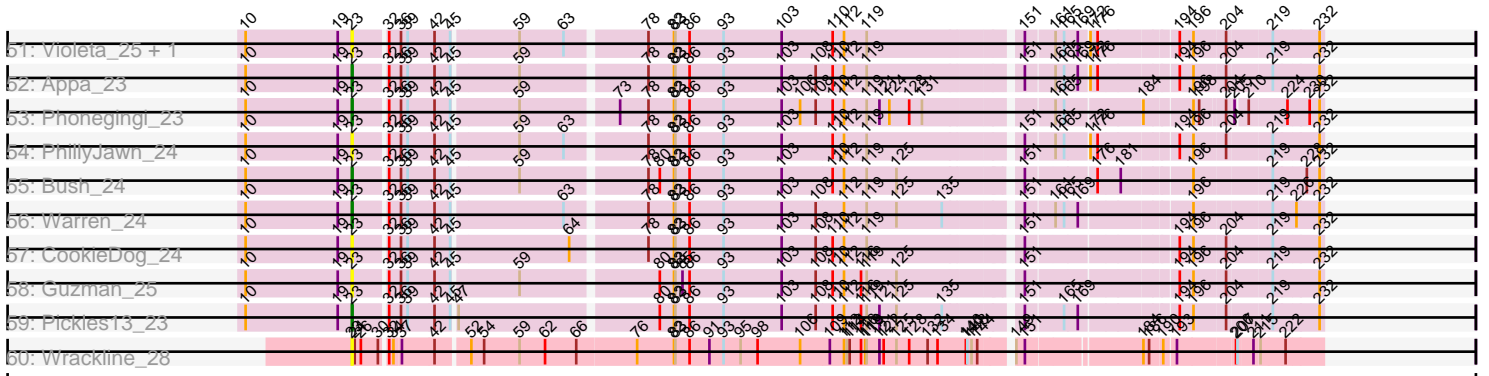


Pham 224538



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 224538 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224538 has 74 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Burritobowl_18
- Track 2 : Abigail_18
- Track 3 : Lahqtemish_18
- Track 4 : Softsoap_17, BubbaBear_18
- Track 5 : SarBear_18, Swervy_18
- Track 6 : Johnathan_18
- Track 7 : Slay_18
- Track 8 : Didgeridoo_19
- Track 9 : Albedo_18
- Track 10 : Cashington_18
- Track 11 : Eula_18, QMacho_19
- Track 12 : Jovita_18
- Track 13 : CroZenni_18
- Track 14 : Bengal_18, LimaBean_18
- Track 15 : MsUbiquitous_18, Jabb_18, CupcakePrincess_18
- Track 16 : TukTuk_18
- Track 17 : Kate33_18
- Track 18 : Phisb_18
- Track 19 : Arroyo_19
- Track 20 : BabyDaisy_19
- Track 21 : DickRichards_18
- Track 22 : PastaFagioli_18
- Track 23 : Nicky22_19
- Track 24 : SansAfet_18
- Track 25 : BelmontSKP_19, AnnaLie_19
- Track 26 : PhigPhack_19
- Track 27 : IndyLu_18
- Track 28 : Finalfrontier_19
- Track 29 : Avocadoman_18
- Track 30 : Floof_17
- Track 31 : GardenState_17
- Track 32 : IAmGroot_17
- Track 33 : Caron_16
- Track 34 : Barnstormer_16
- Track 35 : UtzChips_16
- Track 36 : Typher_23
- Track 37 : Goodman_22, Johann_22

- Track 38 : Milani_22
- Track 39 : SBlackberry_21
- Track 40 : Htur_21, Linayshia_21
- Track 41 : Rasovi_21
- Track 42 : Zanella_21, TurboVicky_21
- Track 43 : Cicada_23
- Track 44 : PermaG_22
- Track 45 : Jera_22
- Track 46 : Olympi_22
- Track 47 : Antuna_24, Losacky_26, MenE_24
- Track 48 : Dropshot_23, Blett_24
- Track 49 : Carrillo_25
- Track 50 : Phingu_26
- Track 51 : Violeta_25, Jakelyne_26
- Track 52 : Appa_23
- Track 53 : Phonegingi_23
- Track 54 : PhillyJawn_24
- Track 55 : Bush_24
- Track 56 : Warren_24
- Track 57 : CookieDog_24
- Track 58 : Guzman_25
- Track 59 : Pickles13_23
- Track 60 : Wrackline_28

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

The start number called the most often in the published annotations is 23, it was called in 49 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail_18, Albedo_18, AnnaLie_19, Antuna_24, Appa_23, Arroyo_19, Avocadoman_18, BabyDaisy_19, BelmontSKP_19, Bengal_18, Blett_24, BubbaBear_18, Burritobowl_18, Bush_24, Carrillo_25, Cashington_18, Cicada_23, CookieDog_24, CroZenni_18, CupcakePrincess_18, DickRichards_18, Didgeridoo_19, Dropshot_23, Eula_18, Finalfrontier_19, Goodman_22, Guzman_25, Htur_21, IndyLu_18, Jabb_18, Jakelyne_26, Jera_22, Johann_22, Johnathan_18, Jovita_18, Kate33_18, Lahqtemish_18, LimaBean_18, Linayshia_21, Losacky_26, MenE_24, Milani_22, MsUbiquitous_18, Nicky22_19, Olympi_22, PastaFagioli_18, PermaG_22, PhigPhack_19, PhillyJawn_24, Phingu_26, Phisb_18, Phonegingi_23, Pickles13_23, QMacho_19, Rasovi_21, SBlackberry_21, SansAfet_18, SarBear_18, Slay_18, Softsoap_17, Swervy_18, TukTuk_18, TurboVicky_21, Typher_23, Violeta_25, Warren_24, Wrackline_28, Zanella_21,

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

-

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

- Barnstormer_16, Caron_16, Floof_17, GardenState_17, IAmGroot_17, UtzChips_16,

Summary by start number:

Start 2:

- Found in 4 of 74 (5.4%) of genes in pham
- Manual Annotations of this start: 4 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer_16 (EH), GardenState_17 (EH), IAmGroot_17 (EH), UtzChips_16 (EH),

Start 18:

- Found in 2 of 74 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Caron_16 (EH), Floof_17 (EH),

Start 23:

- Found in 68 of 74 (91.9%) of genes in pham
- Manual Annotations of this start: 49 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abigail_18 (EB), Albedo_18 (EB), AnnaLie_19 (EB), Antuna_24 (GA), Appa_23 (GA), Arroyo_19 (EB), Avocadoman_18 (EB), BabyDaisy_19 (EB), BelmontSKP_19 (EB), Bengal_18 (EB), Blett_24 (GA), BubbaBear_18 (EB), Burritobowl_18 (EB), Bush_24 (GA), Carrillo_25 (GA), Cashington_18 (EB), Cicada_23 (EJ), CookieDog_24 (GA), CroZenni_18 (EB), CupcakePrincess_18 (EB), DickRichards_18 (EB), Didgeridoo_19 (EB), Dropshot_23 (GA), Eula_18 (EB), Finalfrontier_19 (EB), Goodman_22 (EJ), Guzman_25 (GA), Htur_21 (EJ), IndyLu_18 (EB), Jabb_18 (EB), Jakelyne_26 (GA), Jera_22 (EJ), Johann_22 (EJ), Johnathan_18 (EB), Jovita_18 (EB), Kate33_18 (EB), Lahqtemish_18 (EB), LimaBean_18 (EB), Linayshia_21 (EJ), Losacky_26 (GA), MenE_24 (GA), Milani_22 (EJ), MsUbiquitous_18 (EB), Nicky22_19 (EB), Olympi_22 (EJ), PastaFagioli_18 (EB), PermaG_22 (EJ), PhigPhack_19 (EB), PhillyJawn_24 (GA), Phingu_26 (GA), Phisb_18 (EB), Phonegingi_23 (GA), Pickles13_23 (GA), QMacho_19 (EB), Rasovi_21 (EJ), SBlackberry_21 (EJ), SansAfet_18 (EB), SarBear_18 (EB), Slay_18 (EB), Softsoap_17 (EB), Swervy_18 (EB), TukTuk_18 (EB), TurboVicky_21 (EJ), Typher_23 (EJ), Violeta_25 (GA), Warren_24 (GA), Wrackline_28 (GF), Zanella_21 (EJ),

Summary by clusters:

There are 5 clusters represented in this pham: GF, EB, EH, GA, EJ,

Info for manual annotations of cluster EB:

- Start number 23 was manually annotated 28 times for cluster EB.

Info for manual annotations of cluster EH:

- Start number 2 was manually annotated 4 times for cluster EH.
- Start number 18 was manually annotated 2 times for cluster EH.

Info for manual annotations of cluster EJ:

- Start number 23 was manually annotated 12 times for cluster EJ.

Info for manual annotations of cluster GA:

- Start number 23 was manually annotated 9 times for cluster GA.

Gene Information:

Gene: Abigail_18 Start: 14117, Stop: 16090, Start Num: 23

Candidate Starts for Abigail_18:

(Start: 23 @14117 has 49 MA's), (54, 14363), (57, 14417), (65, 14537), (67, 14549), (97, 14888), (110, 15050), (117, 15116), (122, 15158), (129, 15215), (162, 15470), (167, 15494), (169, 15515), (175, 15554), (189, 15680), (209, 15839), (212, 15863), (223, 15926), (229, 15959), (239, 16058), (240, 16064),

Gene: Albedo_18 Start: 13985, Stop: 15955, Start Num: 23

Candidate Starts for Albedo_18:

(Start: 23 @13985 has 49 MA's), (46, 14174), (49, 14189), (54, 14231), (56, 14282), (64, 14402), (65, 14405), (95, 14723), (97, 14756), (117, 14984), (122, 15026), (146, 15245), (154, 15284), (167, 15359), (171, 15401), (199, 15629), (209, 15704), (218, 15749), (229, 15824), (231, 15833), (236, 15887), (240, 15929),

Gene: AnnaLie_19 Start: 14304, Stop: 16274, Start Num: 23

Candidate Starts for AnnaLie_19:

(Start: 23 @14304 has 49 MA's), (46, 14493), (54, 14550), (57, 14604), (59, 14625), (65, 14724), (74, 14802), (95, 15042), (117, 15303), (122, 15345), (129, 15402), (167, 15678), (171, 15720), (199, 15948), (209, 16023), (212, 16047), (218, 16068), (222, 16107), (229, 16143), (234, 16182), (236, 16206), (240, 16248),

Gene: Antuna_24 Start: 14563, Stop: 16431, Start Num: 23

Candidate Starts for Antuna_24:

(10, 14338), (19, 14533), (Start: 23 @14563 has 49 MA's), (32, 14623), (36, 14644), (39, 14656), (42, 14710), (45, 14743), (48, 14749), (63, 14965), (78, 15121), (82, 15175), (83, 15178), (86, 15208), (93, 15280), (103, 15403), (108, 15475), (110, 15508), (112, 15532), (119, 15580), (125, 15643), (151, 15877), (161, 15928), (165, 15946), (169, 15973), (172, 15991), (176, 16006), (194, 16153), (196, 16180), (204, 16243), (219, 16330), (232, 16423),

Gene: Appa_23 Start: 14425, Stop: 16293, Start Num: 23

Candidate Starts for Appa_23:

(10, 14200), (19, 14395), (Start: 23 @14425 has 49 MA's), (32, 14485), (36, 14506), (39, 14518), (42, 14572), (45, 14605), (59, 14734), (78, 14983), (82, 15037), (83, 15040), (86, 15070), (93, 15142), (103, 15265), (108, 15337), (110, 15370), (112, 15394), (119, 15442), (151, 15739), (161, 15790), (165, 15808), (169, 15835), (172, 15853), (176, 15868), (194, 16015), (196, 16042), (204, 16105), (219, 16192), (232, 16285),

Gene: Arroyo_19 Start: 14505, Stop: 16475, Start Num: 23

Candidate Starts for Arroyo_19:

(Start: 23 @14505 has 49 MA's), (46, 14694), (54, 14751), (57, 14805), (59, 14826), (65, 14925), (67, 14937), (74, 15003), (95, 15243), (97, 15276), (117, 15504), (122, 15546), (129, 15603), (162, 15855), (167, 15879), (171, 15921), (199, 16149), (209, 16224), (212, 16248), (218, 16269), (222, 16308), (229, 16344), (234, 16383), (236, 16407), (240, 16449),

Gene: Avocadoman_18 Start: 14060, Stop: 16033, Start Num: 23

Candidate Starts for Avocadoman_18:

(Start: 23 @14060 has 49 MA's), (54, 14306), (57, 14360), (65, 14480), (67, 14492), (97, 14831), (110, 14993), (117, 15059), (122, 15101), (129, 15158), (162, 15413), (167, 15437), (169, 15458), (175, 15497), (199, 15707), (203, 15737), (209, 15782), (212, 15806), (223, 15869), (229, 15902), (239, 16001), (240, 16007),

Gene: BabyDaisy_19 Start: 14120, Stop: 16090, Start Num: 23

Candidate Starts for BabyDaisy_19:

(Start: 23 @14120 has 49 MA's), (38, 14213), (46, 14309), (50, 14333), (54, 14366), (56, 14417), (65, 14540), (67, 14552), (95, 14858), (97, 14891), (100, 14900), (117, 15119), (122, 15161), (134, 15275), (147, 15380), (164, 15479), (167, 15494), (199, 15764), (203, 15794), (209, 15839), (223, 15926), (239, 16058), (240, 16064),

Gene: Barnstormer_16 Start: 13150, Stop: 15660, Start Num: 2

Candidate Starts for Barnstormer_16:

(1, 13114), (Start: 2 @13150 has 4 MA's), (7, 13510), (8, 13540), (15, 13684), (17, 13717), (31, 13867), (45, 13990), (54, 14062), (59, 14137), (90, 14500), (91, 14506), (98, 14608), (112, 14791), (115, 14815), (233, 15577), (235, 15598), (237, 15610),

Gene: BelmontSKP_19 Start: 14304, Stop: 16274, Start Num: 23

Candidate Starts for BelmontSKP_19:

(Start: 23 @14304 has 49 MA's), (46, 14493), (54, 14550), (57, 14604), (59, 14625), (65, 14724), (74, 14802), (95, 15042), (117, 15303), (122, 15345), (129, 15402), (167, 15678), (171, 15720), (199, 15948), (209, 16023), (212, 16047), (218, 16068), (222, 16107), (229, 16143), (234, 16182), (236, 16206), (240, 16248),

Gene: Bengal_18 Start: 13895, Stop: 15865, Start Num: 23

Candidate Starts for Bengal_18:

(Start: 23 @13895 has 49 MA's), (54, 14141), (57, 14195), (61, 14258), (65, 14315), (67, 14327), (95, 14633), (97, 14666), (110, 14828), (117, 14894), (122, 14936), (129, 14993), (146, 15155), (148, 15167), (164, 15254), (167, 15269), (199, 15539), (203, 15569), (209, 15614), (214, 15644), (223, 15701), (229, 15734), (239, 15833), (240, 15839),

Gene: Blett_24 Start: 14578, Stop: 16446, Start Num: 23

Candidate Starts for Blett_24:

(10, 14353), (19, 14548), (Start: 23 @14578 has 49 MA's), (32, 14638), (36, 14659), (39, 14671), (42, 14725), (45, 14758), (59, 14887), (63, 14980), (82, 15190), (83, 15193), (86, 15223), (93, 15295), (103, 15418), (110, 15523), (112, 15547), (119, 15595), (151, 15892), (161, 15943), (165, 15961), (169, 15988), (172, 16006), (176, 16021), (194, 16168), (196, 16195), (204, 16258), (219, 16345), (232, 16438),

Gene: BubbaBear_18 Start: 13985, Stop: 15955, Start Num: 23

Candidate Starts for BubbaBear_18:

(Start: 23 @13985 has 49 MA's), (46, 14174), (49, 14189), (54, 14231), (56, 14282), (64, 14402), (65, 14405), (95, 14723), (97, 14756), (117, 14984), (122, 15026), (136, 15161), (146, 15245), (154, 15284), (167, 15359), (171, 15401), (199, 15629), (209, 15704), (218, 15749), (229, 15824), (231, 15833), (236, 15887), (240, 15929),

Gene: Burritobowl_18 Start: 14063, Stop: 16033, Start Num: 23

Candidate Starts for Burritobowl_18:

(Start: 23 @14063 has 49 MA's), (54, 14309), (57, 14363), (65, 14483), (67, 14495), (95, 14801), (97, 14834), (110, 14996), (117, 15062), (122, 15104), (129, 15161), (146, 15323), (162, 15413), (171, 15479), (172, 15485), (199, 15707), (203, 15737), (209, 15782), (212, 15806), (223, 15869), (229, 15902), (239, 16001), (240, 16007),

Gene: Bush_24 Start: 14559, Stop: 16421, Start Num: 23

Candidate Starts for Bush_24:

(10, 14334), (19, 14529), (Start: 23 @14559 has 49 MA's), (32, 14619), (36, 14640), (39, 14652), (42, 14706), (45, 14739), (59, 14868), (78, 15117), (80, 15141), (82, 15171), (83, 15174), (86, 15204), (93, 15276), (103, 15399), (110, 15504), (112, 15528), (119, 15576), (125, 15639), (151, 15867), (176, 15996), (181, 16041), (196, 16170), (219, 16320), (228, 16386), (232, 16413),

Gene: Caron_16 Start: 13192, Stop: 15042, Start Num: 18

Candidate Starts for Caron_16:

(17, 13156), (Start: 18 @13192 has 2 MA's), (21, 13219), (40, 13339), (54, 13495), (59, 13570), (90, 13933), (91, 13939), (112, 14224), (115, 14248), (137, 14449), (188, 14623), (233, 14959), (235, 14980), (237, 14992),

Gene: Carrillo_25 Start: 14532, Stop: 16400, Start Num: 23

Candidate Starts for Carrillo_25:

(10, 14307), (19, 14502), (Start: 23 @14532 has 49 MA's), (32, 14592), (36, 14613), (39, 14625), (42, 14679), (45, 14712), (63, 14934), (78, 15090), (82, 15144), (83, 15147), (86, 15177), (93, 15249), (103, 15372), (108, 15444), (110, 15477), (112, 15501), (119, 15549), (125, 15612), (151, 15846), (161, 15897), (165, 15915), (169, 15942), (172, 15960), (176, 15975), (194, 16122), (196, 16149), (204, 16212), (219, 16299), (232, 16392),

Gene: Cashington_18 Start: 13912, Stop: 15882, Start Num: 23

Candidate Starts for Cashington_18:

(Start: 23 @13912 has 49 MA's), (54, 14158), (57, 14212), (65, 14332), (67, 14344), (97, 14683), (110, 14845), (117, 14911), (122, 14953), (129, 15010), (146, 15172), (148, 15184), (164, 15271), (167, 15286), (199, 15556), (203, 15586), (209, 15631), (214, 15661), (223, 15718), (229, 15751), (239, 15850), (240, 15856),

Gene: Cicada_23 Start: 16468, Stop: 18345, Start Num: 23

Candidate Starts for Cicada_23:

(10, 16243), (Start: 23 @16468 has 49 MA's), (41, 16597), (42, 16636), (43, 16639), (53, 16708), (55, 16753), (58, 16789), (66, 16918), (82, 17098), (83, 17101), (87, 17134), (95, 17239), (96, 17260), (99, 17278), (100, 17281), (112, 17455), (120, 17527), (123, 17542), (125, 17566), (126, 17572), (128, 17593), (133, 17641), (155, 17809), (156, 17812), (158, 17833), (160, 17845), (174, 17920), (198, 18115), (201, 18136), (202, 18145), (205, 18178), (219, 18244), (224, 18274), (230, 18316),

Gene: CookieDog_24 Start: 14559, Stop: 16421, Start Num: 23

Candidate Starts for CookieDog_24:

(10, 14334), (19, 14529), (Start: 23 @14559 has 49 MA's), (32, 14619), (36, 14640), (39, 14652), (42, 14706), (45, 14739), (64, 14973), (78, 15117), (82, 15171), (83, 15174), (86, 15204), (93, 15276), (103, 15399), (108, 15471), (110, 15504), (112, 15528), (119, 15576), (151, 15867), (194, 16143), (196, 16170), (204, 16233), (219, 16320), (232, 16413),

Gene: CroZenni_18 Start: 13895, Stop: 15865, Start Num: 23

Candidate Starts for CroZenni_18:

(Start: 23 @13895 has 49 MA's), (46, 14084), (54, 14141), (57, 14195), (59, 14216), (65, 14315), (67, 14327), (95, 14633), (97, 14666), (117, 14894), (122, 14936), (129, 14993), (164, 15254), (167, 15269), (199, 15539), (209, 15614), (212, 15638), (218, 15659), (222, 15698), (234, 15773), (236, 15797), (240, 15839),

Gene: CupcakePrincess_18 Start: 14012, Stop: 15982, Start Num: 23

Candidate Starts for CupcakePrincess_18:

(Start: 23 @14012 has 49 MA's), (46, 14201), (49, 14216), (54, 14258), (56, 14309), (57, 14312), (65, 14432), (95, 14750), (97, 14783), (122, 15053), (146, 15272), (154, 15311), (167, 15386), (171, 15428), (199, 15656), (209, 15731), (214, 15761), (229, 15851), (231, 15860), (236, 15914), (240, 15956),

Gene: DickRichards_18 Start: 14390, Stop: 16360, Start Num: 23

Candidate Starts for DickRichards_18:

(Start: 23 @14390 has 49 MA's), (46, 14579), (51, 14606), (54, 14636), (57, 14690), (59, 14711), (65, 14810), (67, 14822), (79, 14945), (95, 15128), (97, 15161), (117, 15389), (122, 15431), (167, 15764), (171, 15806), (189, 15950), (199, 16034), (209, 16109), (212, 16133), (218, 16154), (222, 16193), (229, 16229), (234, 16268), (236, 16292), (240, 16334),

Gene: Didgeridoo_19 Start: 14122, Stop: 16092, Start Num: 23

Candidate Starts for Didgeridoo_19:

(Start: 23 @14122 has 49 MA's), (38, 14215), (46, 14311), (50, 14335), (54, 14368), (65, 14542), (67, 14554), (95, 14860), (97, 14893), (100, 14902), (117, 15121), (122, 15163), (136, 15298), (164, 15481), (167, 15496), (199, 15766), (203, 15796), (209, 15841), (223, 15928), (239, 16060), (240, 16066),

Gene: Dropshot_23 Start: 14425, Stop: 16293, Start Num: 23

Candidate Starts for Dropshot_23:

(10, 14200), (19, 14395), (Start: 23 @14425 has 49 MA's), (32, 14485), (36, 14506), (39, 14518), (42, 14572), (45, 14605), (59, 14734), (63, 14827), (82, 15037), (83, 15040), (86, 15070), (93, 15142), (103, 15265), (110, 15370), (112, 15394), (119, 15442), (151, 15739), (161, 15790), (165, 15808), (169, 15835), (172, 15853), (176, 15868), (194, 16015), (196, 16042), (204, 16105), (219, 16192), (232, 16285),

Gene: Eula_18 Start: 13973, Stop: 15943, Start Num: 23

Candidate Starts for Eula_18:

(Start: 23 @13973 has 49 MA's), (46, 14162), (49, 14177), (51, 14189), (54, 14219), (56, 14270), (65, 14393), (95, 14711), (97, 14744), (117, 14972), (134, 15128), (136, 15149), (146, 15233), (154, 15272), (167, 15347), (171, 15389), (209, 15692), (218, 15737), (221, 15764), (229, 15812), (231, 15821), (236, 15875), (240, 15917),

Gene: Finalfrontier_19 Start: 14486, Stop: 16459, Start Num: 23

Candidate Starts for Finalfrontier_19:

(Start: 23 @14486 has 49 MA's), (38, 14579), (46, 14675), (50, 14699), (54, 14732), (56, 14783), (65, 14906), (67, 14918), (95, 15224), (97, 15257), (100, 15266), (117, 15485), (122, 15527), (134, 15641), (136, 15662), (154, 15785), (167, 15863), (172, 15911), (189, 16049), (209, 16208), (212, 16232), (223, 16295), (239, 16427), (240, 16433),

Gene: Floof_17 Start: 13331, Stop: 15664, Start Num: 18

Candidate Starts for Floof_17:

(Start: 18 @13331 has 2 MA's), (20, 13352), (44, 13553), (54, 13604), (84, 13994), (90, 14054), (91, 14060), (92, 14084), (108, 14285), (112, 14345), (118, 14390), (121, 14420), (124, 14441), (127, 14465), (130, 14498), (164, 14795), (171, 14852), (180, 14918), (205, 15158), (213, 15203), (216, 15215), (227, 15293), (237, 15392), (238, 15410), (241, 15431), (242, 15494), (243, 15560), (244, 15581), (245, 15638),

Gene: GardenState_17 Start: 13423, Stop: 16074, Start Num: 2

Candidate Starts for GardenState_17:

(Start: 2 @13423 has 4 MA's), (3, 13498), (4, 13534), (11, 13879), (13, 13897), (14, 13924), (16, 13954), (29, 14107), (33, 14128), (35, 14143), (54, 14320), (71, 14554), (75, 14611), (84, 14698), (90,

14758), (91, 14764), (112, 15049), (118, 15094), (126, 15166), (142, 15310), (145, 15349), (164, 15460), (167, 15475), (168, 15493), (209, 15832), (233, 15991), (235, 16012),

Gene: Goodman_22 Start: 16381, Stop: 18258, Start Num: 23

Candidate Starts for Goodman_22:

(Start: 23 @16381 has 49 MA's), (41, 16510), (42, 16549), (43, 16552), (53, 16621), (55, 16666), (58, 16702), (66, 16831), (82, 17011), (83, 17014), (87, 17047), (95, 17152), (96, 17173), (99, 17191), (100, 17194), (112, 17368), (118, 17413), (120, 17440), (123, 17455), (125, 17479), (126, 17485), (128, 17506), (133, 17554), (155, 17722), (156, 17725), (158, 17746), (160, 17758), (174, 17833), (198, 18028), (201, 18049), (202, 18058), (205, 18091), (219, 18157), (224, 18187), (230, 18229),

Gene: Guzman_25 Start: 14840, Stop: 16702, Start Num: 23

Candidate Starts for Guzman_25:

(10, 14615), (19, 14810), (Start: 23 @14840 has 49 MA's), (32, 14900), (36, 14921), (39, 14933), (42, 14987), (45, 15020), (59, 15149), (80, 15422), (82, 15452), (83, 15455), (85, 15470), (86, 15485), (93, 15557), (103, 15680), (108, 15752), (110, 15785), (112, 15809), (116, 15845), (119, 15857), (125, 15920), (151, 16148), (194, 16424), (196, 16451), (204, 16514), (219, 16601), (232, 16694),

Gene: Htur_21 Start: 16411, Stop: 18312, Start Num: 23

Candidate Starts for Htur_21:

(Start: 23 @16411 has 49 MA's), (27, 16432), (28, 16438), (41, 16540), (42, 16579), (43, 16582), (53, 16651), (58, 16732), (60, 16762), (66, 16861), (69, 16903), (81, 17044), (82, 17065), (83, 17068), (87, 17101), (95, 17206), (99, 17245), (100, 17248), (105, 17308), (111, 17416), (112, 17422), (120, 17494), (123, 17509), (125, 17533), (126, 17539), (128, 17560), (133, 17608), (138, 17659), (141, 17680), (155, 17776), (158, 17800), (160, 17812), (170, 17875), (178, 17932), (185, 17986), (194, 18043), (196, 18070), (197, 18076), (198, 18082), (200, 18094), (205, 18145), (230, 18283),

Gene: IAmGroot_17 Start: 14067, Stop: 16736, Start Num: 2

Candidate Starts for IAmGroot_17:

(Start: 2 @14067 has 4 MA's), (3, 14142), (4, 14178), (5, 14349), (6, 14379), (9, 14475), (12, 14529), (22, 14718), (25, 14727), (54, 14982), (71, 15216), (75, 15273), (84, 15360), (90, 15420), (91, 15426), (112, 15711), (118, 15756), (126, 15828), (142, 15972), (145, 16011), (164, 16122), (167, 16137), (168, 16155), (209, 16494), (233, 16653), (235, 16674),

Gene: IndyLu_18 Start: 13944, Stop: 15914, Start Num: 23

Candidate Starts for IndyLu_18:

(Start: 23 @13944 has 49 MA's), (38, 14037), (46, 14133), (50, 14157), (54, 14190), (56, 14241), (65, 14364), (67, 14376), (95, 14682), (97, 14715), (100, 14724), (117, 14943), (134, 15099), (136, 15120), (146, 15204), (162, 15294), (169, 15339), (189, 15504), (209, 15663), (212, 15687), (223, 15750), (229, 15783), (240, 15888),

Gene: Jabb_18 Start: 14012, Stop: 15982, Start Num: 23

Candidate Starts for Jabb_18:

(Start: 23 @14012 has 49 MA's), (46, 14201), (49, 14216), (54, 14258), (56, 14309), (57, 14312), (65, 14432), (95, 14750), (97, 14783), (122, 15053), (146, 15272), (154, 15311), (167, 15386), (171, 15428), (199, 15656), (209, 15731), (214, 15761), (229, 15851), (231, 15860), (236, 15914), (240, 15956),

Gene: Jakelyne_26 Start: 14641, Stop: 16509, Start Num: 23

Candidate Starts for Jakelyne_26:

(10, 14416), (19, 14611), (Start: 23 @14641 has 49 MA's), (32, 14701), (36, 14722), (39, 14734), (42, 14788), (45, 14821), (59, 14950), (63, 15043), (78, 15199), (82, 15253), (83, 15256), (86, 15286), (93, 15358), (103, 15481), (110, 15586), (112, 15610), (119, 15658), (151, 15955), (161, 16006), (165,

16024), (169, 16051), (172, 16069), (176, 16084), (194, 16231), (196, 16258), (204, 16321), (219, 16408), (232, 16501),

Gene: Jera_22 Start: 15478, Stop: 17370, Start Num: 23

Candidate Starts for Jera_22:

(Start: 23 @15478 has 49 MA's), (41, 15607), (42, 15646), (53, 15718), (58, 15799), (59, 15811), (66, 15928), (72, 15994), (81, 16087), (82, 16108), (83, 16111), (87, 16144), (95, 16249), (100, 16291), (101, 16309), (111, 16459), (112, 16465), (120, 16537), (123, 16552), (125, 16576), (126, 16582), (128, 16603), (133, 16651), (151, 16816), (153, 16822), (159, 16852), (163, 16876), (165, 16885), (166, 16891), (169, 16912), (176, 16945), (192, 17080), (195, 17110), (196, 17119), (197, 17125), (226, 17314), (228, 17335),

Gene: Johann_22 Start: 16381, Stop: 18258, Start Num: 23

Candidate Starts for Johann_22:

(Start: 23 @16381 has 49 MA's), (41, 16510), (42, 16549), (43, 16552), (53, 16621), (55, 16666), (58, 16702), (66, 16831), (82, 17011), (83, 17014), (87, 17047), (95, 17152), (96, 17173), (99, 17191), (100, 17194), (112, 17368), (118, 17413), (120, 17440), (123, 17455), (125, 17479), (126, 17485), (128, 17506), (133, 17554), (155, 17722), (156, 17725), (158, 17746), (160, 17758), (174, 17833), (198, 18028), (201, 18049), (202, 18058), (205, 18091), (219, 18157), (224, 18187), (230, 18229),

Gene: Johnathan_18 Start: 13999, Stop: 15969, Start Num: 23

Candidate Starts for Johnathan_18:

(Start: 23 @13999 has 49 MA's), (46, 14188), (54, 14245), (57, 14299), (59, 14320), (65, 14419), (67, 14431), (77, 14542), (94, 14731), (95, 14737), (97, 14770), (117, 14998), (122, 15040), (162, 15349), (169, 15394), (199, 15643), (209, 15718), (217, 15757), (218, 15763), (223, 15805), (231, 15847), (236, 15901), (240, 15943),

Gene: Jovita_18 Start: 14074, Stop: 16047, Start Num: 23

Candidate Starts for Jovita_18:

(Start: 23 @14074 has 49 MA's), (46, 14263), (49, 14278), (51, 14290), (54, 14320), (56, 14371), (65, 14494), (95, 14812), (97, 14845), (117, 15073), (122, 15115), (134, 15229), (136, 15250), (146, 15334), (172, 15499), (209, 15796), (218, 15841), (221, 15868), (229, 15916), (231, 15925), (236, 15979), (240, 16021),

Gene: Kate33_18 Start: 13943, Stop: 15916, Start Num: 23

Candidate Starts for Kate33_18:

(Start: 23 @13943 has 49 MA's), (38, 14036), (46, 14132), (50, 14156), (54, 14189), (56, 14240), (65, 14363), (67, 14375), (95, 14681), (97, 14714), (100, 14723), (113, 14906), (117, 14942), (122, 14984), (134, 15098), (136, 15119), (146, 15203), (162, 15296), (167, 15320), (169, 15341), (175, 15380), (189, 15506), (209, 15665), (212, 15689), (223, 15752), (229, 15785), (239, 15884), (240, 15890),

Gene: Lahqtemish_18 Start: 13989, Stop: 15962, Start Num: 23

Candidate Starts for Lahqtemish_18:

(Start: 23 @13989 has 49 MA's), (50, 14202), (54, 14235), (56, 14286), (65, 14409), (67, 14421), (95, 14727), (97, 14760), (100, 14769), (117, 14988), (122, 15030), (136, 15165), (146, 15249), (162, 15342), (167, 15366), (169, 15387), (175, 15426), (189, 15552), (209, 15711), (212, 15735), (228, 15828), (229, 15831), (240, 15936),

Gene: LimaBean_18 Start: 13998, Stop: 15968, Start Num: 23

Candidate Starts for LimaBean_18:

(Start: 23 @13998 has 49 MA's), (54, 14244), (57, 14298), (61, 14361), (65, 14418), (67, 14430), (95, 14736), (97, 14769), (110, 14931), (117, 14997), (122, 15039), (129, 15096), (146, 15258), (148, 15270), (164, 15357), (167, 15372), (199, 15642), (203, 15672), (209, 15717), (214, 15747), (223,

15804), (229, 15837), (239, 15936), (240, 15942),

Gene: Linayshia_21 Start: 16403, Stop: 18304, Start Num: 23

Candidate Starts for Linayshia_21:

(Start: 23 @16403 has 49 MA's), (27, 16424), (28, 16430), (41, 16532), (42, 16571), (43, 16574), (53, 16643), (58, 16724), (60, 16754), (66, 16853), (69, 16895), (81, 17036), (82, 17057), (83, 17060), (87, 17093), (95, 17198), (99, 17237), (100, 17240), (105, 17300), (111, 17408), (112, 17414), (120, 17486), (123, 17501), (125, 17525), (126, 17531), (128, 17552), (133, 17600), (138, 17651), (141, 17672), (155, 17768), (158, 17792), (160, 17804), (170, 17867), (178, 17924), (185, 17978), (194, 18035), (196, 18062), (197, 18068), (198, 18074), (200, 18086), (205, 18137), (230, 18275),

Gene: Losacky_26 Start: 14705, Stop: 16573, Start Num: 23

Candidate Starts for Losacky_26:

(10, 14480), (19, 14675), (Start: 23 @14705 has 49 MA's), (32, 14765), (36, 14786), (39, 14798), (42, 14852), (45, 14885), (48, 14891), (63, 15107), (78, 15263), (82, 15317), (83, 15320), (86, 15350), (93, 15422), (103, 15545), (108, 15617), (110, 15650), (112, 15674), (119, 15722), (125, 15785), (151, 16019), (161, 16070), (165, 16088), (169, 16115), (172, 16133), (176, 16148), (194, 16295), (196, 16322), (204, 16385), (219, 16472), (232, 16565),

Gene: MenE_24 Start: 14693, Stop: 16561, Start Num: 23

Candidate Starts for MenE_24:

(10, 14468), (19, 14663), (Start: 23 @14693 has 49 MA's), (32, 14753), (36, 14774), (39, 14786), (42, 14840), (45, 14873), (48, 14879), (63, 15095), (78, 15251), (82, 15305), (83, 15308), (86, 15338), (93, 15410), (103, 15533), (108, 15605), (110, 15638), (112, 15662), (119, 15710), (125, 15773), (151, 16007), (161, 16058), (165, 16076), (169, 16103), (172, 16121), (176, 16136), (194, 16283), (196, 16310), (204, 16373), (219, 16460), (232, 16553),

Gene: Milani_22 Start: 15329, Stop: 17206, Start Num: 23

Candidate Starts for Milani_22:

(Start: 23 @15329 has 49 MA's), (30, 15380), (42, 15476), (43, 15479), (52, 15539), (60, 15656), (66, 15758), (68, 15770), (72, 15845), (80, 15932), (82, 15962), (83, 15965), (86, 15995), (89, 16025), (91, 16037), (93, 16067), (104, 16199), (110, 16295), (112, 16319), (118, 16364), (119, 16367), (121, 16394), (123, 16406), (124, 16415), (128, 16457), (134, 16517), (157, 16685), (177, 16802), (182, 16859), (184, 16877), (186, 16889), (187, 16892), (191, 16916), (196, 16964), (201, 16997), (208, 17051),

Gene: MsUbiquitous_18 Start: 14012, Stop: 15982, Start Num: 23

Candidate Starts for MsUbiquitous_18:

(Start: 23 @14012 has 49 MA's), (46, 14201), (49, 14216), (54, 14258), (56, 14309), (57, 14312), (65, 14432), (95, 14750), (97, 14783), (122, 15053), (146, 15272), (154, 15311), (167, 15386), (171, 15428), (199, 15656), (209, 15731), (214, 15761), (229, 15851), (231, 15860), (236, 15914), (240, 15956),

Gene: Nicky22_19 Start: 14417, Stop: 16390, Start Num: 23

Candidate Starts for Nicky22_19:

(Start: 23 @14417 has 49 MA's), (46, 14606), (49, 14621), (54, 14663), (56, 14714), (57, 14717), (64, 14834), (65, 14837), (95, 15155), (97, 15188), (117, 15416), (122, 15458), (136, 15593), (146, 15677), (172, 15842), (173, 15848), (189, 15980), (209, 16139), (218, 16184), (221, 16211), (229, 16259), (231, 16268), (236, 16322), (240, 16364),

Gene: Olympi_22 Start: 16368, Stop: 18245, Start Num: 23

Candidate Starts for Olympi_22:

(Start: 23 @16368 has 49 MA's), (41, 16497), (42, 16536), (43, 16539), (53, 16608), (55, 16653), (58, 16689), (66, 16818), (82, 16998), (83, 17001), (87, 17034), (88, 17058), (95, 17139), (99, 17178), (100, 17181), (107, 17271), (112, 17355), (120, 17427), (123, 17442), (125, 17466), (126, 17472), (128, 17493), (133, 17541), (155, 17709), (156, 17712), (158, 17733), (160, 17745), (174, 17820), (198, 18015), (201, 18036), (202, 18045), (205, 18078), (219, 18144), (224, 18174), (230, 18216),

Gene: PastaFagioli_18 Start: 13977, Stop: 15950, Start Num: 23

Candidate Starts for PastaFagioli_18:

(Start: 23 @13977 has 49 MA's), (38, 14070), (50, 14190), (54, 14223), (56, 14274), (65, 14397), (67, 14409), (95, 14715), (97, 14748), (100, 14757), (117, 14976), (122, 15018), (136, 15153), (146, 15237), (162, 15330), (169, 15375), (175, 15414), (199, 15624), (203, 15654), (209, 15699), (212, 15723), (229, 15819), (240, 15924),

Gene: PermaG_22 Start: 16442, Stop: 18325, Start Num: 23

Candidate Starts for PermaG_22:

(19, 16412), (Start: 23 @16442 has 49 MA's), (41, 16571), (42, 16610), (43, 16613), (53, 16682), (58, 16763), (66, 16892), (74, 16970), (82, 17072), (83, 17075), (95, 17213), (99, 17252), (100, 17255), (109, 17399), (112, 17429), (123, 17516), (125, 17540), (126, 17546), (128, 17567), (133, 17615), (155, 17783), (156, 17786), (158, 17807), (160, 17819), (183, 17975), (194, 18050), (195, 18068), (204, 18137), (219, 18224), (220, 18227), (225, 18260),

Gene: PhigPhack_19 Start: 13972, Stop: 15942, Start Num: 23

Candidate Starts for PhigPhack_19:

(Start: 23 @13972 has 49 MA's), (46, 14161), (54, 14218), (57, 14272), (59, 14293), (65, 14392), (67, 14404), (95, 14710), (97, 14743), (122, 15013), (167, 15346), (171, 15388), (189, 15532), (199, 15616), (209, 15691), (212, 15715), (218, 15736), (222, 15775), (229, 15811), (234, 15850), (236, 15874), (240, 15916),

Gene: PhillyJawn_24 Start: 14425, Stop: 16293, Start Num: 23

Candidate Starts for PhillyJawn_24:

(10, 14200), (19, 14395), (Start: 23 @14425 has 49 MA's), (32, 14485), (36, 14506), (39, 14518), (42, 14572), (45, 14605), (59, 14734), (63, 14827), (78, 14983), (82, 15037), (83, 15040), (86, 15070), (93, 15142), (103, 15265), (110, 15370), (112, 15394), (119, 15442), (151, 15739), (161, 15790), (165, 15808), (172, 15853), (176, 15868), (194, 16015), (196, 16042), (204, 16105), (219, 16192), (232, 16285),

Gene: Phingu_26 Start: 14644, Stop: 16512, Start Num: 23

Candidate Starts for Phingu_26:

(10, 14419), (19, 14614), (Start: 23 @14644 has 49 MA's), (32, 14704), (36, 14725), (39, 14737), (42, 14791), (45, 14824), (59, 14953), (63, 15046), (78, 15202), (82, 15256), (83, 15259), (86, 15289), (93, 15361), (103, 15484), (108, 15556), (110, 15589), (112, 15613), (119, 15661), (125, 15724), (151, 15958), (161, 16009), (165, 16027), (172, 16072), (176, 16087), (194, 16234), (196, 16261), (204, 16324), (219, 16411), (232, 16504),

Gene: Phisb_18 Start: 13986, Stop: 15956, Start Num: 23

Candidate Starts for Phisb_18:

(Start: 23 @13986 has 49 MA's), (46, 14175), (49, 14190), (54, 14232), (56, 14283), (57, 14286), (64, 14403), (65, 14406), (95, 14724), (97, 14757), (117, 14985), (122, 15027), (136, 15162), (146, 15246), (154, 15285), (167, 15360), (171, 15402), (199, 15630), (209, 15705), (218, 15750), (229, 15825), (231, 15834), (236, 15888), (240, 15930),

Gene: Phonegingi_23 Start: 14486, Stop: 16339, Start Num: 23

Candidate Starts for Phonegingi_23:

(10, 14261), (19, 14456), (Start: 23 @14486 has 49 MA's), (32, 14546), (36, 14567), (39, 14579), (42, 14633), (45, 14666), (59, 14795), (73, 14984), (78, 15044), (82, 15098), (83, 15101), (86, 15131), (93, 15203), (103, 15326), (106, 15365), (108, 15398), (110, 15431), (112, 15455), (119, 15503), (121, 15530), (124, 15551), (128, 15593), (131, 15620), (161, 15851), (165, 15869), (184, 16016), (196, 16103), (198, 16115), (204, 16160), (205, 16172), (210, 16193), (224, 16268), (230, 16310), (232, 16331),

Gene: Pickles13_23 Start: 14850, Stop: 16718, Start Num: 23

Candidate Starts for Pickles13_23:

(10, 14625), (19, 14820), (Start: 23 @14850 has 49 MA's), (32, 14910), (36, 14931), (39, 14943), (42, 14997), (45, 15030), (47, 15033), (80, 15432), (82, 15462), (83, 15465), (86, 15495), (93, 15567), (103, 15690), (108, 15762), (110, 15795), (112, 15819), (116, 15855), (119, 15867), (121, 15894), (125, 15930), (135, 16026), (151, 16164), (165, 16233), (169, 16260), (194, 16440), (196, 16467), (204, 16530), (219, 16617), (232, 16710),

Gene: QMacho_19 Start: 14456, Stop: 16426, Start Num: 23

Candidate Starts for QMacho_19:

(Start: 23 @14456 has 49 MA's), (46, 14645), (49, 14660), (51, 14672), (54, 14702), (56, 14753), (65, 14876), (95, 15194), (97, 15227), (117, 15455), (134, 15611), (136, 15632), (146, 15716), (154, 15755), (167, 15830), (171, 15872), (209, 16175), (218, 16220), (221, 16247), (229, 16295), (231, 16304), (236, 16358), (240, 16400),

Gene: Rasovi_21 Start: 16411, Stop: 18312, Start Num: 23

Candidate Starts for Rasovi_21:

(Start: 23 @16411 has 49 MA's), (27, 16432), (28, 16438), (41, 16540), (43, 16582), (53, 16651), (58, 16732), (60, 16762), (66, 16861), (69, 16903), (81, 17044), (82, 17065), (83, 17068), (87, 17101), (95, 17206), (99, 17245), (100, 17248), (105, 17308), (111, 17416), (112, 17422), (120, 17494), (123, 17509), (125, 17533), (126, 17539), (128, 17560), (133, 17608), (138, 17659), (141, 17680), (155, 17776), (158, 17800), (160, 17812), (170, 17875), (178, 17932), (185, 17986), (194, 18043), (196, 18070), (197, 18076), (198, 18082), (200, 18094), (205, 18145), (230, 18283),

Gene: SBlackberry_21 Start: 16237, Stop: 18123, Start Num: 23

Candidate Starts for SBlackberry_21:

(Start: 23 @16237 has 49 MA's), (41, 16366), (42, 16405), (53, 16477), (58, 16558), (59, 16570), (66, 16687), (70, 16729), (81, 16846), (82, 16867), (83, 16870), (87, 16903), (95, 17008), (99, 17047), (100, 17050), (102, 17080), (111, 17218), (112, 17224), (120, 17296), (123, 17311), (125, 17335), (126, 17341), (128, 17362), (133, 17410), (139, 17467), (150, 17566), (151, 17575), (153, 17581), (163, 17635), (169, 17671), (198, 17893), (201, 17914), (202, 17923), (205, 17956), (219, 18022), (224, 18052), (230, 18094),

Gene: SansAfet_18 Start: 13906, Stop: 15876, Start Num: 23

Candidate Starts for SansAfet_18:

(Start: 23 @13906 has 49 MA's), (46, 14095), (54, 14152), (57, 14206), (59, 14227), (65, 14326), (74, 14404), (95, 14644), (117, 14905), (122, 14947), (129, 15004), (167, 15280), (171, 15322), (209, 15625), (212, 15649), (218, 15670), (222, 15709), (229, 15745), (234, 15784), (236, 15808), (240, 15850),

Gene: SarBear_18 Start: 13951, Stop: 15924, Start Num: 23

Candidate Starts for SarBear_18:

(Start: 23 @13951 has 49 MA's), (46, 14140), (49, 14155), (54, 14197), (56, 14248), (57, 14251), (65, 14371), (95, 14689), (97, 14722), (122, 14992), (136, 15127), (146, 15211), (152, 15241), (173, 15382), (199, 15598), (209, 15673), (214, 15703), (229, 15793), (231, 15802), (236, 15856), (240, 15898),

Gene: Slay_18 Start: 14493, Stop: 16466, Start Num: 23

Candidate Starts for Slay_18:

(Start: 23 @14493 has 49 MA's), (46, 14682), (49, 14697), (54, 14739), (56, 14790), (57, 14793), (65, 14913), (95, 15231), (97, 15264), (117, 15492), (122, 15534), (125, 15561), (136, 15669), (146, 15753), (152, 15783), (173, 15924), (199, 16140), (209, 16215), (214, 16245), (229, 16335), (231, 16344), (236, 16398), (240, 16440),

Gene: Softsoap_17 Start: 13727, Stop: 15697, Start Num: 23

Candidate Starts for Softsoap_17:

(Start: 23 @13727 has 49 MA's), (46, 13916), (49, 13931), (54, 13973), (56, 14024), (64, 14144), (65, 14147), (95, 14465), (97, 14498), (117, 14726), (122, 14768), (136, 14903), (146, 14987), (154, 15026), (167, 15101), (171, 15143), (199, 15371), (209, 15446), (218, 15491), (229, 15566), (231, 15575), (236, 15629), (240, 15671),

Gene: Swervy_18 Start: 13951, Stop: 15924, Start Num: 23

Candidate Starts for Swervy_18:

(Start: 23 @13951 has 49 MA's), (46, 14140), (49, 14155), (54, 14197), (56, 14248), (57, 14251), (65, 14371), (95, 14689), (97, 14722), (122, 14992), (136, 15127), (146, 15211), (152, 15241), (173, 15382), (199, 15598), (209, 15673), (214, 15703), (229, 15793), (231, 15802), (236, 15856), (240, 15898),

Gene: TukTuk_18 Start: 14009, Stop: 15982, Start Num: 23

Candidate Starts for TukTuk_18:

(Start: 23 @14009 has 49 MA's), (46, 14198), (49, 14213), (51, 14225), (54, 14255), (56, 14306), (64, 14426), (65, 14429), (95, 14747), (97, 14780), (117, 15008), (122, 15050), (134, 15164), (136, 15185), (146, 15269), (152, 15299), (209, 15731), (218, 15776), (221, 15803), (229, 15851), (231, 15860), (236, 15914), (240, 15956),

Gene: TurboVicky_21 Start: 16231, Stop: 18123, Start Num: 23

Candidate Starts for TurboVicky_21:

(Start: 23 @16231 has 49 MA's), (41, 16360), (42, 16399), (43, 16402), (53, 16471), (58, 16552), (59, 16564), (66, 16681), (81, 16840), (82, 16861), (83, 16864), (87, 16897), (95, 17002), (99, 17041), (100, 17044), (101, 17062), (102, 17074), (111, 17212), (112, 17218), (120, 17290), (123, 17305), (125, 17329), (126, 17335), (128, 17356), (133, 17404), (151, 17569), (153, 17575), (159, 17605), (165, 17638), (166, 17644), (176, 17698), (179, 17737), (192, 17833), (197, 17878), (200, 17896), (219, 18022), (226, 18067), (228, 18088),

Gene: Typher_23 Start: 16361, Stop: 18253, Start Num: 23

Candidate Starts for Typher_23:

(Start: 23 @16361 has 49 MA's), (41, 16490), (42, 16529), (43, 16532), (53, 16601), (58, 16682), (59, 16694), (66, 16811), (81, 16970), (82, 16991), (83, 16994), (87, 17027), (95, 17132), (99, 17171), (100, 17174), (101, 17192), (102, 17204), (111, 17342), (112, 17348), (120, 17420), (123, 17435), (125, 17459), (126, 17465), (128, 17486), (133, 17534), (151, 17699), (153, 17705), (159, 17735), (165, 17768), (166, 17774), (176, 17828), (192, 17963), (196, 18002), (200, 18026), (226, 18197), (228, 18218),

Gene: UtzChips_16 Start: 13138, Stop: 15648, Start Num: 2

Candidate Starts for UtzChips_16:

(1, 13102), (Start: 2 @13138 has 4 MA's), (8, 13528), (15, 13672), (17, 13705), (31, 13855), (45, 13978), (54, 14050), (59, 14125), (90, 14488), (91, 14494), (98, 14596), (112, 14779), (115, 14803), (233, 15565), (235, 15586), (237, 15598),

Gene: Violeta_25 Start: 14523, Stop: 16391, Start Num: 23

Candidate Starts for Violeta_25:

(10, 14298), (19, 14493), (Start: 23 @14523 has 49 MA's), (32, 14583), (36, 14604), (39, 14616), (42, 14670), (45, 14703), (59, 14832), (63, 14925), (78, 15081), (82, 15135), (83, 15138), (86, 15168), (93, 15240), (103, 15363), (110, 15468), (112, 15492), (119, 15540), (151, 15837), (161, 15888), (165, 15906), (169, 15933), (172, 15951), (176, 15966), (194, 16113), (196, 16140), (204, 16203), (219, 16290), (232, 16383),

Gene: Warren_24 Start: 14623, Stop: 16491, Start Num: 23

Candidate Starts for Warren_24:

(10, 14398), (19, 14593), (Start: 23 @14623 has 49 MA's), (32, 14683), (36, 14704), (39, 14716), (42, 14770), (45, 14803), (63, 15025), (78, 15181), (82, 15235), (83, 15238), (86, 15268), (93, 15340), (103, 15463), (108, 15535), (112, 15592), (119, 15640), (125, 15703), (135, 15799), (151, 15937), (161, 15988), (165, 16006), (169, 16033), (196, 16240), (219, 16390), (226, 16435), (232, 16483),

Gene: Wrackline_28 Start: 15957, Stop: 17840, Start Num: 23

Candidate Starts for Wrackline_28:

(Start: 23 @15957 has 49 MA's), (24, 15963), (26, 15972), (30, 16008), (32, 16017), (34, 16026), (37, 16038), (42, 16104), (52, 16167), (54, 16191), (59, 16266), (62, 16320), (66, 16386), (76, 16509), (82, 16587), (83, 16590), (86, 16620), (91, 16662), (93, 16692), (95, 16728), (98, 16764), (106, 16854), (109, 16914), (112, 16944), (113, 16950), (114, 16956), (116, 16980), (118, 16989), (119, 16992), (121, 17019), (122, 17028), (125, 17055), (128, 17082), (132, 17121), (134, 17142), (140, 17202), (141, 17205), (143, 17214), (144, 17226), (149, 17280), (151, 17295), (184, 17508), (186, 17520), (190, 17544), (193, 17565), (206, 17676), (207, 17679), (211, 17706), (215, 17715), (222, 17766),

Gene: Zanella_21 Start: 16234, Stop: 18126, Start Num: 23

Candidate Starts for Zanella_21:

(Start: 23 @16234 has 49 MA's), (41, 16363), (42, 16402), (43, 16405), (53, 16474), (58, 16555), (59, 16567), (66, 16684), (81, 16843), (82, 16864), (83, 16867), (87, 16900), (95, 17005), (99, 17044), (100, 17047), (101, 17065), (102, 17077), (111, 17215), (112, 17221), (120, 17293), (123, 17308), (125, 17332), (126, 17338), (128, 17359), (133, 17407), (151, 17572), (153, 17578), (159, 17608), (165, 17641), (166, 17647), (176, 17701), (179, 17740), (192, 17836), (197, 17881), (200, 17899), (219, 18025), (226, 18070), (228, 18091),