's), (68, 25236), (69, 25242), (79, 25272), (125, 25449), (128, 25467), (132, 25494),

Gene: SPB78_66 Start: 42811, Stop: 43368, Start Num: 49

Candidate Starts for SPB78_66:

(21, 42730), (26, 42748), (28, 42754), (Start: 49 @42811 has 13 MA's), (64, 42880), (75, 42946), (78, 42961), (90, 43003), (95, 43027), (109, 43093), (110, 43096), (128, 43189), (132, 43216), (146, 43264), (155, 43330),

Gene: SaltySpittoon_190 Start: 96170, Stop: 96727, Start Num: 52

Candidate Starts for SaltySpittoon_190:

(Start: 52 @96170 has 85 MA's), (69, 96293), (84, 96347), (109, 96440), (122, 96527), (124, 96533), (128, 96554), (129, 96563), (131, 96575), (132, 96581), (134, 96590),

Gene: Samisti12_182 Start: 98079, Stop: 98636, Start Num: 52

Candidate Starts for Samisti12_182:

(Start: 52 @98079 has 85 MA's), (57, 98106), (65, 98154), (69, 98202), (78, 98232), (84, 98256), (123, 98439), (128, 98463), (129, 98472), (131, 98484), (132, 98490), (134, 98499),

Gene: Sarkar_82 Start: 57043, Stop: 56420, Start Num: 59

Candidate Starts for Sarkar_82:

(Start: 59 @57043 has 4 MA's), (70, 56962), (101, 56806), (102, 56803), (115, 56755), (120, 56692), (121, 56683), (128, 56650), (142, 56584), (163, 56452),

Gene: Sashimi_88 Start: 48886, Stop: 49443, Start Num: 52

Candidate Starts for Sashimi_88:

(Start: 52 @48886 has 85 MA's), (65, 48955), (67, 48985), (79, 49033), (91, 49063), (128, 49216), (132, 49243), (139, 49270), (155, 49354), (159, 49378),

Gene: Sassafras_69 Start: 43501, Stop: 44079, Start Num: 18

Candidate Starts for Sassafras_69:

(Start: 18 @43501 has 18 MA's), (22, 43510), (68, 43633), (81, 43678), (101, 43783), (122, 43879), (128, 43906), (132, 43933), (141, 43969), (153, 44035), (154, 44038), (156, 44044), (160, 44065),

Gene: Satis_78 Start: 57039, Stop: 56416, Start Num: 59

Candidate Starts for Satis_78:

(Start: 59 @57039 has 4 MA's), (70, 56958), (101, 56802), (102, 56799), (115, 56751), (120, 56688), (121, 56679), (128, 56646), (142, 56580), (163, 56448),

Gene: Sbash_62 Start: 43188, Stop: 43778, Start Num: 44

Candidate Starts for Sbash_62:

(30, 43146), (Start: 44 @43188 has 1 MA's), (69, 43317), (81, 43362), (86, 43380), (101, 43482), (105, 43497), (122, 43578), (128, 43605), (132, 43632), (141, 43668), (154, 43737), (156, 43743), (160, 43764),

Gene: Scheme_183 Start: 98260, Stop: 98817, Start Num: 52

Candidate Starts for Scheme_183:

(Start: 52 @98260 has 85 MA's), (57, 98287), (65, 98335), (69, 98383), (78, 98413), (84, 98437), (123, 98620), (128, 98644), (129, 98653), (131, 98665), (132, 98671), (134, 98680),

Gene: Scottish_67 Start: 43084, Stop: 43737, Start Num: 18

Candidate Starts for Scottish_67:

(Start: 18 @43084 has 18 MA's), (22, 43093), (Start: 34 @43126 has 1 MA's), (Start: 45 @43165 has 6 MA's), (65, 43243), (68, 43285), (81, 43330), (99, 43435), (101, 43441), (105, 43456), (122, 43537), (128, 43564), (132, 43591), (141, 43627), (153, 43693), (154, 43696), (156, 43702), (160, 43723),

Gene: SeresaTree_110 Start: 72518, Stop: 73087, Start Num: 48

Candidate Starts for SeresaTree_110:

(Start: 48 @72518 has 16 MA's), (Start: 52 @72527 has 85 MA's), (79, 72674), (80, 72686), (110, 72803), (124, 72860), (128, 72881), (132, 72908), (135, 72923), (152, 73013), (155, 73019), (157, 73031),

Gene: Sham_107 Start: 72628, Stop: 73191, Start Num: 47

Candidate Starts for Sham_107:

(27, 72571), (36, 72598), (Start: 47 @72628 has 7 MA's), (79, 72784), (80, 72796), (110, 72913), (116, 72937), (128, 73024), (129, 73033), (132, 73051), (135, 73066), (155, 73162),

Gene: Shuckle_178 Start: 96745, Stop: 97302, Start Num: 52

Candidate Starts for Shuckle_178:

(Start: 52 @96745 has 85 MA's), (78, 96898), (84, 96922), (105, 97003), (128, 97129), (129, 97138), (132, 97156), (134, 97165), (148, 97213),

Gene: SiSi_68 Start: 44708, Stop: 45361, Start Num: 18

Candidate Starts for SiSi_68:

(Start: 18 @44708 has 18 MA's), (22, 44717), (Start: 34 @44750 has 1 MA's), (Start: 45 @44789 has 6 MA's), (65, 44867), (68, 44909), (81, 44954), (99, 45059), (101, 45065), (105, 45080), (122, 45161), (128, 45188), (132, 45215), (141, 45251), (153, 45317), (154, 45320), (156, 45326), (160, 45347),

Gene: SkinnyPete_50 Start: 33679, Stop: 34233, Start Num: 45

Candidate Starts for SkinnyPete_50:

(12, 33553), (14, 33577), (17, 33586), (23, 33613), (Start: 45 @33679 has 6 MA's), (68, 33799), (99, 33931), (100, 33934), (101, 33937), (105, 33952), (112, 33979), (119, 34003), (122, 34033), (128, 34060), (132, 34087), (141, 34123), (154, 34192), (156, 34198), (160, 34219),

Gene: Skog_133 Start: 54097, Stop: 54663, Start Num: 50

Candidate Starts for Skog_133:

(Start: 50 @54097 has 1 MA's), (68, 54208), (81, 54253), (91, 54277), (122, 54421), (123, 54424), (128, 54448), (131, 54469), (132, 54475), (165, 54640),

Gene: Sollertia_186 Start: 96138, Stop: 96692, Start Num: 52

Candidate Starts for Sollertia_186:

(Start: 52 @96138 has 85 MA's), (65, 96213), (84, 96315), (101, 96381), (102, 96384), (122, 96495), (128, 96522), (129, 96531), (131, 96543), (132, 96549), (134, 96558), (143, 96591), (151, 96645),

Gene: Soul22_95 Start: 50440, Stop: 50997, Start Num: 49

Candidate Starts for Soul22_95:

(7, 50248), (19, 50356), (33, 50395), (Start: 49 @50440 has 13 MA's), (62, 50494), (68, 50554), (87, 50626), (100, 50707), (126, 50821), (128, 50833), (132, 50860), (136, 50878), (145, 50908), (161, 50992),

Gene: SparkleGoddess_109 Start: 73096, Stop: 73659, Start Num: 47

Candidate Starts for SparkleGoddess_109:

(27, 73039), (36, 73066), (Start: 47 @73096 has 7 MA's), (79, 73252), (80, 73264), (85, 73285), (98, 73339), (124, 73471), (126, 73480), (128, 73492), (131, 73513), (132, 73519), (135, 73534), (155, 73630),

Gene: Sparky_55 Start: 38977, Stop: 39525, Start Num: 46

Candidate Starts for Sparky_55:

(1, 38575), (2, 38632), (9, 38827), (10, 38842), (Start: 46 @38977 has 2 MA's), (68, 39097), (79, 39133), (101, 39229), (105, 39244), (122, 39325), (128, 39352), (132, 39379), (141, 39415), (153, 39481), (154, 39484), (156, 39490),

Gene: Spelly_193 Start: 96099, Stop: 96656, Start Num: 52

Candidate Starts for Spelly_193:

(Start: 52 @96099 has 85 MA's), (69, 96222), (78, 96252), (84, 96276), (109, 96369), (122, 96456), (124, 96462), (128, 96483), (129, 96492), (131, 96504), (132, 96510), (134, 96519),

Gene: Spilled_196 Start: 97303, Stop: 97860, Start Num: 52

Candidate Starts for Spilled_196:

(Start: 52 @97303 has 85 MA's), (69, 97426), (84, 97480), (109, 97573), (124, 97666), (128, 97687), (129, 97696), (131, 97708), (132, 97714), (134, 97723),

Gene: Squillium_181 Start: 95898, Stop: 96455, Start Num: 52

Candidate Starts for Squillium_181:

(Start: 52 @95898 has 85 MA's), (84, 96075), (105, 96156), (128, 96282), (129, 96291), (132, 96309), (134, 96318), (148, 96366),

Gene: StAugustine_3 Start: 1052, Stop: 1621, Start Num: 45

Candidate Starts for StAugustine_3:

(Start: 45 @1052 has 6 MA's), (58, 1097), (67, 1154), (68, 1166), (79, 1202), (86, 1229), (105, 1325), (123, 1412), (127, 1433), (128, 1436), (132, 1463), (154, 1565),

Gene: Stanimal_185 Start: 96499, Stop: 97053, Start Num: 52

Candidate Starts for Stanimal_185:

(Start: 52 @96499 has 85 MA's), (65, 96574), (84, 96676), (101, 96742), (102, 96745), (122, 96856), (128, 96883), (129, 96892), (131, 96904), (132, 96910), (134, 96919), (143, 96952), (151, 97006),

Gene: StarPlatinum_196 Start: 98569, Stop: 99126, Start Num: 52

Candidate Starts for StarPlatinum_196:

(Start: 52 @98569 has 85 MA's), (65, 98644), (69, 98692), (78, 98722), (84, 98746), (109, 98839), (122, 98926), (128, 98953), (129, 98962), (131, 98974), (132, 98980), (134, 98989), (151, 99076),

Gene: Starbow_188 Start: 96143, Stop: 96700, Start Num: 52

Candidate Starts for Starbow_188:

(Start: 52 @96143 has 85 MA's), (69, 96266), (84, 96320), (109, 96413), (122, 96500), (124, 96506), (128, 96527), (129, 96536), (131, 96548), (132, 96554), (134, 96563),

Gene: Stigma_109 Start: 73104, Stop: 73667, Start Num: 47

Candidate Starts for Stigma_109:

(27, 73047), (36, 73074), (Start: 47 @73104 has 7 MA's), (79, 73260), (80, 73272), (85, 73293), (98, 73347), (124, 73479), (126, 73488), (128, 73500), (132, 73527), (135, 73542), (155, 73638),

Gene: Sushi23_181 Start: 97745, Stop: 98302, Start Num: 52

Candidate Starts for Sushi23_181:

(Start: 52 @97745 has 85 MA's), (57, 97772), (65, 97820), (69, 97868), (78, 97898), (84, 97922), (123, 98105), (128, 98129), (129, 98138), (131, 98150), (132, 98156), (134, 98165),

Gene: Targaryen_179 Start: 97642, Stop: 98199, Start Num: 52

Candidate Starts for Targaryen_179:

(Start: 52 @97642 has 85 MA's), (69, 97765), (78, 97795), (84, 97819), (89, 97834), (119, 97969), (126, 98014), (128, 98026), (129, 98035), (131, 98047), (132, 98053), (134, 98062),

Gene: Deutsch_179 Start: 97177, Stop: 97734, Start Num: 52

Candidate Starts for Deutsch_179:

(Start: 52 @97177 has 85 MA's), (57, 97204), (65, 97252), (69, 97300), (78, 97330), (84, 97354), (123, 97537), (128, 97561), (129, 97570), (131, 97582), (132, 97588), (134, 97597),

Gene: Tomas_184 Start: 96480, Stop: 97016, Start Num: 52

Candidate Starts for Tomas_184:

(Start: 52 @96480 has 85 MA's), (66, 96582), (84, 96657), (102, 96726), (105, 96738), (128, 96846), (129, 96855), (132, 96873), (134, 96882), (152, 96978),

Gene: Tribute_178 Start: 97194, Stop: 97751, Start Num: 52

Candidate Starts for Tribute_178:

(Start: 52 @97194 has 85 MA's), (57, 97221), (65, 97269), (69, 97317), (78, 97347), (84, 97371), (123, 97554), (128, 97578), (129, 97587), (131, 97599), (132, 97605), (134, 97614),

Gene: TunaTartare_110 Start: 74387, Stop: 74956, Start Num: 48

Candidate Starts for TunaTartare_110:

(42, 74375), (Start: 48 @74387 has 16 MA's), (Start: 52 @74396 has 85 MA's), (78, 74540), (79, 74543), (80, 74555), (124, 74729), (128, 74750), (129, 74759), (132, 74777), (135, 74792), (152, 74882), (155, 74888), (157, 74900),

Gene: VanLee_87 Start: 48126, Stop: 48647, Start Num: 52

Candidate Starts for VanLee_87:

(Start: 52 @48126 has 85 MA's), (68, 48237), (69, 48243), (73, 48246), (81, 48282), (101, 48357), (110, 48387), (119, 48423), (128, 48480), (132, 48507),

Gene: Warpy_184 Start: 96658, Stop: 97212, Start Num: 52

Candidate Starts for Warpy_184:

(Start: 52 @96658 has 85 MA's), (69, 96781), (84, 96835), (89, 96850), (101, 96901), (126, 97030), (128, 97042), (129, 97051), (131, 97063), (132, 97069), (134, 97078),

Gene: Watermoore_179 Start: 97589, Stop: 98146, Start Num: 52

Candidate Starts for Watermoore_179:

(Start: 52 @97589 has 85 MA's), (57, 97616), (65, 97664), (69, 97712), (78, 97742), (84, 97766), (123, 97949), (128, 97973), (129, 97982), (131, 97994), (132, 98000), (134, 98009),

Gene: Westy_113 Start: 74131, Stop: 74694, Start Num: 47

Candidate Starts for Westy_113:

(27, 74074), (36, 74101), (Start: 47 @74131 has 7 MA's), (79, 74287), (80, 74299), (85, 74320), (98, 74374), (124, 74506), (126, 74515), (128, 74527), (131, 74548), (132, 74554), (135, 74569), (155, 74665),

Gene: WhereRU_180 Start: 96302, Stop: 96859, Start Num: 52

Candidate Starts for WhereRU_180:

(Start: 52 @96302 has 85 MA's), (69, 96425), (78, 96455), (84, 96479), (89, 96494), (119, 96629), (126, 96674), (128, 96686), (129, 96695), (131, 96707), (132, 96713), (134, 96722),

Gene: Wipeout_182 Start: 97566, Stop: 98123, Start Num: 52

Candidate Starts for Wipeout_182:

(Start: 52 @97566 has 85 MA's), (69, 97689), (84, 97743), (109, 97836), (122, 97923), (124, 97929), (128, 97950), (129, 97959), (131, 97971), (132, 97977), (134, 97986),

Gene: Wofford_189 Start: 99505, Stop: 100062, Start Num: 52

Candidate Starts for Wofford_189:

(Start: 52 @99505 has 85 MA's), (65, 99580), (78, 99658), (84, 99682), (109, 99775), (112, 99790), (122, 99862), (128, 99889), (129, 99898), (131, 99910), (132, 99916), (134, 99925),

Gene: Yaboi_189 Start: 96073, Stop: 96627, Start Num: 52

Candidate Starts for Yaboi_189:

(Start: 52 @96073 has 85 MA's), (65, 96148), (84, 96250), (101, 96316), (102, 96319), (122, 96430), (128, 96457), (129, 96466), (131, 96478), (132, 96484), (134, 96493), (143, 96526), (151, 96580),

Gene: Zuko_37 Start: 32848, Stop: 32147, Start Num: 34

Candidate Starts for Zuko_37:

(29, 32860), (Start: 34 @32848 has 1 MA's), (39, 32830), (53, 32791), (61, 32749), (62, 32746), (63, 32743), (67, 32698), (68, 32686), (71, 32671), (72, 32668), (74, 32653), (83, 32593), (96, 32515), (97, 32497), (101, 32482), (104, 32473), (117, 32410), (119, 32389), (128, 32332), (131, 32311), (132, 32305), (140, 32275), (147, 32254),

Gene: pZL12_59c Start: 47859, Stop: 47257, Start Num: 32

Candidate Starts for pZL12_59c:

(32, 47859), (55, 47790), (56, 47787), (79, 47661), (94, 47607), (100, 47568), (111, 47535), (126, 47454), (128, 47442), (132, 47415), (157, 47286),