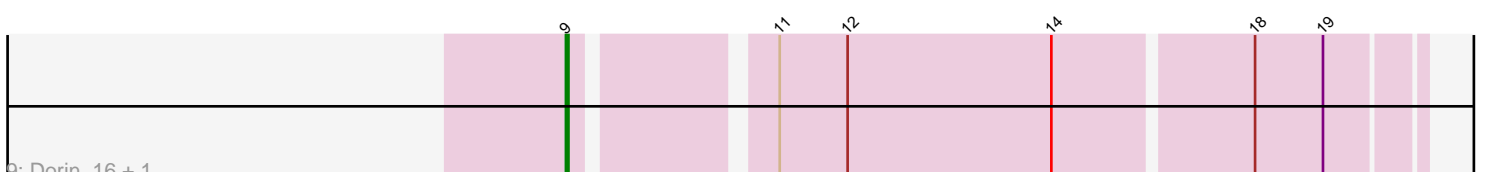
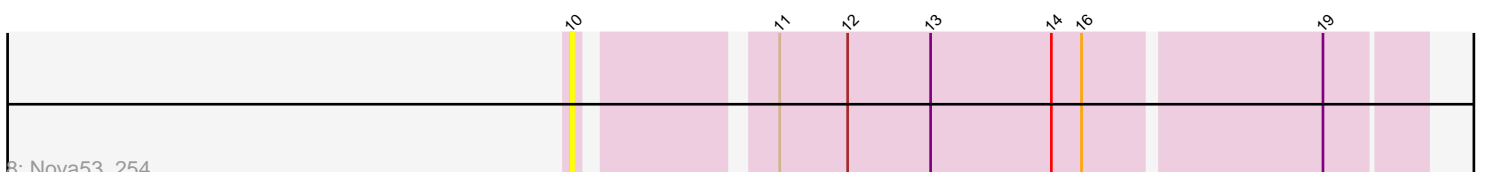
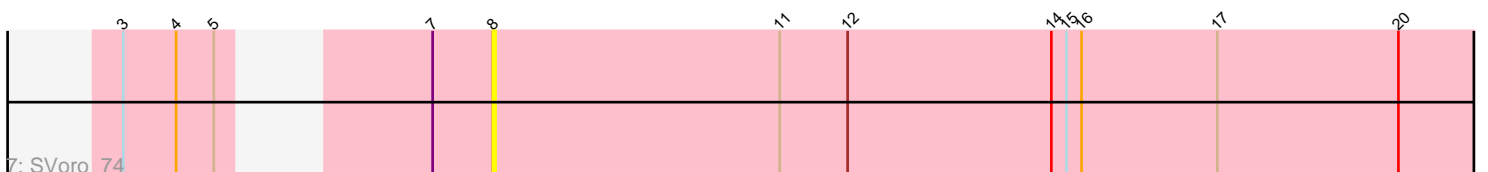
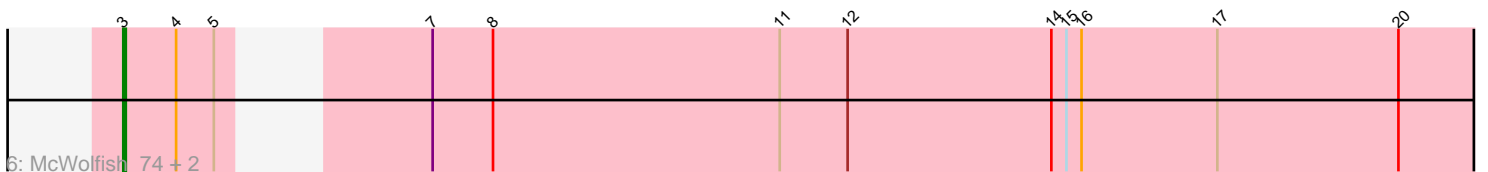
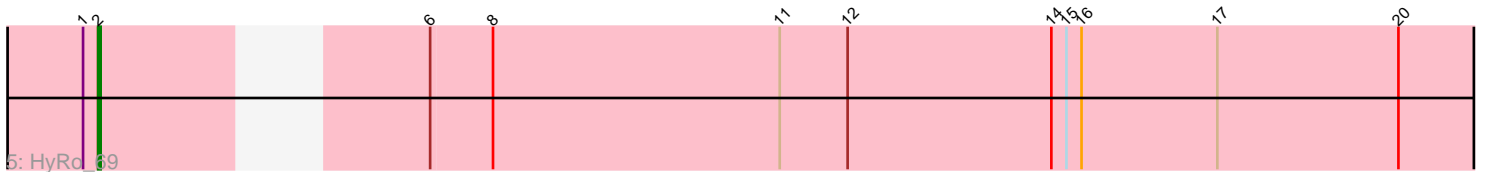
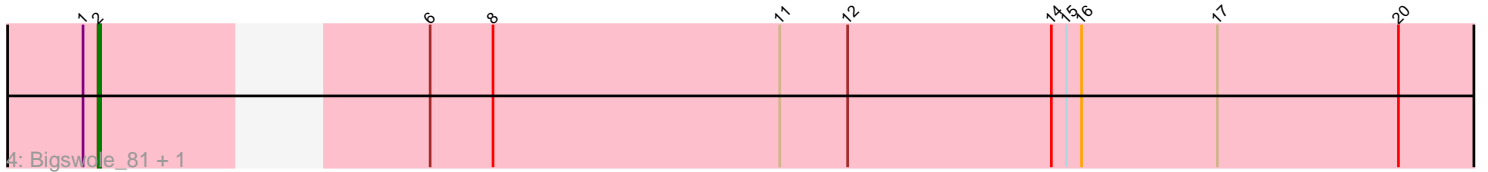
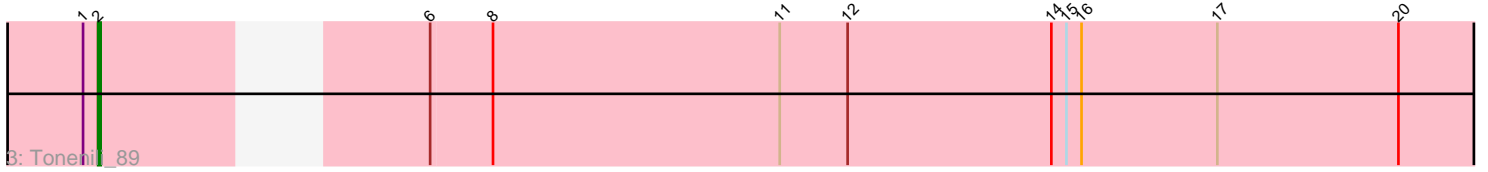
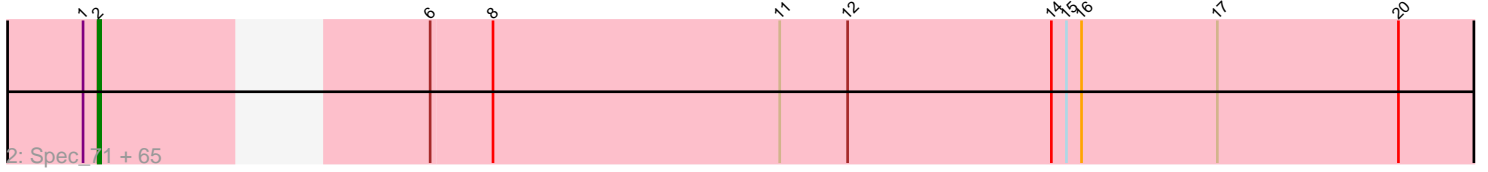
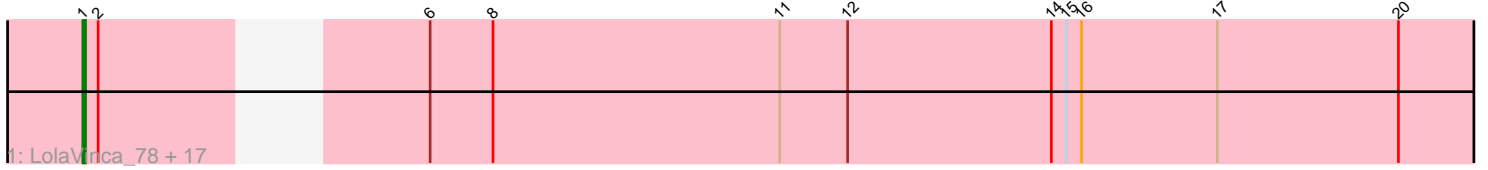


Pham 200150



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 200150 Report

This analysis was run 01/18/25 on database version 583.

Pham number 200150 has 95 members, 17 are drafts.

Phages represented in each track:

- Track 1 : LolaVinca_78, ParkTD_77, Erdmann_76, StephanieG_76, Wally_74, Gizmo_80, BananaFence_75, IkeLoa_70, Yucca_75, Issimir_75, Zeenon_77, MikeLiesIn_76, Shrimp_76, NedWong_77, Zalkecks_77, Spud_75, Daffodil_80, Pier_80
- Track 2 : Spec_71, Ronan_69, Jezreel_74, Shaqnato_68, LinStu_75, BigCity_83, Concombre_83, NuevoMundo_82, NoodleTree_79, Bipolarisk_75, Kamryn_76, Colt_66, FrayBell_82, Nidhogg_76, Domi_70, Breeniome_76, BadAgartude_73, DrPhinkDaddy_75, Tainan_80, Delylah_79, Sebata_76, Willis_77, RoMag_71, Shelob_78, Nappy_77, Lethe_76, ZygoTaiga_75, JayJay_78, Megamind_75, Teardrop_76, LRRHood_70, JigglyPuff_81, MoMoMixon_76, Maby2021_76, Caravan_72, Napoleon13_72, Ewok_77, Mikro_74, YemiJoy2021_77, Lee7_74, Naval22_81, Tortoise16_74, Pleione_78, Demodog_82, InterFolia_85, Specks_82, Bonray_76, EmToTheThree_79, Jessibeth14_75, Izajani_76, Dandelion_82, LordLeafolot_80, Rizal_73, Loanshark_76, Tyke_78, Phox_72, EggyFarm_83, SrishMeg2525_75, Grasshills_83, FoxtrotP1_76, TinyTim_76, I3_80, Delilah_76, Dietrick_69, StubbySaigey_77, Norm_77
- Track 3 : Tonenili_89
- Track 4 : Bigswole_81, Mangeria_76
- Track 5 : HyRo_69
- Track 6 : McWolfish_74, PurduePete_76, Khaleesi_75
- Track 7 : SVoro_74
- Track 8 : Nova53_254
- Track 9 : Dorin_16, Francesca_15

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

The start number called the most often in the published annotations is 2, it was called in 55 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BadAgartude_73, BigCity_83, Bigswole_81, Bipolarisk_75, Bonray_76, Breeniome_76, Caravan_72, Colt_66, Concombre_83, Dandelion_82, Delilah_76, Delylah_79, Demodog_82, Dietrick_69, Domi_70, DrPhinkDaddy_75, EggyFarm_83, EmToTheThree_79, Ewok_77, FoxtrotP1_76, FrayBell_82, Grasshills_83, HyRo_69,

I3_80, InterFolia_85, Izajani_76, JayJay_78, Jessibeth14_75, Jezreel_74, JigglyPuff_81, Kamryn_76, LRRHood_70, Lee7_74, Lethe_76, LinStu_75, Loanshark_76, LordLeafolot_80, Maby2021_76, Mangeria_76, Megamind_75, Mikro_74, MoMoMixon_76, Napoleon13_72, Nappy_77, Naval22_81, Nidhogg_76, NoodleTree_79, Norm_77, NuevoMundo_82, Phox_72, Pleione_78, Rizal_73, RoMag_71, Ronan_69, Sebata_76, Shaqnato_68, Shelob_78, Spec_71, Specks_82, SrishMeg2525_75, StubbySaigey_77, Tainan_80, Teardrop_76, TinyTim_76, Tonenili_89, Tortoise16_74, Tyke_78, Willis_77, YemiJoy2021_77, ZygoTaiga_75,

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

- BananaFence_75, Daffodil_80, Erdmann_76, Gizmo_80, IkeLoa_70, Issimir_75, LolaVinca_78, MikeLiesIn_76, NedWong_77, ParkTD_77, Pier_80, Shrimp_76, Spud_75, StephanieG_76, Wally_74, Yucca_75, Zalkecks_77, Zeenon_77,

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

- Dorin_16, Francesca_15, Khaleesi_75, McWolfish_74, Nova53_254, PurduePete_76, SVoro_74,

Summary by start number:

Start 1:

- Found in 88 of 95 (92.6%) of genes in pham
- Manual Annotations of this start: 18 of 78
- Called 20.5% of time when present
- Phage (with cluster) where this start called: BananaFence_75 (C1), Daffodil_80 (C1), Erdmann_76 (C1), Gizmo_80 (C1), IkeLoa_70 (C1), Issimir_75 (C1), LolaVinca_78 (C1), MikeLiesIn_76 (C1), NedWong_77 (C1), ParkTD_77 (C1), Pier_80 (C1), Shrimp_76 (C1), Spud_75 (C1), StephanieG_76 (C1), Wally_74 (C1), Yucca_75 (C1), Zalkecks_77 (C1), Zeenon_77 (C1),

Start 2:

- Found in 88 of 95 (92.6%) of genes in pham
- Manual Annotations of this start: 55 of 78
- Called 79.5% of time when present
- Phage (with cluster) where this start called: BadAgartude_73 (C1), BigCity_83 (C1), Bigswole_81 (C1), Bipolarisk_75 (C1), Bonray_76 (C1), Breeniome_76 (C1), Caravan_72 (C1), Colt_66 (C1), Concombre_83 (C1), Dandelion_82 (C1), Delilah_76 (C1), Delylah_79 (C1), Demodog_82 (C1), Dietrick_69 (C1), Domi_70 (C1), DrPhinkDaddy_75 (C1), EggyFarm_83 (C1), EmToTheThree_79 (C1), Ewok_77 (C1), FoxtrotP1_76 (C1), FrayBell_82 (C1), Grasshills_83 (C1), HyRo_69 (C1), I3_80 (C1), InterFolia_85 (C1), Izajani_76 (C1), JayJay_78 (C1), Jessibeth14_75 (C1), Jezreel_74 (C1), JigglyPuff_81 (C1), Kamryn_76 (C1), LRRHood_70 (C1), Lee7_74 (C1), Lethe_76 (C1), LinStu_75 (C1), Loanshark_76 (C1), LordLeafolot_80 (C1), Maby2021_76 (C1), Mangeria_76 (C1), Megamind_75 (C1), Mikro_74 (C1), MoMoMixon_76 (C1), Napoleon13_72 (C1), Nappy_77 (C1), Naval22_81 (C1), Nidhogg_76 (C1), NoodleTree_79 (C1), Norm_77 (C1), NuevoMundo_82 (C1), Phox_72 (C1), Pleione_78 (C1), Rizal_73 (C1), RoMag_71 (C1), Ronan_69 (C1), Sebata_76 (C1), Shaqnato_68 (C1), Shelob_78 (C1), Spec_71 (C1), Specks_82 (C1), SrishMeg2525_75 (C1), StubbySaigey_77 (C1), Tainan_80 (C1), Teardrop_76 (C1), TinyTim_76 (C1), Tonenili_89 (C1), Tortoise16_74 (C1), Tyke_78 (C1), Willis_77 (C1), YemiJoy2021_77 (C1), ZygoTaiga_75 (C1),

Start 3:

- Found in 4 of 95 (4.2%) of genes in pham
- Manual Annotations of this start: 3 of 78
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Khaleesi_75 (C1), McWolfish_74 (C1), PurduePete_76 (C1),

Start 8:

- Found in 92 of 95 (96.8%) of genes in pham
- No Manual Annotations of this start.
- Called 1.1% of time when present
- Phage (with cluster) where this start called: SVoro_74 (C1),

Start 9:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 78
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dorin_16 (CG), Francesca_15 (CG),

Start 10:

- Found in 1 of 95 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nova53_254 (CG),

Summary by clusters:

There are 2 clusters represented in this pham: C1, CG,

Info for manual annotations of cluster C1:

- Start number 1 was manually annotated 18 times for cluster C1.
- Start number 2 was manually annotated 55 times for cluster C1.
- Start number 3 was manually annotated 3 times for cluster C1.

Info for manual annotations of cluster CG:

- Start number 9 was manually annotated 2 times for cluster CG.

Gene Information:

Gene: BadAgartude_73 Start: 26845, Stop: 27360, Start Num: 2

Candidate Starts for BadAgartude_73:

(Start: 1 @26839 has 18 MA's), (Start: 2 @26845 has 55 MA's), (6, 26941), (8, 26965), (11, 27079), (12, 27106), (14, 27187), (15, 27193), (16, 27199), (17, 27253), (20, 27325),

Gene: BananaFence_75 Start: 26320, Stop: 26841, Start Num: 1

Candidate Starts for BananaFence_75:

(Start: 1 @26320 has 18 MA's), (Start: 2 @26326 has 55 MA's), (6, 26422), (8, 26446), (11, 26560), (12, 26587), (14, 26668), (15, 26674), (16, 26680), (17, 26734), (20, 26806),

Gene: BigCity_83 Start: 28983, Stop: 29498, Start Num: 2

Candidate Starts for BigCity_83:

(Start: 1 @28977 has 18 MA's), (Start: 2 @28983 has 55 MA's), (6, 29079), (8, 29103), (11, 29217), (12, 29244), (14, 29325), (15, 29331), (16, 29337), (17, 29391), (20, 29463),

Gene: Bigswole_81 Start: 28572, Stop: 29087, Start Num: 2

Candidate Starts for Bigswole_81:

(Start: 1 @28566 has 18 MA's), (Start: 2 @28572 has 55 MA's), (6, 28668), (8, 28692), (11, 28806), (12, 28833), (14, 28914), (15, 28920), (16, 28926), (17, 28980), (20, 29052),

Gene: Bipolarisk_75 Start: 26608, Stop: 27123, Start Num: 2

Candidate Starts for Bipolarisk_75:

(Start: 1 @26602 has 18 MA's), (Start: 2 @26608 has 55 MA's), (6, 26704), (8, 26728), (11, 26842), (12, 26869), (14, 26950), (15, 26956), (16, 26962), (17, 27016), (20, 27088),

Gene: Bonray_76 Start: 26888, Stop: 27403, Start Num: 2

Candidate Starts for Bonray_76:

(Start: 1 @26882 has 18 MA's), (Start: 2 @26888 has 55 MA's), (6, 26984), (8, 27008), (11, 27122), (12, 27149), (14, 27230), (15, 27236), (16, 27242), (17, 27296), (20, 27368),

Gene: Breeniome_76 Start: 25631, Stop: 26146, Start Num: 2

Candidate Starts for Breeniome_76:

(Start: 1 @25625 has 18 MA's), (Start: 2 @25631 has 55 MA's), (6, 25727), (8, 25751), (11, 25865), (12, 25892), (14, 25973), (15, 25979), (16, 25985), (17, 26039), (20, 26111),

Gene: Caravan_72 Start: 25956, Stop: 26486, Start Num: 2

Candidate Starts for Caravan_72:

(Start: 1 @25950 has 18 MA's), (Start: 2 @25956 has 55 MA's), (6, 26067), (8, 26091), (11, 26205), (12, 26232), (14, 26313), (15, 26319), (16, 26325), (17, 26379), (20, 26451),

Gene: Colt_66 Start: 24153, Stop: 24668, Start Num: 2

Candidate Starts for Colt_66:

(Start: 1 @24147 has 18 MA's), (Start: 2 @24153 has 55 MA's), (6, 24249), (8, 24273), (11, 24387), (12, 24414), (14, 24495), (15, 24501), (16, 24507), (17, 24561), (20, 24633),

Gene: Concombres_83 Start: 29225, Stop: 29776, Start Num: 2

Candidate Starts for Concombres_83:

(Start: 1 @29219 has 18 MA's), (Start: 2 @29225 has 55 MA's), (6, 29357), (8, 29381), (11, 29495), (12, 29522), (14, 29603), (15, 29609), (16, 29615), (17, 29669), (20, 29741),

Gene: Daffodil_80 Start: 26890, Stop: 27411, Start Num: 1

Candidate Starts for Daffodil_80:

(Start: 1 @26890 has 18 MA's), (Start: 2 @26896 has 55 MA's), (6, 26992), (8, 27016), (11, 27130), (12, 27157), (14, 27238), (15, 27244), (16, 27250), (17, 27304), (20, 27376),

Gene: Dandelion_82 Start: 28977, Stop: 29492, Start Num: 2

Candidate Starts for Dandelion_82:

(Start: 1 @28971 has 18 MA's), (Start: 2 @28977 has 55 MA's), (6, 29073), (8, 29097), (11, 29211), (12, 29238), (14, 29319), (15, 29325), (16, 29331), (17, 29385), (20, 29457),

Gene: Delilah_76 Start: 26897, Stop: 27412, Start Num: 2

Candidate Starts for Delilah_76:

(Start: 1 @26891 has 18 MA's), (Start: 2 @26897 has 55 MA's), (6, 26993), (8, 27017), (11, 27131), (12, 27158), (14, 27239), (15, 27245), (16, 27251), (17, 27305), (20, 27377),

Gene: Delylah_79 Start: 26675, Stop: 27205, Start Num: 2

Candidate Starts for Delylah_79:

(Start: 1 @26669 has 18 MA's), (Start: 2 @26675 has 55 MA's), (6, 26786), (8, 26810), (11, 26924), (12, 26951), (14, 27032), (15, 27038), (16, 27044), (17, 27098), (20, 27170),

Gene: Demodog_82 Start: 29225, Stop: 29776, Start Num: 2

Candidate Starts for Demodog_82:

(Start: 1 @29219 has 18 MA's), (Start: 2 @29225 has 55 MA's), (6, 29357), (8, 29381), (11, 29495), (12, 29522), (14, 29603), (15, 29609), (16, 29615), (17, 29669), (20, 29741),

Gene: Dietrick_69 Start: 25015, Stop: 25530, Start Num: 2

Candidate Starts for Dietrick_69:

(Start: 1 @25009 has 18 MA's), (Start: 2 @25015 has 55 MA's), (6, 25111), (8, 25135), (11, 25249), (12, 25276), (14, 25357), (15, 25363), (16, 25369), (17, 25423), (20, 25495),

Gene: Domi_70 Start: 26108, Stop: 26623, Start Num: 2

Candidate Starts for Domi_70:

(Start: 1 @26102 has 18 MA's), (Start: 2 @26108 has 55 MA's), (6, 26204), (8, 26228), (11, 26342), (12, 26369), (14, 26450), (15, 26456), (16, 26462), (17, 26516), (20, 26588),

Gene: Dorin_16 Start: 7294, Stop: 6980, Start Num: 9

Candidate Starts for Dorin_16:

(Start: 9 @7294 has 2 MA's), (11, 7225), (12, 7198), (14, 7117), (18, 7042), (19, 7015),

Gene: DrPhinkDaddy_75 Start: 26952, Stop: 27467, Start Num: 2

Candidate Starts for DrPhinkDaddy_75:

(Start: 1 @26946 has 18 MA's), (Start: 2 @26952 has 55 MA's), (6, 27048), (8, 27072), (11, 27186), (12, 27213), (14, 27294), (15, 27300), (16, 27306), (17, 27360), (20, 27432),

Gene: EggyFarm_83 Start: 28983, Stop: 29498, Start Num: 2

Candidate Starts for EggyFarm_83:

(Start: 1 @28977 has 18 MA's), (Start: 2 @28983 has 55 MA's), (6, 29079), (8, 29103), (11, 29217), (12, 29244), (14, 29325), (15, 29331), (16, 29337), (17, 29391), (20, 29463),

Gene: EmToTheThree_79 Start: 28369, Stop: 28884, Start Num: 2

Candidate Starts for EmToTheThree_79:

(Start: 1 @28363 has 18 MA's), (Start: 2 @28369 has 55 MA's), (6, 28465), (8, 28489), (11, 28603), (12, 28630), (14, 28711), (15, 28717), (16, 28723), (17, 28777), (20, 28849),

Gene: Erdmann_76 Start: 26891, Stop: 27412, Start Num: 1

Candidate Starts for Erdmann_76:

(Start: 1 @26891 has 18 MA's), (Start: 2 @26897 has 55 MA's), (6, 26993), (8, 27017), (11, 27131), (12, 27158), (14, 27239), (15, 27245), (16, 27251), (17, 27305), (20, 27377),

Gene: Ewok_77 Start: 26899, Stop: 27414, Start Num: 2

Candidate Starts for Ewok_77:

(Start: 1 @26893 has 18 MA's), (Start: 2 @26899 has 55 MA's), (6, 26995), (8, 27019), (11, 27133), (12, 27160), (14, 27241), (15, 27247), (16, 27253), (17, 27307), (20, 27379),

Gene: FoxtrotP1_76 Start: 27284, Stop: 27814, Start Num: 2

Candidate Starts for FoxtrotP1_76:

(Start: 1 @27278 has 18 MA's), (Start: 2 @27284 has 55 MA's), (6, 27395), (8, 27419), (11, 27533), (12, 27560), (14, 27641), (15, 27647), (16, 27653), (17, 27707), (20, 27779),

Gene: Francesca_15 Start: 7416, Stop: 7102, Start Num: 9

Candidate Starts for Francesca_15:

(Start: 9 @7416 has 2 MA's), (11, 7347), (12, 7320), (14, 7239), (18, 7164), (19, 7137),

Gene: FrayBell_82 Start: 28229, Stop: 28744, Start Num: 2

Candidate Starts for FrayBell_82:

(Start: 1 @28223 has 18 MA's), (Start: 2 @28229 has 55 MA's), (6, 28325), (8, 28349), (11, 28463), (12, 28490), (14, 28571), (15, 28577), (16, 28583), (17, 28637), (20, 28709),

Gene: Gizmo_80 Start: 26574, Stop: 27095, Start Num: 1

Candidate Starts for Gizmo_80:

(Start: 1 @26574 has 18 MA's), (Start: 2 @26580 has 55 MA's), (6, 26676), (8, 26700), (11, 26814), (12, 26841), (14, 26922), (15, 26928), (16, 26934), (17, 26988), (20, 27060),

Gene: Grasshills_83 Start: 28983, Stop: 29498, Start Num: 2

Candidate Starts for Grasshills_83:

(Start: 1 @28977 has 18 MA's), (Start: 2 @28983 has 55 MA's), (6, 29079), (8, 29103), (11, 29217), (12, 29244), (14, 29325), (15, 29331), (16, 29337), (17, 29391), (20, 29463),

Gene: HyRo_69 Start: 25508, Stop: 26023, Start Num: 2

Candidate Starts for HyRo_69:

(Start: 1 @25502 has 18 MA's), (Start: 2 @25508 has 55 MA's), (6, 25604), (8, 25628), (11, 25742), (12, 25769), (14, 25850), (15, 25856), (16, 25862), (17, 25916), (20, 25988),

Gene: I3_80 Start: 27179, Stop: 27694, Start Num: 2

Candidate Starts for I3_80:

(Start: 1 @27173 has 18 MA's), (Start: 2 @27179 has 55 MA's), (6, 27275), (8, 27299), (11, 27413), (12, 27440), (14, 27521), (15, 27527), (16, 27533), (17, 27587), (20, 27659),

Gene: IkeLoa_70 Start: 25125, Stop: 25661, Start Num: 1

Candidate Starts for IkeLoa_70:

(Start: 1 @25125 has 18 MA's), (Start: 2 @25131 has 55 MA's), (6, 25242), (8, 25266), (11, 25380), (12, 25407), (14, 25488), (15, 25494), (16, 25500), (17, 25554), (20, 25626),

Gene: InterFolia_85 Start: 29349, Stop: 29864, Start Num: 2

Candidate Starts for InterFolia_85:

(Start: 1 @29343 has 18 MA's), (Start: 2 @29349 has 55 MA's), (6, 29445), (8, 29469), (11, 29583), (12, 29610), (14, 29691), (15, 29697), (16, 29703), (17, 29757), (20, 29829),

Gene: Issimir_75 Start: 26834, Stop: 27355, Start Num: 1

Candidate Starts for Issimir_75:

(Start: 1 @26834 has 18 MA's), (Start: 2 @26840 has 55 MA's), (6, 26936), (8, 26960), (11, 27074), (12, 27101), (14, 27182), (15, 27188), (16, 27194), (17, 27248), (20, 27320),

Gene: Izajani_76 Start: 26913, Stop: 27428, Start Num: 2

Candidate Starts for Izajani_76:

(Start: 1 @26907 has 18 MA's), (Start: 2 @26913 has 55 MA's), (6, 27009), (8, 27033), (11, 27147), (12, 27174), (14, 27255), (15, 27261), (16, 27267), (17, 27321), (20, 27393),

Gene: JayJay_78 Start: 27394, Stop: 27909, Start Num: 2

Candidate Starts for JayJay_78:

(Start: 1 @27388 has 18 MA's), (Start: 2 @27394 has 55 MA's), (6, 27490), (8, 27514), (11, 27628), (12, 27655), (14, 27736), (15, 27742), (16, 27748), (17, 27802), (20, 27874),

Gene: Jessibeth14_75 Start: 26682, Stop: 27197, Start Num: 2

Candidate Starts for Jessibeth14_75:

(Start: 1 @26676 has 18 MA's), (Start: 2 @26682 has 55 MA's), (6, 26778), (8, 26802), (11, 26916), (12, 26943), (14, 27024), (15, 27030), (16, 27036), (17, 27090), (20, 27162),

Gene: Jezreel_74 Start: 26479, Stop: 26994, Start Num: 2

Candidate Starts for Jezreel_74:

(Start: 1 @26473 has 18 MA's), (Start: 2 @26479 has 55 MA's), (6, 26575), (8, 26599), (11, 26713), (12, 26740), (14, 26821), (15, 26827), (16, 26833), (17, 26887), (20, 26959),

Gene: JigglyPuff_81 Start: 28556, Stop: 29107, Start Num: 2

Candidate Starts for JigglyPuff_81:

(Start: 1 @28550 has 18 MA's), (Start: 2 @28556 has 55 MA's), (6, 28688), (8, 28712), (11, 28826), (12, 28853), (14, 28934), (15, 28940), (16, 28946), (17, 29000), (20, 29072),

Gene: Kamryn_76 Start: 26839, Stop: 27354, Start Num: 2

Candidate Starts for Kamryn_76:

(Start: 1 @26833 has 18 MA's), (Start: 2 @26839 has 55 MA's), (6, 26935), (8, 26959), (11, 27073), (12, 27100), (14, 27181), (15, 27187), (16, 27193), (17, 27247), (20, 27319),

Gene: Khaleesi_75 Start: 26654, Stop: 27160, Start Num: 3

Candidate Starts for Khaleesi_75:

(Start: 3 @26654 has 3 MA's), (4, 26675), (5, 26690), (7, 26741), (8, 26765), (11, 26879), (12, 26906), (14, 26987), (15, 26993), (16, 26999), (17, 27053), (20, 27125),

Gene: LRRHood_70 Start: 26148, Stop: 26663, Start Num: 2

Candidate Starts for LRRHood_70:

(Start: 1 @26142 has 18 MA's), (Start: 2 @26148 has 55 MA's), (6, 26244), (8, 26268), (11, 26382), (12, 26409), (14, 26490), (15, 26496), (16, 26502), (17, 26556), (20, 26628),

Gene: Lee7_74 Start: 26898, Stop: 27413, Start Num: 2

Candidate Starts for Lee7_74:

(Start: 1 @26892 has 18 MA's), (Start: 2 @26898 has 55 MA's), (6, 26994), (8, 27018), (11, 27132), (12, 27159), (14, 27240), (15, 27246), (16, 27252), (17, 27306), (20, 27378),

Gene: Lethe_76 Start: 27078, Stop: 27608, Start Num: 2

Candidate Starts for Lethe_76:

(Start: 1 @27072 has 18 MA's), (Start: 2 @27078 has 55 MA's), (6, 27189), (8, 27213), (11, 27327), (12, 27354), (14, 27435), (15, 27441), (16, 27447), (17, 27501), (20, 27573),

Gene: LinStu_75 Start: 27307, Stop: 27822, Start Num: 2

Candidate Starts for LinStu_75:

(Start: 1 @27301 has 18 MA's), (Start: 2 @27307 has 55 MA's), (6, 27403), (8, 27427), (11, 27541), (12, 27568), (14, 27649), (15, 27655), (16, 27661), (17, 27715), (20, 27787),

Gene: Loanshark_76 Start: 26897, Stop: 27412, Start Num: 2

Candidate Starts for Loanshark_76:

(Start: 1 @26891 has 18 MA's), (Start: 2 @26897 has 55 MA's), (6, 26993), (8, 27017), (11, 27131), (12, 27158), (14, 27239), (15, 27245), (16, 27251), (17, 27305), (20, 27377),

Gene: LolaVinca_78 Start: 28052, Stop: 28573, Start Num: 1

Candidate Starts for LolaVinca_78:

(Start: 1 @28052 has 18 MA's), (Start: 2 @28058 has 55 MA's), (6, 28154), (8, 28178), (11, 28292), (12, 28319), (14, 28400), (15, 28406), (16, 28412), (17, 28466), (20, 28538),

Gene: LordLeafolot_80 Start: 28228, Stop: 28743, Start Num: 2

Candidate Starts for LordLeafolot_80:

(Start: 1 @28222 has 18 MA's), (Start: 2 @28228 has 55 MA's), (6, 28324), (8, 28348), (11, 28462), (12, 28489), (14, 28570), (15, 28576), (16, 28582), (17, 28636), (20, 28708),

Gene: Maby2021_76 Start: 26578, Stop: 27093, Start Num: 2

Candidate Starts for Maby2021_76:

(Start: 1 @26572 has 18 MA's), (Start: 2 @26578 has 55 MA's), (6, 26674), (8, 26698), (11, 26812), (12, 26839), (14, 26920), (15, 26926), (16, 26932), (17, 26986), (20, 27058),

Gene: Mangeria_76 Start: 26319, Stop: 26834, Start Num: 2

Candidate Starts for Mangeria_76:

(Start: 1 @26313 has 18 MA's), (Start: 2 @26319 has 55 MA's), (6, 26415), (8, 26439), (11, 26553), (12, 26580), (14, 26661), (15, 26667), (16, 26673), (17, 26727), (20, 26799),

Gene: McWolfish_74 Start: 26335, Stop: 26841, Start Num: 3

Candidate Starts for McWolfish_74:

(Start: 3 @26335 has 3 MA's), (4, 26356), (5, 26371), (7, 26422), (8, 26446), (11, 26560), (12, 26587), (14, 26668), (15, 26674), (16, 26680), (17, 26734), (20, 26806),

Gene: Megamind_75 Start: 26563, Stop: 27078, Start Num: 2

Candidate Starts for Megamind_75:

(Start: 1 @26557 has 18 MA's), (Start: 2 @26563 has 55 MA's), (6, 26659), (8, 26683), (11, 26797), (12, 26824), (14, 26905), (15, 26911), (16, 26917), (17, 26971), (20, 27043),

Gene: MikeLiesIn_76 Start: 26904, Stop: 27425, Start Num: 1

Candidate Starts for MikeLiesIn_76:

(Start: 1 @26904 has 18 MA's), (Start: 2 @26910 has 55 MA's), (6, 27006), (8, 27030), (11, 27144), (12, 27171), (14, 27252), (15, 27258), (16, 27264), (17, 27318), (20, 27390),

Gene: Mikro_74 Start: 27704, Stop: 28219, Start Num: 2

Candidate Starts for Mikro_74:

(Start: 1 @27698 has 18 MA's), (Start: 2 @27704 has 55 MA's), (6, 27800), (8, 27824), (11, 27938), (12, 27965), (14, 28046), (15, 28052), (16, 28058), (17, 28112), (20, 28184),

Gene: MoMoMixon_76 Start: 26995, Stop: 27525, Start Num: 2

Candidate Starts for MoMoMixon_76:

(Start: 1 @26989 has 18 MA's), (Start: 2 @26995 has 55 MA's), (6, 27106), (8, 27130), (11, 27244), (12, 27271), (14, 27352), (15, 27358), (16, 27364), (17, 27418), (20, 27490),

Gene: Napoleon13_72 Start: 24705, Stop: 25220, Start Num: 2

Candidate Starts for Napoleon13_72:

(Start: 1 @24699 has 18 MA's), (Start: 2 @24705 has 55 MA's), (6, 24801), (8, 24825), (11, 24939), (12, 24966), (14, 25047), (15, 25053), (16, 25059), (17, 25113), (20, 25185),

Gene: Nappy_77 Start: 27199, Stop: 27714, Start Num: 2

Candidate Starts for Nappy_77:

(Start: 1 @27193 has 18 MA's), (Start: 2 @27199 has 55 MA's), (6, 27295), (8, 27319), (11, 27433), (12, 27460), (14, 27541), (15, 27547), (16, 27553), (17, 27607), (20, 27679),

Gene: Naval22_81 Start: 27920, Stop: 28435, Start Num: 2

Candidate Starts for Naval22_81:

(Start: 1 @27914 has 18 MA's), (Start: 2 @27920 has 55 MA's), (6, 28016), (8, 28040), (11, 28154), (12, 28181), (14, 28262), (15, 28268), (16, 28274), (17, 28328), (20, 28400),

Gene: NedWong_77 Start: 26891, Stop: 27412, Start Num: 1

Candidate Starts for NedWong_77:

(Start: 1 @26891 has 18 MA's), (Start: 2 @26897 has 55 MA's), (6, 26993), (8, 27017), (11, 27131), (12, 27158), (14, 27239), (15, 27245), (16, 27251), (17, 27305), (20, 27377),

Gene: Nidhogg_76 Start: 26751, Stop: 27266, Start Num: 2

Candidate Starts for Nidhogg_76:

(Start: 1 @26745 has 18 MA's), (Start: 2 @26751 has 55 MA's), (6, 26847), (8, 26871), (11, 26985), (12, 27012), (14, 27093), (15, 27099), (16, 27105), (17, 27159), (20, 27231),

Gene: NoodleTree_79 Start: 27347, Stop: 27862, Start Num: 2

Candidate Starts for NoodleTree_79:

(Start: 1 @27341 has 18 MA's), (Start: 2 @27347 has 55 MA's), (6, 27443), (8, 27467), (11, 27581), (12, 27608), (14, 27689), (15, 27695), (16, 27701), (17, 27755), (20, 27827),

Gene: Norm_77 Start: 26899, Stop: 27414, Start Num: 2

Candidate Starts for Norm_77:

(Start: 1 @26893 has 18 MA's), (Start: 2 @26899 has 55 MA's), (6, 26995), (8, 27019), (11, 27133), (12, 27160), (14, 27241), (15, 27247), (16, 27253), (17, 27307), (20, 27379),

Gene: Nova53_254 Start: 127313, Stop: 127627, Start Num: 10

Candidate Starts for Nova53_254:

(10, 127313), (11, 127379), (12, 127406), (13, 127439), (14, 127487), (16, 127499), (19, 127589),

Gene: NuevoMundo_82 Start: 28277, Stop: 28792, Start Num: 2

Candidate Starts for NuevoMundo_82:

(Start: 1 @28271 has 18 MA's), (Start: 2 @28277 has 55 MA's), (6, 28373), (8, 28397), (11, 28511), (12, 28538), (14, 28619), (15, 28625), (16, 28631), (17, 28685), (20, 28757),

Gene: ParkTD_77 Start: 26887, Stop: 27408, Start Num: 1

Candidate Starts for ParkTD_77:

(Start: 1 @26887 has 18 MA's), (Start: 2 @26893 has 55 MA's), (6, 26989), (8, 27013), (11, 27127), (12, 27154), (14, 27235), (15, 27241), (16, 27247), (17, 27301), (20, 27373),

Gene: Phox_72 Start: 26830, Stop: 27345, Start Num: 2

Candidate Starts for Phox_72:

(Start: 1 @26824 has 18 MA's), (Start: 2 @26830 has 55 MA's), (6, 26926), (8, 26950), (11, 27064), (12, 27091), (14, 27172), (15, 27178), (16, 27184), (17, 27238), (20, 27310),

Gene: Pier_80 Start: 26972, Stop: 27493, Start Num: 1

Candidate Starts for Pier_80:

(Start: 1 @26972 has 18 MA's), (Start: 2 @26978 has 55 MA's), (6, 27074), (8, 27098), (11, 27212), (12, 27239), (14, 27320), (15, 27326), (16, 27332), (17, 27386), (20, 27458),

Gene: Pleione_78 Start: 26896, Stop: 27411, Start Num: 2

Candidate Starts for Pleione_78:

(Start: 1 @26890 has 18 MA's), (Start: 2 @26896 has 55 MA's), (6, 26992), (8, 27016), (11, 27130), (12, 27157), (14, 27238), (15, 27244), (16, 27250), (17, 27304), (20, 27376),

Gene: PurduePete_76 Start: 26951, Stop: 27457, Start Num: 3

Candidate Starts for PurduePete_76:

(Start: 3 @26951 has 3 MA's), (4, 26972), (5, 26987), (7, 27038), (8, 27062), (11, 27176), (12, 27203), (14, 27284), (15, 27290), (16, 27296), (17, 27350), (20, 27422),

Gene: Rizal_73 Start: 25814, Stop: 26329, Start Num: 2

Candidate Starts for Rizal_73:

(Start: 1 @25808 has 18 MA's), (Start: 2 @25814 has 55 MA's), (6, 25910), (8, 25934), (11, 26048), (12, 26075), (14, 26156), (15, 26162), (16, 26168), (17, 26222), (20, 26294),

Gene: RoMag_71 Start: 26139, Stop: 26654, Start Num: 2

Candidate Starts for RoMag_71:

(Start: 1 @26133 has 18 MA's), (Start: 2 @26139 has 55 MA's), (6, 26235), (8, 26259), (11, 26373), (12, 26400), (14, 26481), (15, 26487), (16, 26493), (17, 26547), (20, 26619),

Gene: Ronan_69 Start: 23647, Stop: 24162, Start Num: 2

Candidate Starts for Ronan_69:

(Start: 1 @23641 has 18 MA's), (Start: 2 @23647 has 55 MA's), (6, 23743), (8, 23767), (11, 23881), (12, 23908), (14, 23989), (15, 23995), (16, 24001), (17, 24055), (20, 24127),

Gene: SVoro_74 Start: 27012, Stop: 27407, Start Num: 8

Candidate Starts for SVoro_74:

(Start: 3 @26901 has 3 MA's), (4, 26922), (5, 26937), (7, 26988), (8, 27012), (11, 27126), (12, 27153), (14, 27234), (15, 27240), (16, 27246), (17, 27300), (20, 27372),

Gene: Sebata_76 Start: 27426, Stop: 27941, Start Num: 2

Candidate Starts for Sebata_76:

(Start: 1 @27420 has 18 MA's), (Start: 2 @27426 has 55 MA's), (6, 27522), (8, 27546), (11, 27660), (12, 27687), (14, 27768), (15, 27774), (16, 27780), (17, 27834), (20, 27906),

Gene: Shaqnato_68 Start: 24570, Stop: 25085, Start Num: 2

Candidate Starts for Shaqnato_68:

(Start: 1 @24564 has 18 MA's), (Start: 2 @24570 has 55 MA's), (6, 24666), (8, 24690), (11, 24804), (12, 24831), (14, 24912), (15, 24918), (16, 24924), (17, 24978), (20, 25050),

Gene: Shelob_78 Start: 27889, Stop: 28404, Start Num: 2

Candidate Starts for Shelob_78:

(Start: 1 @27883 has 18 MA's), (Start: 2 @27889 has 55 MA's), (6, 27985), (8, 28009), (11, 28123), (12, 28150), (14, 28231), (15, 28237), (16, 28243), (17, 28297), (20, 28369),

Gene: Shrimp_76 Start: 26895, Stop: 27416, Start Num: 1

Candidate Starts for Shrimp_76:

(Start: 1 @26895 has 18 MA's), (Start: 2 @26901 has 55 MA's), (6, 26997), (8, 27021), (11, 27135), (12, 27162), (14, 27243), (15, 27249), (16, 27255), (17, 27309), (20, 27381),

Gene: Spec_71 Start: 25528, Stop: 26043, Start Num: 2

Candidate Starts for Spec_71:

(Start: 1 @25522 has 18 MA's), (Start: 2 @25528 has 55 MA's), (6, 25624), (8, 25648), (11, 25762), (12, 25789), (14, 25870), (15, 25876), (16, 25882), (17, 25936), (20, 26008),

Gene: Specks_82 Start: 28692, Stop: 29207, Start Num: 2

Candidate Starts for Specks_82:

(Start: 1 @28686 has 18 MA's), (Start: 2 @28692 has 55 MA's), (6, 28788), (8, 28812), (11, 28926), (12, 28953), (14, 29034), (15, 29040), (16, 29046), (17, 29100), (20, 29172),

Gene: Spud_75 Start: 27206, Stop: 27727, Start Num: 1

Candidate Starts for Spud_75:

(Start: 1 @27206 has 18 MA's), (Start: 2 @27212 has 55 MA's), (6, 27308), (8, 27332), (11, 27446), (12, 27473), (14, 27554), (15, 27560), (16, 27566), (17, 27620), (20, 27692),

Gene: SrishMeg2525_75 Start: 26608, Stop: 27123, Start Num: 2

Candidate Starts for SrishMeg2525_75:

(Start: 1 @26602 has 18 MA's), (Start: 2 @26608 has 55 MA's), (6, 26704), (8, 26728), (11, 26842), (12, 26869), (14, 26950), (15, 26956), (16, 26962), (17, 27016), (20, 27088),

Gene: StephanieG_76 Start: 27590, Stop: 28111, Start Num: 1

Candidate Starts for StephanieG_76:

(Start: 1 @27590 has 18 MA's), (Start: 2 @27596 has 55 MA's), (6, 27692), (8, 27716), (11, 27830), (12, 27857), (14, 27938), (15, 27944), (16, 27950), (17, 28004), (20, 28076),

Gene: StubbySaigey_77 Start: 25537, Stop: 26052, Start Num: 2

Candidate Starts for StubbySaigey_77:

(Start: 1 @25531 has 18 MA's), (Start: 2 @25537 has 55 MA's), (6, 25633), (8, 25657), (11, 25771), (12, 25798), (14, 25879), (15, 25885), (16, 25891), (17, 25945), (20, 26017),

Gene: Tainan_80 Start: 28228, Stop: 28743, Start Num: 2

Candidate Starts for Tainan_80:

(Start: 1 @28222 has 18 MA's), (Start: 2 @28228 has 55 MA's), (6, 28324), (8, 28348), (11, 28462), (12, 28489), (14, 28570), (15, 28576), (16, 28582), (17, 28636), (20, 28708),

Gene: Teardrop_76 Start: 26016, Stop: 26531, Start Num: 2

Candidate Starts for Teardrop_76:

(Start: 1 @26010 has 18 MA's), (Start: 2 @26016 has 55 MA's), (6, 26112), (8, 26136), (11, 26250), (12, 26277), (14, 26358), (15, 26364), (16, 26370), (17, 26424), (20, 26496),

Gene: TinyTim_76 Start: 26897, Stop: 27412, Start Num: 2

Candidate Starts for TinyTim_76:

(Start: 1 @26891 has 18 MA's), (Start: 2 @26897 has 55 MA's), (6, 26993), (8, 27017), (11, 27131), (12, 27158), (14, 27239), (15, 27245), (16, 27251), (17, 27305), (20, 27377),

Gene: Tonenili_89 Start: 30479, Stop: 31042, Start Num: 2

Candidate Starts for Tonenili_89:

(Start: 1 @30473 has 18 MA's), (Start: 2 @30479 has 55 MA's), (6, 30575), (8, 30599), (11, 30713), (12, 30740), (14, 30821), (15, 30827), (16, 30833), (17, 30887), (20, 30959),

Gene: Tortoise16_74 Start: 26663, Stop: 27178, Start Num: 2

Candidate Starts for Tortoise16_74:

(Start: 1 @26657 has 18 MA's), (Start: 2 @26663 has 55 MA's), (6, 26759), (8, 26783), (11, 26897), (12, 26924), (14, 27005), (15, 27011), (16, 27017), (17, 27071), (20, 27143),

Gene: Tyke_78 Start: 27567, Stop: 28082, Start Num: 2

Candidate Starts for Tyke_78:

(Start: 1 @27561 has 18 MA's), (Start: 2 @27567 has 55 MA's), (6, 27663), (8, 27687), (11, 27801), (12, 27828), (14, 27909), (15, 27915), (16, 27921), (17, 27975), (20, 28047),

Gene: Wally_74 Start: 25446, Stop: 25967, Start Num: 1

Candidate Starts for Wally_74:

(Start: 1 @25446 has 18 MA's), (Start: 2 @25452 has 55 MA's), (6, 25548), (8, 25572), (11, 25686), (12, 25713), (14, 25794), (15, 25800), (16, 25806), (17, 25860), (20, 25932),

Gene: Willis_77 Start: 26792, Stop: 27307, Start Num: 2

Candidate Starts for Willis_77:

(Start: 1 @26786 has 18 MA's), (Start: 2 @26792 has 55 MA's), (6, 26888), (8, 26912), (11, 27026), (12, 27053), (14, 27134), (15, 27140), (16, 27146), (17, 27200), (20, 27272),

Gene: YemiJoy2021_77 Start: 26894, Stop: 27409, Start Num: 2

Candidate Starts for YemiJoy2021_77:

(Start: 1 @26888 has 18 MA's), (Start: 2 @26894 has 55 MA's), (6, 26990), (8, 27014), (11, 27128), (12, 27155), (14, 27236), (15, 27242), (16, 27248), (17, 27302), (20, 27374),

Gene: Yucca_75 Start: 26813, Stop: 27334, Start Num: 1

Candidate Starts for Yucca_75:

(Start: 1 @26813 has 18 MA's), (Start: 2 @26819 has 55 MA's), (6, 26915), (8, 26939), (11, 27053), (12, 27080), (14, 27161), (15, 27167), (16, 27173), (17, 27227), (20, 27299),

Gene: Zalkecks_77 Start: 26576, Stop: 27097, Start Num: 1

Candidate Starts for Zalkecks_77:

(Start: 1 @26576 has 18 MA's), (Start: 2 @26582 has 55 MA's), (6, 26678), (8, 26702), (11, 26816), (12, 26843), (14, 26924), (15, 26930), (16, 26936), (17, 26990), (20, 27062),

Gene: Zeenon_77 Start: 26878, Stop: 27399, Start Num: 1

Candidate Starts for Zeenon_77:

(Start: 1 @26878 has 18 MA's), (Start: 2 @26884 has 55 MA's), (6, 26980), (8, 27004), (11, 27118), (12, 27145), (14, 27226), (15, 27232), (16, 27238), (17, 27292), (20, 27364),

Gene: ZygoTaiga_75 Start: 26898, Stop: 27413, Start Num: 2

Candidate Starts for ZygoTaiga_75:

(Start: 1 @26892 has 18 MA's), (Start: 2 @26898 has 55 MA's), (6, 26994), (8, 27018), (11, 27132), (12, 27159), (14, 27240), (15, 27246), (16, 27252), (17, 27306), (20, 27378),