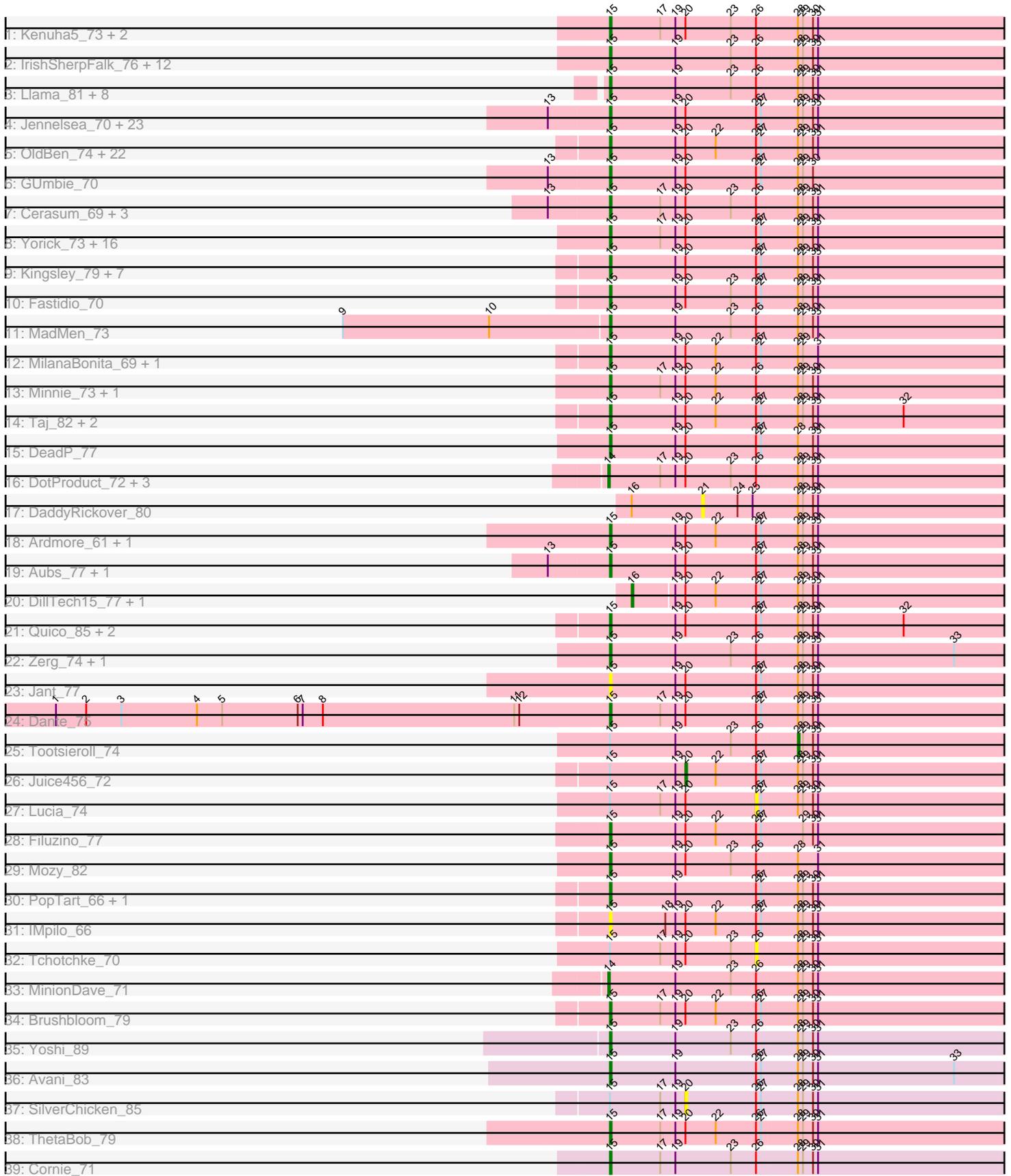


Pham 289160



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 289160 Report

This analysis was run 03/28/26 on database version 641.

Pham number 289160 has 146 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Kenuha5_73, Gandalph_74, SuperGrey_76
- Track 2 : IrishSherpFalk_76, Latretium_72, Squirty_77, Byougenkin_74, Bubbles123_71, Marker_76, XFactor_71, DoRead_77, Rita_82, Ibhuesi_73, Whouxphf_72, Tweety_76, WillSterrel_76
- Track 3 : Llama_81, Ochi17_80, Seabastian_82, AlpineSix_81, OfUltron_82, Wachhund_75, Jinglebell_81, Nichirin_76, Modragons_79
- Track 4 : Jennelsea_70, QuickMath_74, DRBy19_79, Soul22_79, Kimberlium_75, Zizzle_78, Jarcob_75, Mattes_77, Saal_75, Clifton_68, Lizziana_80, IbOuu_70, MulchExplorer_77, Blarby_84, Clank_77, Spoonbill_73, Philus_78, Veteran_68, OlympiaSaint_75, Gorge_77, James_76, Firehouse51_72, Jabbawokkie_85, Zapner_84
- Track 5 : OldBen_74, JoeyJr_77, JalFarm20_84, KingMidas_76, PHappiness_77, Harley_75, Polka14_81, Nimbo_69, Geralt_70, Leperchaun_75, Daenerys_76, Doomphist_80, KristaRAM_74, Inventum_75, RedBird_78, Seagreen_77, Dorothy_78, Poenanya_80, Empress_75, RitaG_77, Deb65_70, Scottish_75, Sassafras_78
- Track 6 : GUmbie_70
- Track 7 : Cerasum_69, Brookers_70, BigPhil_69, Coco12_72
- Track 8 : Yorick_73, DirtMcgirt_73, UncleRicky_73, EleanorGeorge_78, Burwell21_72, Llij_70, Lorde_74, Flathead_75, Blexus_72, Leozinho_75, Martik_77, Pippy_72, Drago_71, Enby_75, Maravista_77, ShroomBoi_76, Phatniss_71
- Track 9 : Kingsley_79, SiSi_72, SG4_73, Doomslug_92, Shauna1_75, LittleShirley_76, Phanphagia_74, Whatsapiecost_70
- Track 10 : Fastidio_70
- Track 11 : MadMen_73
- Track 12 : MilanaBonita_69, Akhila_70
- Track 13 : Minnie_73, Sandalphon_71
- Track 14 : Taj_82, Wee_81, Ms6_74
- Track 15 : DeadP_77
- Track 16 : DotProduct_72, Vivum_76, Totinger_72, GigiOuiOui_70
- Track 17 : DaddyRickover_80
- Track 18 : Ardmore_61, Chuckly_73
- Track 19 : Aubs_77, Guppsters_70
- Track 20 : DillTech15_77, Ogopogo_81
- Track 21 : Quico_85, Girafales_85, Florinda_88
- Track 22 : Zerg_74, Mwanjiwa_79
- Track 23 : Jant_77

- Track 24 : Dante_75
- Track 25 : Tootsieroll_74
- Track 26 : Juice456_72
- Track 27 : Lucia_74
- Track 28 : Filuzino_77
- Track 29 : Mozy_82
- Track 30 : PopTart_66, SassyB_66
- Track 31 : IMpilo_66
- Track 32 : Tchotchke_70
- Track 33 : MinionDave_71
- Track 34 : Brushbloom_79
- Track 35 : Yoshi_89
- Track 36 : Avani_83
- Track 37 : SilverChicken_85
- Track 38 : ThetaBob_79
- Track 39 : Cornie_71

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

The start number called the most often in the published annotations is 15, it was called in 122 of the 131 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila_70, AlpineSix_81, Ardmore_61, Aubs_77, Avani_83, BigPhil_69, Blarby_84, Blexus_72, Brookers_70, Brushbloom_79, Bubbles123_71, Burwell21_72, Byougenkin_74, Cerasum_69, Chuckly_73, Clank_77, Clifton_68, Coco12_72, Cornie_71, DRBy19_79, Daenerys_76, Dante_75, DeadP_77, Deb65_70, DirtMcgirt_73, DoRead_77, Doomphist_80, Doomslug_92, Dorothy_78, Drago_71, EleanorGeorge_78, Empress_75, Enby_75, Fastidio_70, Filuzino_77, Firehouse51_72, Flathead_75, Florinda_88, GUmbe_70, Gandolph_74, Geralt_70, Girafales_85, Gorge_77, Guppsters_70, Harley_75, IMpilo_66, IbOuu_70, Ibhuesi_73, Inventum_75, IrishSherpFalk_76, Jabbawokkie_85, JalFarm20_84, James_76, Jant_77, Jarcob_75, Jennelsea_70, Jinglebell_81, JoeyJr_77, Kenuha5_73, Kimberlium_75, KingMidas_76, Kingsley_79, KristaRAM_74, Latretium_72, Leozinho_75, Leperchaun_75, LittleShirley_76, Lizziana_80, Llama_81, Llij_70, Lorde_74, MadMen_73, Maravista_77, Marker_76, Martik_77, Mattes_77, MilanaBonita_69, Minnie_73, Modragons_79, Mozy_82, Ms6_74, MulchExplorer_77, Mwanjiwa_79, Nichirin_76, Nimbo_69, Ochi17_80, OfUltron_82, OldBen_74, OlympiaSaint_75, PHappiness_77, Phanphagia_74, Phatniss_71, Philus_78, Pippy_72, Poenanya_80, Polka14_81, PopTart_66, QuickMath_74, Quico_85, RedBird_78, RitaG_77, Rita_82, SG4_73, Saal_75, Sandalphon_71, Sassafras_78, SassyB_66, Scottish_75, Sebastian_82, Seagreen_77, Shauna1_75, ShroomBoi_76, SiSi_72, Soul22_79, Spoonbill_73, Squirty_77, SuperGrey_76, Taj_82, ThetaBob_79, Tweety_76, UncleRicky_73, Veteran_68, Wachhund_75, Wee_81, Whatsapiecost_70, Whouxphf_72, WillSterrel_76, XFactor_71, Yorick_73, Yoshi_89, Zapner_84, Zerg_74, Zizzle_78,

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

- Juice456_72, Lucia_74, SilverChicken_85, Tchotchke_70, Tootsieroll_74,

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

- DaddyRickover_80, DillTech15_77, DotProduct_72, GigiOuiOui_70, MinionDave_71, Ogopogo_81, Totinger_72, Vivum_76,

Summary by start number:

Start 14:

- Found in 5 of 146 (3.4%) of genes in pham
- Manual Annotations of this start: 5 of 131
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DotProduct_72 (F1), GigiOuiOui_70 (F1), MinionDave_71 (F1), Totinger_72 (F1), Vivum_76 (F1),

Start 15:

- Found in 138 of 146 (94.5%) of genes in pham
- Manual Annotations of this start: 122 of 131
- Called 96.4% of time when present
- Phage (with cluster) where this start called: Akhila_70 (F1), AlpineSix_81 (F1), Ardmore_61 (F1), Aubs_77 (F1), Avani_83 (F2), BigPhil_69 (F1), Blarby_84 (F), Blexus_72 (F1), Brookers_70 (F1), Brushbloom_79 (F1), Bubbles123_71 (F1), Burwell21_72 (F1), Byougenkin_74 (F1), Cerasum_69 (F1), Chuckly_73 (F1), Clank_77 (F), Clifton_68 (F1), Coco12_72 (F1), Cornie_71 (F5), DRBy19_79 (F1), Daenerys_76 (F1), Dante_75 (F1), DeadP_77 (F1), Deb65_70 (F1), DirtMcgirt_73 (F1), DoRead_77 (F1), Doomphist_80 (F1), Doomslug_92 (F), Dorothy_78 (F1), Drago_71 (F1), EleanorGeorge_78 (F1), Empress_75 (F1), Enby_75 (F1), Fastidio_70 (F1), Filuzino_77 (F1), Firehouse51_72 (F1), Flathead_75 (F1), Florinda_88 (F1), GUmbie_70 (F1), Gandolph_74 (F1), Geralt_70 (F1), Girafales_85 (F1), Gorge_77 (F1), Guppsters_70 (F1), Harley_75 (F1), IMpilo_66 (F1), IbOuu_70 (F1), Ibhubesi_73 (F1), Inventum_75 (F1), IrishSherpFalk_76 (F1), Jabbawokkie_85 (F2), JalFarm20_84 (F1), James_76 (F1), Jant_77 (F1), Jarcob_75 (F1), Jennelsea_70 (F1), Jinglebell_81 (F1), JoeyJr_77 (F1), Kenuha5_73 (F1), Kimberlium_75 (F1), KingMidas_76 (F1), Kingsley_79 (F1), KristaRAM_74 (F1), Latretium_72 (F1), Leozinho_75 (F1), Leperchaun_75 (F1), LittleShirley_76 (F1), Lizziana_80 (F1), Llama_81 (F1), Llij_70 (F1), Lorde_74 (F1), MadMen_73 (F1), Maravista_77 (F1), Marker_76 (F1), Martik_77 (F1), Mattes_77 (F1), MilanaBonita_69 (F1), Minnie_73 (F1), Modragons_79 (F1), Mozy_82 (F1), Ms6_74 (F1), MulchExplorer_77 (F1), Mwanjiwa_79 (F1), Nichirin_76 (F1), Nimbo_69 (F1), Ochi17_80 (F1), OfUltron_82 (F1), OldBen_74 (F1), OlympiaSaint_75 (F1), PHappiness_77 (F1), Phanphagia_74 (F1), Phatniss_71 (F1), Philus_78 (F1), Pippy_72 (F1), Poenanya_80 (F1), Polka14_81 (F1), PopTart_66 (F1), QuickMath_74 (F1), Quico_85 (F1), RedBird_78 (F1), RitaG_77 (F1), Rita_82 (F1), SG4_73 (F1), Saal_75 (F1), Sandalphon_71 (F1), Sassafras_78 (F1), SassyB_66 (F1), Scottish_75 (F1), Seabastian_82 (F1), Seagreen_77 (F1), Shauna1_75 (F1), ShroomBoi_76 (F1), SiSi_72 (F1), Soul22_79 (F2), Spoonbill_73 (F1), Squirty_77 (F3), SuperGrey_76 (F1), Taj_82 (F1), ThetaBob_79 (F4), Tweety_76 (F1), UncleRicky_73 (F1), Veteran_68 (F1), Wachhund_75 (F1), Wee_81 (F1), Whatsapiecost_70 (F1), Whouxphf_72 (F1), WillSterrel_76 (F1), XFactor_71 (F1), Yorick_73 (F1), Yoshi_89 (F2), Zapner_84 (F2), Zerg_74 (F1), Zizzle_78 (F1),

Start 16:

- Found in 3 of 146 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 131
- Called 66.7% of time when present

- Phage (with cluster) where this start called: DillTech15_77 (F1), Ogopogo_81 (F1),

Start 20:

- Found in 113 of 146 (77.4%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Juice456_72 (F1), SilverChicken_85 (F2),

Start 21:

- Found in 1 of 146 (0.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DaddyRickover_80 (F1),

Start 26:

- Found in 145 of 146 (99.3%) of genes in pham
- No Manual Annotations of this start.
- Called 1.4% of time when present
- Phage (with cluster) where this start called: Lucia_74 (F1), Tchotchke_70 (F1),

Start 28:

- Found in 145 of 146 (99.3%) of genes in pham
- Manual Annotations of this start: 1 of 131
- Called 0.7% of time when present
- Phage (with cluster) where this start called: Tootsieroll_74 (F1),

Summary by clusters:

There are 6 clusters represented in this pham: F1, F2, F3, F4, F5, F,

Info for manual annotations of cluster F1:

- Start number 14 was manually annotated 5 times for cluster F1.
- Start number 15 was manually annotated 114 times for cluster F1.
- Start number 16 was manually annotated 2 times for cluster F1.
- Start number 20 was manually annotated 1 time for cluster F1.
- Start number 28 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 15 was manually annotated 5 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 15 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 15 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:

- Start number 15 was manually annotated 1 time for cluster F5.

Gene Information:

Gene: Akhila_70 Start: 45997, Stop: 46260, Start Num: 15

Candidate Starts for Akhila_70:

(Start: 15 @45997 has 122 MA's), (19, 46036), (Start: 20 @46042 has 1 MA's), (22, 46060), (26, 46084), (27, 46087), (Start: 28 @46108 has 1 MA's), (29, 46111), (31, 46120),

Gene: AlpineSix_81 Start: 48210, Stop: 48473, Start Num: 15

Candidate Starts for AlpineSix_81:

(Start: 15 @48210 has 122 MA's), (19, 48249), (23, 48282), (26, 48297), (Start: 28 @48321 has 1 MA's), (29, 48324), (30, 48330), (31, 48333),

Gene: Ardmore_61 Start: 42203, Stop: 42466, Start Num: 15

Candidate Starts for Ardmore_61:

(Start: 15 @42203 has 122 MA's), (19, 42242), (Start: 20 @42248 has 1 MA's), (22, 42266), (26, 42290), (27, 42293), (Start: 28 @42314 has 1 MA's), (29, 42317), (30, 42323), (31, 42326),

Gene: Aubs_77 Start: 48345, Stop: 48608, Start Num: 15

Candidate Starts for Aubs_77:

(13, 48309), (Start: 15 @48345 has 122 MA's), (19, 48384), (Start: 20 @48390 has 1 MA's), (26, 48432), (27, 48435), (Start: 28 @48456 has 1 MA's), (29, 48459), (30, 48465), (31, 48468),

Gene: Avani_83 Start: 45436, Stop: 45696, Start Num: 15

Candidate Starts for Avani_83:

(Start: 15 @45436 has 122 MA's), (19, 45475), (26, 45523), (27, 45526), (Start: 28 @45547 has 1 MA's), (29, 45550), (30, 45556), (31, 45559), (33, 45640),

Gene: BigPhil_69 Start: 43418, Stop: 43681, Start Num: 15

Candidate Starts for BigPhil_69:

(13, 43382), (Start: 15 @43418 has 122 MA's), (17, 43448), (19, 43457), (Start: 20 @43463 has 1 MA's), (23, 43490), (26, 43505), (Start: 28 @43529 has 1 MA's), (29, 43532), (30, 43538), (31, 43541),

Gene: Blarby_84 Start: 46350, Stop: 46613, Start Num: 15

Candidate Starts for Blarby_84:

(13, 46314), (Start: 15 @46350 has 122 MA's), (19, 46389), (Start: 20 @46395 has 1 MA's), (26, 46437), (27, 46440), (Start: 28 @46461 has 1 MA's), (29, 46464), (30, 46470), (31, 46473),

Gene: Blexus_72 Start: 47780, Stop: 48040, Start Num: 15

Candidate Starts for Blexus_72:

(Start: 15 @47780 has 122 MA's), (17, 47810), (19, 47819), (Start: 20 @47825 has 1 MA's), (26, 47867), (27, 47870), (Start: 28 @47891 has 1 MA's), (29, 47894), (30, 47900), (31, 47903),

Gene: Brookers_70 Start: 46369, Stop: 46632, Start Num: 15

Candidate Starts for Brookers_70:

(13, 46333), (Start: 15 @46369 has 122 MA's), (17, 46399), (19, 46408), (Start: 20 @46414 has 1 MA's), (23, 46441), (26, 46456), (Start: 28 @46480 has 1 MA's), (29, 46483), (30, 46489), (31, 46492),

Gene: Brushbloom_79 Start: 49136, Stop: 49399, Start Num: 15

Candidate Starts for Brushbloom_79:

(Start: 15 @49136 has 122 MA's), (17, 49166), (19, 49175), (Start: 20 @49181 has 1 MA's), (22, 49199), (26, 49223), (27, 49226), (Start: 28 @49247 has 1 MA's), (29, 49250), (30, 49256), (31, 49259),

Gene: Bubbles123_71 Start: 47407, Stop: 47667, Start Num: 15

Candidate Starts for Bubbles123_71:

(Start: 15 @47407 has 122 MA's), (19, 47446), (23, 47479), (26, 47494), (Start: 28 @47518 has 1 MA's), (29, 47521), (30, 47527), (31, 47530),

Gene: Burwell21_72 Start: 47228, Stop: 47491, Start Num: 15

Candidate Starts for Burwell21_72:

(Start: 15 @47228 has 122 MA's), (17, 47258), (19, 47267), (Start: 20 @47273 has 1 MA's), (26, 47315), (27, 47318), (Start: 28 @47339 has 1 MA's), (29, 47342), (30, 47348), (31, 47351),

Gene: Byougenkin_74 Start: 45276, Stop: 45536, Start Num: 15

Candidate Starts for Byougenkin_74:

(Start: 15 @45276 has 122 MA's), (19, 45315), (23, 45348), (26, 45363), (Start: 28 @45387 has 1 MA's), (29, 45390), (30, 45396), (31, 45399),

Gene: Cerasum_69 Start: 43436, Stop: 43699, Start Num: 15

Candidate Starts for Cerasum_69:

(13, 43400), (Start: 15 @43436 has 122 MA's), (17, 43466), (19, 43475), (Start: 20 @43481 has 1 MA's), (23, 43508), (26, 43523), (Start: 28 @43547 has 1 MA's), (29, 43550), (30, 43556), (31, 43559),

Gene: Chuckly_73 Start: 44774, Stop: 45043, Start Num: 15

Candidate Starts for Chuckly_73:

(Start: 15 @44774 has 122 MA's), (19, 44813), (Start: 20 @44819 has 1 MA's), (22, 44837), (26, 44861), (27, 44864), (Start: 28 @44885 has 1 MA's), (29, 44888), (30, 44894), (31, 44897),

Gene: Clank_77 Start: 45681, Stop: 45944, Start Num: 15

Candidate Starts for Clank_77:

(13, 45645), (Start: 15 @45681 has 122 MA's), (19, 45720), (Start: 20 @45726 has 1 MA's), (26, 45768), (27, 45771), (Start: 28 @45792 has 1 MA's), (29, 45795), (30, 45801), (31, 45804),

Gene: Clifton_68 Start: 45729, Stop: 45998, Start Num: 15

Candidate Starts for Clifton_68:

(13, 45693), (Start: 15 @45729 has 122 MA's), (19, 45768), (Start: 20 @45774 has 1 MA's), (26, 45816), (27, 45819), (Start: 28 @45840 has 1 MA's), (29, 45843), (30, 45849), (31, 45852),

Gene: Coco12_72 Start: 47493, Stop: 47756, Start Num: 15

Candidate Starts for Coco12_72:

(13, 47457), (Start: 15 @47493 has 122 MA's), (17, 47523), (19, 47532), (Start: 20 @47538 has 1 MA's), (23, 47565), (26, 47580), (Start: 28 @47604 has 1 MA's), (29, 47607), (30, 47613), (31, 47616),

Gene: Cornie_71 Start: 45997, Stop: 46260, Start Num: 15

Candidate Starts for Cornie_71:

(Start: 15 @45997 has 122 MA's), (17, 46027), (19, 46036), (23, 46069), (26, 46084), (Start: 28 @46108 has 1 MA's), (29, 46111), (30, 46117), (31, 46120),

Gene: DRBy19_79 Start: 49458, Stop: 49727, Start Num: 15

Candidate Starts for DRBy19_79:

(13, 49422), (Start: 15 @49458 has 122 MA's), (19, 49497), (Start: 20 @49503 has 1 MA's), (26, 49545), (27, 49548), (Start: 28 @49569 has 1 MA's), (29, 49572), (30, 49578), (31, 49581),

Gene: DaddyRickover_80 Start: 49400, Stop: 49606, Start Num: 21

Candidate Starts for DaddyRickover_80:

(Start: 16 @49358 has 2 MA's), (21, 49400), (24, 49421), (25, 49430), (Start: 28 @49457 has 1 MA's), (29, 49460), (30, 49466), (31, 49469),

Gene: Daenerys_76 Start: 48942, Stop: 49205, Start Num: 15

Candidate Starts for Daenerys_76:

(Start: 15 @48942 has 122 MA's), (19, 48981), (Start: 20 @48987 has 1 MA's), (22, 49005), (26, 49029), (27, 49032), (Start: 28 @49053 has 1 MA's), (29, 49056), (30, 49062), (31, 49065),

Gene: Dante_75 Start: 49464, Stop: 49727, Start Num: 15

Candidate Starts for Dante_75:

(1, 49134), (2, 49152), (3, 49173), (4, 49218), (5, 49233), (6, 49278), (7, 49281), (8, 49293), (11, 49407), (12, 49410), (Start: 15 @49464 has 122 MA's), (17, 49494), (19, 49503), (Start: 20 @49509 has 1 MA's), (26, 49551), (27, 49554), (Start: 28 @49575 has 1 MA's), (29, 49578), (30, 49584), (31, 49587),

Gene: DeadP_77 Start: 46561, Stop: 46824, Start Num: 15

Candidate Starts for DeadP_77:

(Start: 15 @46561 has 122 MA's), (19, 46600), (Start: 20 @46606 has 1 MA's), (26, 46648), (27, 46651), (Start: 28 @46672 has 1 MA's), (30, 46681), (31, 46684),

Gene: Deb65_70 Start: 46664, Stop: 46927, Start Num: 15

Candidate Starts for Deb65_70:

(Start: 15 @46664 has 122 MA's), (19, 46703), (Start: 20 @46709 has 1 MA's), (22, 46727), (26, 46751), (27, 46754), (Start: 28 @46775 has 1 MA's), (29, 46778), (30, 46784), (31, 46787),

Gene: DillTech15_77 Start: 46271, Stop: 46519, Start Num: 16

Candidate Starts for DillTech15_77:

(Start: 16 @46271 has 2 MA's), (19, 46295), (Start: 20 @46301 has 1 MA's), (22, 46319), (26, 46343), (27, 46346), (Start: 28 @46367 has 1 MA's), (29, 46370), (30, 46376), (31, 46379),

Gene: DirtMcgirt_73 Start: 44667, Stop: 44927, Start Num: 15

Candidate Starts for DirtMcgirt_73:

(Start: 15 @44667 has 122 MA's), (17, 44697), (19, 44706), (Start: 20 @44712 has 1 MA's), (26, 44754), (27, 44757), (Start: 28 @44778 has 1 MA's), (29, 44781), (30, 44787), (31, 44790),

Gene: DoRead_77 Start: 46011, Stop: 46274, Start Num: 15

Candidate Starts for DoRead_77:

(Start: 15 @46011 has 122 MA's), (19, 46050), (23, 46083), (26, 46098), (Start: 28 @46122 has 1 MA's), (29, 46125), (30, 46131), (31, 46134),

Gene: Doomphist_80 Start: 48755, Stop: 49015, Start Num: 15

Candidate Starts for Doomphist_80:

(Start: 15 @48755 has 122 MA's), (19, 48794), (Start: 20 @48800 has 1 MA's), (22, 48818), (26, 48842), (27, 48845), (Start: 28 @48866 has 1 MA's), (29, 48869), (30, 48875), (31, 48878),

Gene: Doomslug_92 Start: 50173, Stop: 50436, Start Num: 15

Candidate Starts for Doomslug_92:

(Start: 15 @50173 has 122 MA's), (19, 50212), (Start: 20 @50218 has 1 MA's), (26, 50260), (27, 50263), (Start: 28 @50284 has 1 MA's), (29, 50287), (30, 50293), (31, 50296),

Gene: Dorothy_78 Start: 49393, Stop: 49656, Start Num: 15

Candidate Starts for Dorothy_78:

(Start: 15 @49393 has 122 MA's), (19, 49432), (Start: 20 @49438 has 1 MA's), (22, 49456), (26, 49480), (27, 49483), (Start: 28 @49504 has 1 MA's), (29, 49507), (30, 49513), (31, 49516),

Gene: DotProduct_72 Start: 46308, Stop: 46571, Start Num: 14

Candidate Starts for DotProduct_72:

(Start: 14 @46308 has 5 MA's), (17, 46338), (19, 46347), (Start: 20 @46353 has 1 MA's), (23, 46380), (26, 46395), (Start: 28 @46419 has 1 MA's), (29, 46422), (30, 46428), (31, 46431),

Gene: Drago_71 Start: 44670, Stop: 44930, Start Num: 15

Candidate Starts for Drago_71:

(Start: 15 @44670 has 122 MA's), (17, 44700), (19, 44709), (Start: 20 @44715 has 1 MA's), (26, 44757), (27, 44760), (Start: 28 @44781 has 1 MA's), (29, 44784), (30, 44790), (31, 44793),

Gene: EleanorGeorge_78 Start: 48348, Stop: 48611, Start Num: 15

Candidate Starts for EleanorGeorge_78:

(Start: 15 @48348 has 122 MA's), (17, 48378), (19, 48387), (Start: 20 @48393 has 1 MA's), (26, 48435), (27, 48438), (Start: 28 @48459 has 1 MA's), (29, 48462), (30, 48468), (31, 48471),

Gene: Empress_75 Start: 47566, Stop: 47826, Start Num: 15

Candidate Starts for Empress_75:

(Start: 15 @47566 has 122 MA's), (19, 47605), (Start: 20 @47611 has 1 MA's), (22, 47629), (26, 47653), (27, 47656), (Start: 28 @47677 has 1 MA's), (29, 47680), (30, 47686), (31, 47689),

Gene: Enby_75 Start: 44946, Stop: 45206, Start Num: 15

Candidate Starts for Enby_75:

(Start: 15 @44946 has 122 MA's), (17, 44976), (19, 44985), (Start: 20 @44991 has 1 MA's), (26, 45033), (27, 45036), (Start: 28 @45057 has 1 MA's), (29, 45060), (30, 45066), (31, 45069),

Gene: Fastidio_70 Start: 43064, Stop: 43327, Start Num: 15

Candidate Starts for Fastidio_70:

(Start: 15 @43064 has 122 MA's), (19, 43103), (Start: 20 @43109 has 1 MA's), (23, 43136), (26, 43151), (27, 43154), (Start: 28 @43175 has 1 MA's), (29, 43178), (30, 43184), (31, 43187),

Gene: Filuzino_77 Start: 49292, Stop: 49555, Start Num: 15

Candidate Starts for Filuzino_77:

(Start: 15 @49292 has 122 MA's), (19, 49331), (Start: 20 @49337 has 1 MA's), (22, 49355), (26, 49379), (27, 49382), (29, 49406), (30, 49412), (31, 49415),

Gene: Firehouse51_72 Start: 48557, Stop: 48820, Start Num: 15

Candidate Starts for Firehouse51_72:

(13, 48521), (Start: 15 @48557 has 122 MA's), (19, 48596), (Start: 20 @48602 has 1 MA's), (26, 48644), (27, 48647), (Start: 28 @48668 has 1 MA's), (29, 48671), (30, 48677), (31, 48680),

Gene: Flathead_75 Start: 47006, Stop: 47269, Start Num: 15

Candidate Starts for Flathead_75:

(Start: 15 @47006 has 122 MA's), (17, 47036), (19, 47045), (Start: 20 @47051 has 1 MA's), (26, 47093), (27, 47096), (Start: 28 @47117 has 1 MA's), (29, 47120), (30, 47126), (31, 47129),

Gene: Florinda_88 Start: 50208, Stop: 50471, Start Num: 15

Candidate Starts for Florinda_88:

(Start: 15 @50208 has 122 MA's), (19, 50247), (Start: 20 @50253 has 1 MA's), (26, 50295), (27, 50298), (Start: 28 @50319 has 1 MA's), (29, 50322), (30, 50328), (31, 50331), (32, 50382),

Gene: GUmbie_70 Start: 46728, Stop: 46991, Start Num: 15

Candidate Starts for GUmbie_70:

(13, 46692), (Start: 15 @46728 has 122 MA's), (19, 46767), (Start: 20 @46773 has 1 MA's), (26, 46815), (27, 46818), (Start: 28 @46839 has 1 MA's), (29, 46842), (30, 46848),

Gene: Gandalph_74 Start: 44756, Stop: 45019, Start Num: 15

Candidate Starts for Gandalph_74:

(Start: 15 @44756 has 122 MA's), (17, 44786), (19, 44795), (Start: 20 @44801 has 1 MA's), (23, 44828), (26, 44843), (Start: 28 @44867 has 1 MA's), (29, 44870), (30, 44876), (31, 44879),

Gene: Geralt_70 Start: 46662, Stop: 46925, Start Num: 15

Candidate Starts for Geralt_70:

(Start: 15 @46662 has 122 MA's), (19, 46701), (Start: 20 @46707 has 1 MA's), (22, 46725), (26, 46749), (27, 46752), (Start: 28 @46773 has 1 MA's), (29, 46776), (30, 46782), (31, 46785),

Gene: GigiOuiOui_70 Start: 46399, Stop: 46662, Start Num: 14

Candidate Starts for GigiOuiOui_70:

(Start: 14 @46399 has 5 MA's), (17, 46429), (19, 46438), (Start: 20 @46444 has 1 MA's), (23, 46471), (26, 46486), (Start: 28 @46510 has 1 MA's), (29, 46513), (30, 46519), (31, 46522),

Gene: Girafales_85 Start: 49813, Stop: 50076, Start Num: 15

Candidate Starts for Girafales_85:

(Start: 15 @49813 has 122 MA's), (19, 49852), (Start: 20 @49858 has 1 MA's), (26, 49900), (27, 49903), (Start: 28 @49924 has 1 MA's), (29, 49927), (30, 49933), (31, 49936), (32, 49987),

Gene: Gorge_77 Start: 48668, Stop: 48937, Start Num: 15

Candidate Starts for Gorge_77:

(13, 48632), (Start: 15 @48668 has 122 MA's), (19, 48707), (Start: 20 @48713 has 1 MA's), (26, 48755), (27, 48758), (Start: 28 @48779 has 1 MA's), (29, 48782), (30, 48788), (31, 48791),

Gene: Guppsters_70 Start: 45099, Stop: 45362, Start Num: 15

Candidate Starts for Guppsters_70:

(13, 45063), (Start: 15 @45099 has 122 MA's), (19, 45138), (Start: 20 @45144 has 1 MA's), (26, 45186), (27, 45189), (Start: 28 @45210 has 1 MA's), (29, 45213), (30, 45219), (31, 45222),

Gene: Harley_75 Start: 46896, Stop: 47156, Start Num: 15

Candidate Starts for Harley_75:

(Start: 15 @46896 has 122 MA's), (19, 46935), (Start: 20 @46941 has 1 MA's), (22, 46959), (26, 46983), (27, 46986), (Start: 28 @47007 has 1 MA's), (29, 47010), (30, 47016), (31, 47019),

Gene: IMpilo_66 Start: 43421, Stop: 43684, Start Num: 15

Candidate Starts for IMpilo_66:

(Start: 15 @43421 has 122 MA's), (18, 43454), (19, 43460), (Start: 20 @43466 has 1 MA's), (22, 43484), (26, 43508), (27, 43511), (Start: 28 @43532 has 1 MA's), (29, 43535), (30, 43541), (31, 43544),

Gene: IbOuu_70 Start: 45535, Stop: 45804, Start Num: 15

Candidate Starts for IbOuu_70:

(13, 45499), (Start: 15 @45535 has 122 MA's), (19, 45574), (Start: 20 @45580 has 1 MA's), (26, 45622), (27, 45625), (Start: 28 @45646 has 1 MA's), (29, 45649), (30, 45655), (31, 45658),

Gene: Ibhubesi_73 Start: 45070, Stop: 45330, Start Num: 15

Candidate Starts for Ibhubesi_73:

(Start: 15 @45070 has 122 MA's), (19, 45109), (23, 45142), (26, 45157), (Start: 28 @45181 has 1 MA's), (29, 45184), (30, 45190), (31, 45193),

Gene: Inventum_75 Start: 47578, Stop: 47841, Start Num: 15

Candidate Starts for Inventum_75:

(Start: 15 @47578 has 122 MA's), (19, 47617), (Start: 20 @47623 has 1 MA's), (22, 47641), (26, 47665), (27, 47668), (Start: 28 @47689 has 1 MA's), (29, 47692), (30, 47698), (31, 47701),

Gene: IrishSherpFalk_76 Start: 48130, Stop: 48390, Start Num: 15

Candidate Starts for IrishSherpFalk_76:

(Start: 15 @48130 has 122 MA's), (19, 48169), (23, 48202), (26, 48217), (Start: 28 @48241 has 1 MA's), (29, 48244), (30, 48250), (31, 48253),

Gene: Jabbawokkie_85 Start: 46270, Stop: 46533, Start Num: 15

Candidate Starts for Jabbawokkie_85:

(13, 46234), (Start: 15 @46270 has 122 MA's), (19, 46309), (Start: 20 @46315 has 1 MA's), (26, 46357), (27, 46360), (Start: 28 @46381 has 1 MA's), (29, 46384), (30, 46390), (31, 46393),

Gene: JalFarm20_84 Start: 48356, Stop: 48619, Start Num: 15

Candidate Starts for JalFarm20_84:

(Start: 15 @48356 has 122 MA's), (19, 48395), (Start: 20 @48401 has 1 MA's), (22, 48419), (26, 48443), (27, 48446), (Start: 28 @48467 has 1 MA's), (29, 48470), (30, 48476), (31, 48479),

Gene: James_76 Start: 48793, Stop: 49062, Start Num: 15

Candidate Starts for James_76:

(13, 48757), (Start: 15 @48793 has 122 MA's), (19, 48832), (Start: 20 @48838 has 1 MA's), (26, 48880), (27, 48883), (Start: 28 @48904 has 1 MA's), (29, 48907), (30, 48913), (31, 48916),

Gene: Jant_77 Start: 46286, Stop: 46549, Start Num: 15

Candidate Starts for Jant_77:

(Start: 15 @46286 has 122 MA's), (19, 46325), (Start: 20 @46331 has 1 MA's), (26, 46373), (27, 46376), (Start: 28 @46397 has 1 MA's), (29, 46400), (30, 46406), (31, 46409),

Gene: Jarcob_75 Start: 48390, Stop: 48659, Start Num: 15

Candidate Starts for Jarcob_75:

(13, 48354), (Start: 15 @48390 has 122 MA's), (19, 48429), (Start: 20 @48435 has 1 MA's), (26, 48477), (27, 48480), (Start: 28 @48501 has 1 MA's), (29, 48504), (30, 48510), (31, 48513),

Gene: Jennelsea_70 Start: 45951, Stop: 46214, Start Num: 15

Candidate Starts for Jennelsea_70:

(13, 45915), (Start: 15 @45951 has 122 MA's), (19, 45990), (Start: 20 @45996 has 1 MA's), (26, 46038), (27, 46041), (Start: 28 @46062 has 1 MA's), (29, 46065), (30, 46071), (31, 46074),

Gene: Jinglebell_81 Start: 48209, Stop: 48472, Start Num: 15

Candidate Starts for Jinglebell_81:

(Start: 15 @48209 has 122 MA's), (19, 48248), (23, 48281), (26, 48296), (Start: 28 @48320 has 1 MA's), (29, 48323), (30, 48329), (31, 48332),

Gene: JoeyJr_77 Start: 48567, Stop: 48830, Start Num: 15

Candidate Starts for JoeyJr_77:

(Start: 15 @48567 has 122 MA's), (19, 48606), (Start: 20 @48612 has 1 MA's), (22, 48630), (26, 48654), (27, 48657), (Start: 28 @48678 has 1 MA's), (29, 48681), (30, 48687), (31, 48690),

Gene: Juice456_72 Start: 46357, Stop: 46575, Start Num: 20

Candidate Starts for Juice456_72:

(Start: 15 @46312 has 122 MA's), (19, 46351), (Start: 20 @46357 has 1 MA's), (22, 46375), (26, 46399), (27, 46402), (Start: 28 @46423 has 1 MA's), (29, 46426), (30, 46432), (31, 46435),

Gene: Kenuha5_73 Start: 48117, Stop: 48380, Start Num: 15

Candidate Starts for Kenuha5_73:

(Start: 15 @48117 has 122 MA's), (17, 48147), (19, 48156), (Start: 20 @48162 has 1 MA's), (23, 48189), (26, 48204), (Start: 28 @48228 has 1 MA's), (29, 48231), (30, 48237), (31, 48240),

Gene: Kimberlium_75 Start: 46441, Stop: 46704, Start Num: 15

Candidate Starts for Kimberlium_75:

(13, 46405), (Start: 15 @46441 has 122 MA's), (19, 46480), (Start: 20 @46486 has 1 MA's), (26, 46528), (27, 46531), (Start: 28 @46552 has 1 MA's), (29, 46555), (30, 46561), (31, 46564),

Gene: KingMidas_76 Start: 47981, Stop: 48241, Start Num: 15

Candidate Starts for KingMidas_76:

(Start: 15 @47981 has 122 MA's), (19, 48020), (Start: 20 @48026 has 1 MA's), (22, 48044), (26, 48068), (27, 48071), (Start: 28 @48092 has 1 MA's), (29, 48095), (30, 48101), (31, 48104),

Gene: Kingsley_79 Start: 49818, Stop: 50081, Start Num: 15

Candidate Starts for Kingsley_79:

(Start: 15 @49818 has 122 MA's), (19, 49857), (Start: 20 @49863 has 1 MA's), (26, 49905), (27, 49908), (Start: 28 @49929 has 1 MA's), (29, 49932), (30, 49938), (31, 49941),

Gene: KristaRAM_74 Start: 46681, Stop: 46944, Start Num: 15

Candidate Starts for KristaRAM_74:

(Start: 15 @46681 has 122 MA's), (19, 46720), (Start: 20 @46726 has 1 MA's), (22, 46744), (26, 46768), (27, 46771), (Start: 28 @46792 has 1 MA's), (29, 46795), (30, 46801), (31, 46804),

Gene: Latretium_72 Start: 45212, Stop: 45475, Start Num: 15

Candidate Starts for Latretium_72:

(Start: 15 @45212 has 122 MA's), (19, 45251), (23, 45284), (26, 45299), (Start: 28 @45323 has 1 MA's), (29, 45326), (30, 45332), (31, 45335),

Gene: Leozinho_75 Start: 45465, Stop: 45725, Start Num: 15

Candidate Starts for Leozinho_75:

(Start: 15 @45465 has 122 MA's), (17, 45495), (19, 45504), (Start: 20 @45510 has 1 MA's), (26, 45552), (27, 45555), (Start: 28 @45576 has 1 MA's), (29, 45579), (30, 45585), (31, 45588),

Gene: Leperchaun_75 Start: 47801, Stop: 48064, Start Num: 15

Candidate Starts for Leperchaun_75:

(Start: 15 @47801 has 122 MA's), (19, 47840), (Start: 20 @47846 has 1 MA's), (22, 47864), (26, 47888), (27, 47891), (Start: 28 @47912 has 1 MA's), (29, 47915), (30, 47921), (31, 47924),

Gene: LittleShirley_76 Start: 46737, Stop: 47000, Start Num: 15

Candidate Starts for LittleShirley_76:

(Start: 15 @46737 has 122 MA's), (19, 46776), (Start: 20 @46782 has 1 MA's), (26, 46824), (27, 46827), (Start: 28 @46848 has 1 MA's), (29, 46851), (30, 46857), (31, 46860),

Gene: Lizziana_80 Start: 49116, Stop: 49385, Start Num: 15

Candidate Starts for Lizziana_80:

(13, 49080), (Start: 15 @49116 has 122 MA's), (19, 49155), (Start: 20 @49161 has 1 MA's), (26, 49203), (27, 49206), (Start: 28 @49227 has 1 MA's), (29, 49230), (30, 49236), (31, 49239),

Gene: Llama_81 Start: 48065, Stop: 48328, Start Num: 15

Candidate Starts for Llama_81:

(Start: 15 @48065 has 122 MA's), (19, 48104), (23, 48137), (26, 48152), (Start: 28 @48176 has 1 MA's), (29, 48179), (30, 48185), (31, 48188),

Gene: Llij_70 Start: 44824, Stop: 45084, Start Num: 15

Candidate Starts for Llij_70:

(Start: 15 @44824 has 122 MA's), (17, 44854), (19, 44863), (Start: 20 @44869 has 1 MA's), (26, 44911), (27, 44914), (Start: 28 @44935 has 1 MA's), (29, 44938), (30, 44944), (31, 44947),

Gene: Lorde_74 Start: 44111, Stop: 44371, Start Num: 15

Candidate Starts for Lorde_74:

(Start: 15 @44111 has 122 MA's), (17, 44141), (19, 44150), (Start: 20 @44156 has 1 MA's), (26, 44198), (27, 44201), (Start: 28 @44222 has 1 MA's), (29, 44225), (30, 44231), (31, 44234),

Gene: Lucia_74 Start: 45046, Stop: 45219, Start Num: 26

Candidate Starts for Lucia_74:

(Start: 15 @44959 has 122 MA's), (17, 44989), (19, 44998), (Start: 20 @45004 has 1 MA's), (26, 45046), (27, 45049), (Start: 28 @45070 has 1 MA's), (29, 45073), (30, 45079), (31, 45082),

Gene: MadMen_73 Start: 46044, Stop: 46307, Start Num: 15

Candidate Starts for MadMen_73:

(9, 45888), (10, 45975), (Start: 15 @46044 has 122 MA's), (19, 46083), (23, 46116), (26, 46131), (Start: 28 @46155 has 1 MA's), (29, 46158), (30, 46164), (31, 46167),

Gene: Maravista_77 Start: 50144, Stop: 50407, Start Num: 15

Candidate Starts for Maravista_77:

(Start: 15 @50144 has 122 MA's), (17, 50174), (19, 50183), (Start: 20 @50189 has 1 MA's), (26, 50231), (27, 50234), (Start: 28 @50255 has 1 MA's), (29, 50258), (30, 50264), (31, 50267),

Gene: Marker_76 Start: 46631, Stop: 46891, Start Num: 15

Candidate Starts for Marker_76:

(Start: 15 @46631 has 122 MA's), (19, 46670), (23, 46703), (26, 46718), (Start: 28 @46742 has 1 MA's), (29, 46745), (30, 46751), (31, 46754),

Gene: Martik_77 Start: 49625, Stop: 49885, Start Num: 15

Candidate Starts for Martik_77:

(Start: 15 @49625 has 122 MA's), (17, 49655), (19, 49664), (Start: 20 @49670 has 1 MA's), (26, 49712), (27, 49715), (Start: 28 @49736 has 1 MA's), (29, 49739), (30, 49745), (31, 49748),

Gene: Mattes_77 Start: 48793, Stop: 49062, Start Num: 15

Candidate Starts for Mattes_77:

(13, 48757), (Start: 15 @48793 has 122 MA's), (19, 48832), (Start: 20 @48838 has 1 MA's), (26, 48880), (27, 48883), (Start: 28 @48904 has 1 MA's), (29, 48907), (30, 48913), (31, 48916),

Gene: MilanaBonita_69 Start: 45997, Stop: 46260, Start Num: 15

Candidate Starts for MilanaBonita_69:

(Start: 15 @45997 has 122 MA's), (19, 46036), (Start: 20 @46042 has 1 MA's), (22, 46060), (26, 46084), (27, 46087), (Start: 28 @46108 has 1 MA's), (29, 46111), (31, 46120),

Gene: MinionDave_71 Start: 47066, Stop: 47329, Start Num: 14
Candidate Starts for MinionDave_71:
(Start: 14 @47066 has 5 MA's), (19, 47105), (23, 47138), (26, 47153), (Start: 28 @47177 has 1 MA's),
(29, 47180), (30, 47186), (31, 47189),

Gene: Minnie_73 Start: 49177, Stop: 49440, Start Num: 15
Candidate Starts for Minnie_73:
(Start: 15 @49177 has 122 MA's), (17, 49207), (19, 49216), (Start: 20 @49222 has 1 MA's), (22,
49240), (26, 49264), (Start: 28 @49288 has 1 MA's), (29, 49291), (30, 49297), (31, 49300),

Gene: Modragons_79 Start: 48053, Stop: 48316, Start Num: 15
Candidate Starts for Modragons_79:
(Start: 15 @48053 has 122 MA's), (19, 48092), (23, 48125), (26, 48140), (Start: 28 @48164 has 1
MA's), (29, 48167), (30, 48173), (31, 48176),

Gene: Mozy_82 Start: 46888, Stop: 47151, Start Num: 15
Candidate Starts for Mozy_82:
(Start: 15 @46888 has 122 MA's), (19, 46927), (Start: 20 @46933 has 1 MA's), (23, 46960), (26,
46975), (Start: 28 @46999 has 1 MA's), (31, 47011),

Gene: Ms6_74 Start: 43560, Stop: 43823, Start Num: 15
Candidate Starts for Ms6_74:
(Start: 15 @43560 has 122 MA's), (19, 43599), (Start: 20 @43605 has 1 MA's), (22, 43623), (26,
43647), (27, 43650), (Start: 28 @43671 has 1 MA's), (29, 43674), (30, 43680), (31, 43683), (32,
43734),

Gene: MulchExplorer_77 Start: 46440, Stop: 46703, Start Num: 15
Candidate Starts for MulchExplorer_77:
(13, 46404), (Start: 15 @46440 has 122 MA's), (19, 46479), (Start: 20 @46485 has 1 MA's), (26,
46527), (27, 46530), (Start: 28 @46551 has 1 MA's), (29, 46554), (30, 46560), (31, 46563),

Gene: Mwanjiwa_79 Start: 48590, Stop: 48853, Start Num: 15
Candidate Starts for Mwanjiwa_79:
(Start: 15 @48590 has 122 MA's), (19, 48629), (23, 48662), (26, 48677), (Start: 28 @48701 has 1
MA's), (29, 48704), (30, 48710), (31, 48713), (33, 48794),

Gene: Nichirin_76 Start: 47427, Stop: 47690, Start Num: 15
Candidate Starts for Nichirin_76:
(Start: 15 @47427 has 122 MA's), (19, 47466), (23, 47499), (26, 47514), (Start: 28 @47538 has 1
MA's), (29, 47541), (30, 47547), (31, 47550),

Gene: Nimbo_69 Start: 46665, Stop: 46928, Start Num: 15
Candidate Starts for Nimbo_69:
(Start: 15 @46665 has 122 MA's), (19, 46704), (Start: 20 @46710 has 1 MA's), (22, 46728), (26,
46752), (27, 46755), (Start: 28 @46776 has 1 MA's), (29, 46779), (30, 46785), (31, 46788),

Gene: Ochi17_80 Start: 47660, Stop: 47923, Start Num: 15
Candidate Starts for Ochi17_80:
(Start: 15 @47660 has 122 MA's), (19, 47699), (23, 47732), (26, 47747), (Start: 28 @47771 has 1
MA's), (29, 47774), (30, 47780), (31, 47783),

Gene: OfUltron_82 Start: 48209, Stop: 48472, Start Num: 15
Candidate Starts for OfUltron_82:

(Start: 15 @48209 has 122 MA's), (19, 48248), (23, 48281), (26, 48296), (Start: 28 @48320 has 1 MA's), (29, 48323), (30, 48329), (31, 48332),

Gene: Ogotogo_81 Start: 47195, Stop: 47443, Start Num: 16

Candidate Starts for Ogotogo_81:

(Start: 16 @47195 has 2 MA's), (19, 47219), (Start: 20 @47225 has 1 MA's), (22, 47243), (26, 47267), (27, 47270), (Start: 28 @47291 has 1 MA's), (29, 47294), (30, 47300), (31, 47303),

Gene: OldBen_74 Start: 48057, Stop: 48320, Start Num: 15

Candidate Starts for OldBen_74:

(Start: 15 @48057 has 122 MA's), (19, 48096), (Start: 20 @48102 has 1 MA's), (22, 48120), (26, 48144), (27, 48147), (Start: 28 @48168 has 1 MA's), (29, 48171), (30, 48177), (31, 48180),

Gene: OlympiaSaint_75 Start: 47735, Stop: 48004, Start Num: 15

Candidate Starts for OlympiaSaint_75:

(13, 47699), (Start: 15 @47735 has 122 MA's), (19, 47774), (Start: 20 @47780 has 1 MA's), (26, 47822), (27, 47825), (Start: 28 @47846 has 1 MA's), (29, 47849), (30, 47855), (31, 47858),

Gene: PHappiness_77 Start: 48886, Stop: 49149, Start Num: 15

Candidate Starts for PHappiness_77:

(Start: 15 @48886 has 122 MA's), (19, 48925), (Start: 20 @48931 has 1 MA's), (22, 48949), (26, 48973), (27, 48976), (Start: 28 @48997 has 1 MA's), (29, 49000), (30, 49006), (31, 49009),

Gene: Phanphagia_74 Start: 47614, Stop: 47877, Start Num: 15

Candidate Starts for Phanphagia_74:

(Start: 15 @47614 has 122 MA's), (19, 47653), (Start: 20 @47659 has 1 MA's), (26, 47701), (27, 47704), (Start: 28 @47725 has 1 MA's), (29, 47728), (30, 47734), (31, 47737),

Gene: Phatniss_71 Start: 45919, Stop: 46179, Start Num: 15

Candidate Starts for Phatniss_71:

(Start: 15 @45919 has 122 MA's), (17, 45949), (19, 45958), (Start: 20 @45964 has 1 MA's), (26, 46006), (27, 46009), (Start: 28 @46030 has 1 MA's), (29, 46033), (30, 46039), (31, 46042),

Gene: Philus_78 Start: 49434, Stop: 49703, Start Num: 15

Candidate Starts for Philus_78:

(13, 49398), (Start: 15 @49434 has 122 MA's), (19, 49473), (Start: 20 @49479 has 1 MA's), (26, 49521), (27, 49524), (Start: 28 @49545 has 1 MA's), (29, 49548), (30, 49554), (31, 49557),

Gene: Pippy_72 Start: 46520, Stop: 46780, Start Num: 15

Candidate Starts for Pippy_72:

(Start: 15 @46520 has 122 MA's), (17, 46550), (19, 46559), (Start: 20 @46565 has 1 MA's), (26, 46607), (27, 46610), (Start: 28 @46631 has 1 MA's), (29, 46634), (30, 46640), (31, 46643),

Gene: Poenanya_80 Start: 48755, Stop: 49015, Start Num: 15

Candidate Starts for Poenanya_80:

(Start: 15 @48755 has 122 MA's), (19, 48794), (Start: 20 @48800 has 1 MA's), (22, 48818), (26, 48842), (27, 48845), (Start: 28 @48866 has 1 MA's), (29, 48869), (30, 48875), (31, 48878),

Gene: Polka14_81 Start: 49545, Stop: 49805, Start Num: 15

Candidate Starts for Polka14_81:

(Start: 15 @49545 has 122 MA's), (19, 49584), (Start: 20 @49590 has 1 MA's), (22, 49608), (26, 49632), (27, 49635), (Start: 28 @49656 has 1 MA's), (29, 49659), (30, 49665), (31, 49668),

Gene: PopTart_66 Start: 44400, Stop: 44669, Start Num: 15
Candidate Starts for PopTart_66:
(Start: 15 @44400 has 122 MA's), (19, 44439), (26, 44487), (27, 44490), (Start: 28 @44511 has 1 MA's), (29, 44514), (30, 44520), (31, 44523),

Gene: QuickMath_74 Start: 46664, Stop: 46927, Start Num: 15
Candidate Starts for QuickMath_74:
(13, 46628), (Start: 15 @46664 has 122 MA's), (19, 46703), (Start: 20 @46709 has 1 MA's), (26, 46751), (27, 46754), (Start: 28 @46775 has 1 MA's), (29, 46778), (30, 46784), (31, 46787),

Gene: Quico_85 Start: 50028, Stop: 50291, Start Num: 15
Candidate Starts for Quico_85:
(Start: 15 @50028 has 122 MA's), (19, 50067), (Start: 20 @50073 has 1 MA's), (26, 50115), (27, 50118), (Start: 28 @50139 has 1 MA's), (29, 50142), (30, 50148), (31, 50151), (32, 50202),

Gene: RedBird_78 Start: 49260, Stop: 49523, Start Num: 15
Candidate Starts for RedBird_78:
(Start: 15 @49260 has 122 MA's), (19, 49299), (Start: 20 @49305 has 1 MA's), (22, 49323), (26, 49347), (27, 49350), (Start: 28 @49371 has 1 MA's), (29, 49374), (30, 49380), (31, 49383),

Gene: Rita_82 Start: 49678, Stop: 49941, Start Num: 15
Candidate Starts for Rita_82:
(Start: 15 @49678 has 122 MA's), (19, 49717), (23, 49750), (26, 49765), (Start: 28 @49789 has 1 MA's), (29, 49792), (30, 49798), (31, 49801),

Gene: RitaG_77 Start: 48688, Stop: 48951, Start Num: 15
Candidate Starts for RitaG_77:
(Start: 15 @48688 has 122 MA's), (19, 48727), (Start: 20 @48733 has 1 MA's), (22, 48751), (26, 48775), (27, 48778), (Start: 28 @48799 has 1 MA's), (29, 48802), (30, 48808), (31, 48811),

Gene: SG4_73 Start: 46463, Stop: 46726, Start Num: 15
Candidate Starts for SG4_73:
(Start: 15 @46463 has 122 MA's), (19, 46502), (Start: 20 @46508 has 1 MA's), (26, 46550), (27, 46553), (Start: 28 @46574 has 1 MA's), (29, 46577), (30, 46583), (31, 46586),

Gene: Saal_75 Start: 48487, Stop: 48756, Start Num: 15
Candidate Starts for Saal_75:
(13, 48451), (Start: 15 @48487 has 122 MA's), (19, 48526), (Start: 20 @48532 has 1 MA's), (26, 48574), (27, 48577), (Start: 28 @48598 has 1 MA's), (29, 48601), (30, 48607), (31, 48610),

Gene: Sandalphon_71 Start: 47162, Stop: 47425, Start Num: 15
Candidate Starts for Sandalphon_71:
(Start: 15 @47162 has 122 MA's), (17, 47192), (19, 47201), (Start: 20 @47207 has 1 MA's), (22, 47225), (26, 47249), (Start: 28 @47273 has 1 MA's), (29, 47276), (30, 47282), (31, 47285),

Gene: Sassafras_78 Start: 47577, Stop: 47840, Start Num: 15
Candidate Starts for Sassafras_78:
(Start: 15 @47577 has 122 MA's), (19, 47616), (Start: 20 @47622 has 1 MA's), (22, 47640), (26, 47664), (27, 47667), (Start: 28 @47688 has 1 MA's), (29, 47691), (30, 47697), (31, 47700),

Gene: SassyB_66 Start: 44400, Stop: 44669, Start Num: 15
Candidate Starts for SassyB_66:

(Start: 15 @44400 has 122 MA's), (19, 44439), (26, 44487), (27, 44490), (Start: 28 @44511 has 1 MA's), (29, 44514), (30, 44520), (31, 44523),

Gene: Scottish_75 Start: 47236, Stop: 47496, Start Num: 15

Candidate Starts for Scottish_75:

(Start: 15 @47236 has 122 MA's), (19, 47275), (Start: 20 @47281 has 1 MA's), (22, 47299), (26, 47323), (27, 47326), (Start: 28 @47347 has 1 MA's), (29, 47350), (30, 47356), (31, 47359),

Gene: Seabastian_82 Start: 48210, Stop: 48473, Start Num: 15

Candidate Starts for Seabastian_82:

(Start: 15 @48210 has 122 MA's), (19, 48249), (23, 48282), (26, 48297), (Start: 28 @48321 has 1 MA's), (29, 48324), (30, 48330), (31, 48333),

Gene: Seagreen_77 Start: 48510, Stop: 48773, Start Num: 15

Candidate Starts for Seagreen_77:

(Start: 15 @48510 has 122 MA's), (19, 48549), (Start: 20 @48555 has 1 MA's), (22, 48573), (26, 48597), (27, 48600), (Start: 28 @48621 has 1 MA's), (29, 48624), (30, 48630), (31, 48633),

Gene: Shauna1_75 Start: 47864, Stop: 48127, Start Num: 15

Candidate Starts for Shauna1_75:

(Start: 15 @47864 has 122 MA's), (19, 47903), (Start: 20 @47909 has 1 MA's), (26, 47951), (27, 47954), (Start: 28 @47975 has 1 MA's), (29, 47978), (30, 47984), (31, 47987),

Gene: ShroomBoi_76 Start: 47619, Stop: 47882, Start Num: 15

Candidate Starts for ShroomBoi_76:

(Start: 15 @47619 has 122 MA's), (17, 47649), (19, 47658), (Start: 20 @47664 has 1 MA's), (26, 47706), (27, 47709), (Start: 28 @47730 has 1 MA's), (29, 47733), (30, 47739), (31, 47742),

Gene: SiSi_72 Start: 46694, Stop: 46957, Start Num: 15

Candidate Starts for SiSi_72:

(Start: 15 @46694 has 122 MA's), (19, 46733), (Start: 20 @46739 has 1 MA's), (26, 46781), (27, 46784), (Start: 28 @46805 has 1 MA's), (29, 46808), (30, 46814), (31, 46817),

Gene: SilverChicken_85 Start: 47600, Stop: 47818, Start Num: 20

Candidate Starts for SilverChicken_85:

(Start: 15 @47555 has 122 MA's), (17, 47585), (19, 47594), (Start: 20 @47600 has 1 MA's), (26, 47642), (27, 47645), (Start: 28 @47666 has 1 MA's), (29, 47669), (30, 47675), (31, 47678),

Gene: Soul22_79 Start: 46222, Stop: 46485, Start Num: 15

Candidate Starts for Soul22_79:

(13, 46186), (Start: 15 @46222 has 122 MA's), (19, 46261), (Start: 20 @46267 has 1 MA's), (26, 46309), (27, 46312), (Start: 28 @46333 has 1 MA's), (29, 46336), (30, 46342), (31, 46345),

Gene: Spoonbill_73 Start: 45779, Stop: 46048, Start Num: 15

Candidate Starts for Spoonbill_73:

(13, 45743), (Start: 15 @45779 has 122 MA's), (19, 45818), (Start: 20 @45824 has 1 MA's), (26, 45866), (27, 45869), (Start: 28 @45890 has 1 MA's), (29, 45893), (30, 45899), (31, 45902),

Gene: Squirty_77 Start: 50791, Stop: 51054, Start Num: 15

Candidate Starts for Squirty_77:

(Start: 15 @50791 has 122 MA's), (19, 50830), (23, 50863), (26, 50878), (Start: 28 @50902 has 1 MA's), (29, 50905), (30, 50911), (31, 50914),

Gene: SuperGrey_76 Start: 49600, Stop: 49863, Start Num: 15

Candidate Starts for SuperGrey_76:

(Start: 15 @49600 has 122 MA's), (17, 49630), (19, 49639), (Start: 20 @49645 has 1 MA's), (23, 49672), (26, 49687), (Start: 28 @49711 has 1 MA's), (29, 49714), (30, 49720), (31, 49723),

Gene: Taj_82 Start: 49318, Stop: 49581, Start Num: 15

Candidate Starts for Taj_82:

(Start: 15 @49318 has 122 MA's), (19, 49357), (Start: 20 @49363 has 1 MA's), (22, 49381), (26, 49405), (27, 49408), (Start: 28 @49429 has 1 MA's), (29, 49432), (30, 49438), (31, 49441), (32, 49492),

Gene: Tchotchke_70 Start: 46294, Stop: 46467, Start Num: 26

Candidate Starts for Tchotchke_70:

(Start: 15 @46207 has 122 MA's), (17, 46237), (19, 46246), (Start: 20 @46252 has 1 MA's), (23, 46279), (26, 46294), (Start: 28 @46318 has 1 MA's), (29, 46321), (30, 46327), (31, 46330),

Gene: ThetaBob_79 Start: 47510, Stop: 47773, Start Num: 15

Candidate Starts for ThetaBob_79:

(Start: 15 @47510 has 122 MA's), (17, 47540), (19, 47549), (Start: 20 @47555 has 1 MA's), (22, 47573), (26, 47597), (27, 47600), (Start: 28 @47621 has 1 MA's), (29, 47624), (30, 47630), (31, 47633),

Gene: Tootsieroll_74 Start: 48828, Stop: 48977, Start Num: 28

Candidate Starts for Tootsieroll_74:

(Start: 15 @48717 has 122 MA's), (19, 48756), (23, 48789), (26, 48804), (Start: 28 @48828 has 1 MA's), (29, 48831), (30, 48837), (31, 48840),

Gene: Totinger_72 Start: 45814, Stop: 46077, Start Num: 14

Candidate Starts for Totinger_72:

(Start: 14 @45814 has 5 MA's), (17, 45844), (19, 45853), (Start: 20 @45859 has 1 MA's), (23, 45886), (26, 45901), (Start: 28 @45925 has 1 MA's), (29, 45928), (30, 45934), (31, 45937),

Gene: Tweety_76 Start: 48310, Stop: 48573, Start Num: 15

Candidate Starts for Tweety_76:

(Start: 15 @48310 has 122 MA's), (19, 48349), (23, 48382), (26, 48397), (Start: 28 @48421 has 1 MA's), (29, 48424), (30, 48430), (31, 48433),

Gene: UncleRicky_73 Start: 46167, Stop: 46427, Start Num: 15

Candidate Starts for UncleRicky_73:

(Start: 15 @46167 has 122 MA's), (17, 46197), (19, 46206), (Start: 20 @46212 has 1 MA's), (26, 46254), (27, 46257), (Start: 28 @46278 has 1 MA's), (29, 46281), (30, 46287), (31, 46290),

Gene: Veteran_68 Start: 46574, Stop: 46837, Start Num: 15

Candidate Starts for Veteran_68:

(13, 46538), (Start: 15 @46574 has 122 MA's), (19, 46613), (Start: 20 @46619 has 1 MA's), (26, 46661), (27, 46664), (Start: 28 @46685 has 1 MA's), (29, 46688), (30, 46694), (31, 46697),

Gene: Vivum_76 Start: 49443, Stop: 49706, Start Num: 14

Candidate Starts for Vivum_76:

(Start: 14 @49443 has 5 MA's), (17, 49473), (19, 49482), (Start: 20 @49488 has 1 MA's), (23, 49515), (26, 49530), (Start: 28 @49554 has 1 MA's), (29, 49557), (30, 49563), (31, 49566),

Gene: Wachhund_75 Start: 45262, Stop: 45531, Start Num: 15

Candidate Starts for Wachhund_75:

(Start: 15 @45262 has 122 MA's), (19, 45301), (23, 45334), (26, 45349), (Start: 28 @45373 has 1 MA's), (29, 45376), (30, 45382), (31, 45385),

Gene: Wee_81 Start: 49394, Stop: 49657, Start Num: 15

Candidate Starts for Wee_81:

(Start: 15 @49394 has 122 MA's), (19, 49433), (Start: 20 @49439 has 1 MA's), (22, 49457), (26, 49481), (27, 49484), (Start: 28 @49505 has 1 MA's), (29, 49508), (30, 49514), (31, 49517), (32, 49568),

Gene: Whatsapiecost_70 Start: 43202, Stop: 43465, Start Num: 15

Candidate Starts for Whatsapiecost_70:

(Start: 15 @43202 has 122 MA's), (19, 43241), (Start: 20 @43247 has 1 MA's), (26, 43289), (27, 43292), (Start: 28 @43313 has 1 MA's), (29, 43316), (30, 43322), (31, 43325),

Gene: Whouxphf_72 Start: 47287, Stop: 47550, Start Num: 15

Candidate Starts for Whouxphf_72:

(Start: 15 @47287 has 122 MA's), (19, 47326), (23, 47359), (26, 47374), (Start: 28 @47398 has 1 MA's), (29, 47401), (30, 47407), (31, 47410),

Gene: WillSterrel_76 Start: 48163, Stop: 48423, Start Num: 15

Candidate Starts for WillSterrel_76:

(Start: 15 @48163 has 122 MA's), (19, 48202), (23, 48235), (26, 48250), (Start: 28 @48274 has 1 MA's), (29, 48277), (30, 48283), (31, 48286),

Gene: XFactor_71 Start: 46580, Stop: 46843, Start Num: 15

Candidate Starts for XFactor_71:

(Start: 15 @46580 has 122 MA's), (19, 46619), (23, 46652), (26, 46667), (Start: 28 @46691 has 1 MA's), (29, 46694), (30, 46700), (31, 46703),

Gene: Yorick_73 Start: 48700, Stop: 48960, Start Num: 15

Candidate Starts for Yorick_73:

(Start: 15 @48700 has 122 MA's), (17, 48730), (19, 48739), (Start: 20 @48745 has 1 MA's), (26, 48787), (27, 48790), (Start: 28 @48811 has 1 MA's), (29, 48814), (30, 48820), (31, 48823),

Gene: Yoshi_89 Start: 48568, Stop: 48831, Start Num: 15

Candidate Starts for Yoshi_89:

(Start: 15 @48568 has 122 MA's), (19, 48607), (23, 48640), (26, 48655), (Start: 28 @48679 has 1 MA's), (29, 48682), (30, 48688), (31, 48691),

Gene: Zapner_84 Start: 46364, Stop: 46627, Start Num: 15

Candidate Starts for Zapner_84:

(13, 46328), (Start: 15 @46364 has 122 MA's), (19, 46403), (Start: 20 @46409 has 1 MA's), (26, 46451), (27, 46454), (Start: 28 @46475 has 1 MA's), (29, 46478), (30, 46484), (31, 46487),

Gene: Zerg_74 Start: 47425, Stop: 47688, Start Num: 15

Candidate Starts for Zerg_74:

(Start: 15 @47425 has 122 MA's), (19, 47464), (23, 47497), (26, 47512), (Start: 28 @47536 has 1 MA's), (29, 47539), (30, 47545), (31, 47548), (33, 47629),

Gene: Zizzle_78 Start: 48816, Stop: 49079, Start Num: 15

Candidate Starts for Zizzle_78:

(13, 48780), (Start: 15 @48816 has 122 MA's), (19, 48855), (Start: 20 @48861 has 1 MA's), (26, 48903), (27, 48906), (Start: 28 @48927 has 1 MA's), (29, 48930), (30, 48936), (31, 48939),