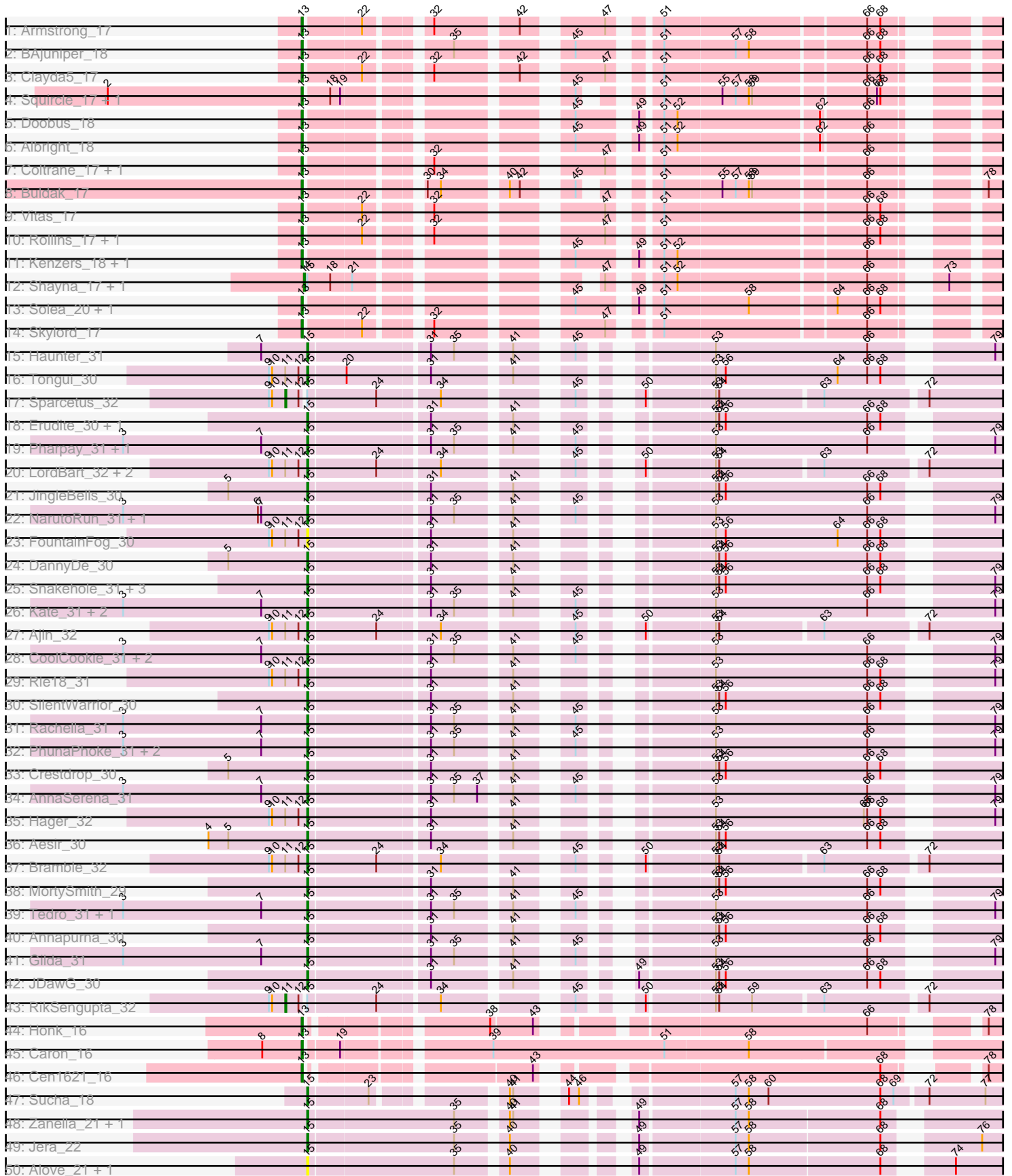


Zoomed Pham 311481



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 311481 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311481 has 86 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Armstrong_17
- Track 2 : BAjuniper_18
- Track 3 : Clayda5_17
- Track 4 : Squirrel_17, Olliecat_17
- Track 5 : Doobus_18
- Track 6 : Albright_18
- Track 7 : Coltrane_17, Brahms_17
- Track 8 : Buldak_17
- Track 9 : Vitas_17
- Track 10 : Rollins_17, Bernstein_17
- Track 11 : Kenzers_18, Lynlen_18
- Track 12 : Shayna_17, SunnyD_17
- Track 13 : Solea_20, Milomuff_19
- Track 14 : Skylord_17
- Track 15 : Haunter_31
- Track 16 : Tongui_30
- Track 17 : Sparcetus_32
- Track 18 : Erudite_30, Dauntless_30
- Track 19 : Pharpay_31, Artiphact_31
- Track 20 : LordBart_32, TinyMiny_32, Kors_32
- Track 21 : JingleBells_30
- Track 22 : NarutoRun_31, Anakin_31
- Track 23 : FountainFog_30
- Track 24 : DannyDe_30
- Track 25 : Snakehole_31, Hiddenleaf_30, FreddieHg_30, Chivey_30
- Track 26 : Kate_31, OhDear_31, OverHedge_31
- Track 27 : Ajin_32
- Track 28 : CoolCookie_31, Krampus_31, Potty_31
- Track 29 : Rie18_31
- Track 30 : SilentWarrior_30
- Track 31 : Rachella_31
- Track 32 : PhunaPhoke_31, Cybele_31, Neptune_31
- Track 33 : Crestdrop_30
- Track 34 : AnnaSerena_31
- Track 35 : Hager_32
- Track 36 : Aesir_30
- Track 37 : Bramble_32

- Track 38 : MortySmith_29
- Track 39 : Tedro_31, Tiggy93_31
- Track 40 : Annapurna_30
- Track 41 : Gilda_31
- Track 42 : JDawG_30
- Track 43 : RikSengupta_32
- Track 44 : Honk_16
- Track 45 : Caron_16
- Track 46 : Cen1621_16
- Track 47 : Sucha_18
- Track 48 : Zanella_21, TurboVicky_21
- Track 49 : Jera_22
- Track 50 : Alove_21, Rootkit7_21
- Track 51 : IndiRoo_21
- Track 52 : FireCastle_21
- Track 53 : Benry_21
- Track 54 : AyoTeo_23
- Track 55 : Labella_23
- Track 56 : Typher_23
- Track 57 : Milani_22
- Track 58 : Bush_24
- Track 59 : Teng_24
- Track 60 : DelaGarza_22
- Track 61 : Lesiram_23
- Track 62 : Sweetums_24
- Track 63 : 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 15, it was called in 53 of the 77 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Aesir_30, Ajin_32, Alove_21, Anakin_31, AnnaSerena_31, Annapurna_30, Artiphact_31, AyoTeo_23, Benry_21, Bramble_32, Bush_24, Chivey_30, CoolCookie_31, Crestdrop_30, Cybele_31, DannyDe_30, Dauntless_30, DelaGarza_22, Erudite_30, FireCastle_21, FountainFog_30, FreddieHg_30, Gilda_31, Hager_32, Haunter_31, Hiddenleaf_30, IndiRoo_21, JDawG_30, Jera_22, JingleBells_30, Kate_31, Kors_32, Krampus_31, Labella_23, Lesiram_23, LordBart_32, Milani_22, MortySmith_29, NarutoRun_31, Neptune_31, OhDear_31, OverHedge_31, Pharpay_31, PhunaPhoke_31, Potty_31, Rachella_31, Rie18_31, Rootkit7_21, SilentWarrior_30, Snakehole_31, Sucha_18, Sweetums_24, Tedro_31, Teng_24, Tiggy93_31, TinyMiny_32, Tongui_30, TurboVicky_21, Typher_23, Wrackline_28, Zanella_21,

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

• RikSengupta_32, Shayna_17, Sparcetus_32, SunnyD_17,

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

- Albright_18, Armstrong_17, BAjuniper_18, Bernstein_17, Brahms_17, Buldak_17, Caron_16, Cen1621_16, Clayda5_17, Coltrane_17, Doobus_18, Honk_16, Kenzers_18, Lynlen_18, Milomuff_19, Olliecat_17, Rollins_17, Skylord_17, Solea_20, Squirrel_17, Vitas_17,

Summary by start number:

Start 11:

- Found in 11 of 86 (12.8%) of genes in pham
- Manual Annotations of this start: 2 of 77
- Called 18.2% of time when present
- Phage (with cluster) where this start called: RikSengupta_32 (EF), Sparcetus_32 (EF),

Start 13:

- Found in 21 of 86 (24.4%) of genes in pham
- Manual Annotations of this start: 20 of 77
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Albright_18 (EB), Armstrong_17 (EB), BAjuniper_18 (EB), Bernstein_17 (EB), Brahms_17 (EB), Buldak_17 (EB), Caron_16 (EH), Cen1621_16 (EH), Clayda5_17 (EB), Coltrane_17 (EB), Doobus_18 (EB), Honk_16 (EH), Kenzers_18 (EB), Lynlen_18 (EB), Milomuff_19 (EB), Olliecat_17 (EB), Rollins_17 (EB), Skylord_17 (EB), Solea_20 (EB), Squirrel_17 (EB), Vitas_17 (EB),

Start 14:

- Found in 2 of 86 (2.3%) of genes in pham
- Manual Annotations of this start: 2 of 77
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shayna_17 (EB), SunnyD_17 (EB),

Start 15:

- Found in 65 of 86 (75.6%) of genes in pham
- Manual Annotations of this start: 53 of 77
- Called 93.8% of time when present
- Phage (with cluster) where this start called: Aesir_30 (EF), Ajin_32 (EF), Alove_21 (EJ), Anakin_31 (EF), AnnaSerena_31 (EF), Annapurna_30 (EF), Artiphact_31 (EF), AyoTeo_23 (EJ), Benry_21 (EJ), Bramble_32 (EF), Bush_24 (GA), Chivey_30 (EF), CoolCookie_31 (EF), Crestdrop_30 (EF), Cybele_31 (EF), DannyDe_30 (EF), Dauntless_30 (EF), DelaGarza_22 (GF), Erudite_30 (EF), FireCastle_21 (EJ), FountainFog_30 (EF), FreddieHg_30 (EF), Gilda_31 (EF), Hager_32 (EF), Haunter_31 (EF), Hiddenleaf_30 (EF), IndiRoo_21 (EJ), JDawG_30 (EF), Jera_22 (EJ), JingleBells_30 (EF), Kate_31 (EF), Kors_32 (EF), Krampus_31 (EF), Labella_23 (EJ), Lesiram_23 (GF), LordBart_32 (EF), Milani_22 (EJ), MortySmith_29 (EF), NarutoRun_31 (EF), Neptune_31 (EF), OhDear_31 (EF), OverHedge_31 (EF), Pharpay_31 (EF), PhunaPhoke_31 (EF), Potty_31 (EF), Rachella_31 (EF), Rie18_31 (EF), Rootkit7_21 (EJ), SilentWarrior_30 (EF), Snakehole_31 (EF), Sucha_18 (EJ), Sweetums_24 (GF), Tedro_31 (EF), Teng_24 (GF), Tiggy93_31 (EF), TinyMiny_32 (EF), Tongui_30 (EF), TurboVicky_21 (EJ), Typher_23 (EJ), Wrackline_28 (GF), Zanella_21 (EJ),

Summary by clusters:

There are 6 clusters represented in this pham: EH, EJ, EF, EB, GF, GA,

Info for manual annotations of cluster EB:

- Start number 13 was manually annotated 17 times for cluster EB.
- Start number 14 was manually annotated 2 times for cluster EB.

Info for manual annotations of cluster EF:

- Start number 11 was manually annotated 2 times for cluster EF.
- Start number 15 was manually annotated 38 times for cluster EF.

Info for manual annotations of cluster EH:

- Start number 13 was manually annotated 3 times for cluster EH.

Info for manual annotations of cluster EJ:

- Start number 15 was manually annotated 10 times for cluster EJ.

Info for manual annotations of cluster GA:

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

Info for manual annotations of cluster GF:

- Start number 15 was manually annotated 4 times for cluster GF.

Gene Information:

Gene: Aesir_30 Start: 18424, Stop: 20193, Start Num: 15

Candidate Starts for Aesir_30:

(4, 18337), (5, 18355), (Start: 15 @18424 has 53 MA's), (31, 18526), (41, 18589), (53, 18712), (54, 18715), (56, 18721), (66, 18850), (68, 18862), (93, 19075), (102, 19177), (106, 19219), (108, 19225), (117, 19306), (124, 19372), (129, 19402), (132, 19411), (136, 19438), (138, 19447), (151, 19528), (158, 19582), (164, 19633), (167, 19648), (177, 19684), (212, 19867), (239, 19996), (270, 20122), (280, 20161), (283, 20173),

Gene: Ajin_32 Start: 18502, Stop: 20436, Start Num: 15

Candidate Starts for Ajin_32:

(9, 18472), (10, 18475), (Start: 11 @18487 has 2 MA's), (12, 18499), (Start: 15 @18502 has 53 MA's), (24, 18562), (34, 18613), (45, 18703), (50, 18733), (53, 18790), (54, 18793), (63, 18883), (72, 18970), (81, 19051), (90, 19135), (98, 19210), (102, 19270), (112, 19351), (118, 19402), (126, 19474), (129, 19495), (130, 19498), (132, 19504), (145, 19582), (151, 19618), (154, 19636), (181, 19792), (195, 19876), (201, 19900), (241, 20116), (249, 20158), (277, 20275), (281, 20296), (289, 20347),

Gene: Albright_18 Start: 13896, Stop: 15746, Start Num: 13

Candidate Starts for Albright_18:

(Start: 13 @13896 has 20 MA's), (45, 14085), (49, 14127), (51, 14142), (52, 14154), (62, 14277), (66, 14316), (80, 14409), (105, 14667), (137, 14895), (143, 14928), (144, 14937), (161, 15060), (205, 15285), (216, 15351), (235, 15453), (238, 15468), (255, 15537), (267, 15585), (272, 15612), (275, 15621), (286, 15672),

Gene: Alove_21 Start: 16231, Stop: 18123, Start Num: 15

Candidate Starts for Alove_21:

(Start: 15 @16231 has 53 MA's), (35, 16360), (40, 16399), (49, 16471), (57, 16552), (58, 16564), (68, 16681), (74, 16723), (88, 16840), (90, 16861), (91, 16864), (94, 16897), (103, 17002), (107, 17041),

(108, 17044), (111, 17074), (128, 17212), (129, 17218), (142, 17290), (145, 17305), (148, 17329), (153, 17356), (159, 17404), (193, 17569), (205, 17605), (209, 17629), (210, 17638), (212, 17644), (222, 17698), (247, 17833), (258, 17878), (263, 17896), (266, 17914), (287, 18022), (295, 18088),

Gene: Anakin_31 Start: 18678, Stop: 20456, Start Num: 15

Candidate Starts for Anakin_31:

(3, 18513), (6, 18636), (7, 18639), (Start: 15 @18678 has 53 MA's), (31, 18780), (35, 18801), (41, 18843), (45, 18879), (53, 18966), (66, 19104), (79, 19194), (90, 19296), (102, 19431), (108, 19479), (117, 19560), (124, 19626), (129, 19656), (132, 19665), (136, 19692), (138, 19701), (158, 19836), (164, 19887), (167, 19902), (177, 19938), (186, 19986), (212, 20121), (283, 20436),

Gene: AnnaSerena_31 Start: 18687, Stop: 20465, Start Num: 15

Candidate Starts for AnnaSerena_31:

(3, 18522), (7, 18648), (Start: 15 @18687 has 53 MA's), (31, 18789), (35, 18810), (37, 18831), (41, 18852), (45, 18888), (53, 18975), (66, 19113), (79, 19203), (90, 19305), (102, 19440), (108, 19488), (117, 19569), (124, 19635), (129, 19665), (132, 19674), (136, 19701), (138, 19710), (158, 19845), (164, 19896), (167, 19911), (177, 19947), (186, 19995), (212, 20130), (253, 20316), (283, 20445),

Gene: Annapurna_30 Start: 17886, Stop: 19655, Start Num: 15

Candidate Starts for Annapurna_30:

(Start: 15 @17886 has 53 MA's), (31, 17988), (41, 18051), (53, 18174), (54, 18177), (56, 18183), (66, 18312), (68, 18324), (93, 18537), (102, 18639), (108, 18687), (117, 18768), (124, 18834), (129, 18864), (132, 18873), (136, 18900), (138, 18909), (151, 18990), (158, 19044), (164, 19095), (167, 19110), (177, 19146), (186, 19194), (212, 19329), (239, 19458), (280, 19623), (283, 19635),

Gene: Armstrong_17 Start: 12466, Stop: 14193, Start Num: 13

Candidate Starts for Armstrong_17:

(Start: 13 @12466 has 20 MA's), (22, 12514), (32, 12559), (42, 12625), (47, 12682), (51, 12712), (66, 12886), (68, 12898), (103, 13204), (104, 13207), (119, 13333), (123, 13384), (129, 13423), (133, 13435), (137, 13465), (139, 13471), (144, 13507), (228, 13963), (236, 14011), (275, 14167), (276, 14170),

Gene: Artiphact_31 Start: 18679, Stop: 20457, Start Num: 15

Candidate Starts for Artiphact_31:

(3, 18514), (7, 18640), (Start: 15 @18679 has 53 MA's), (31, 18781), (35, 18802), (41, 18844), (45, 18880), (53, 18967), (66, 19105), (79, 19195), (102, 19432), (108, 19480), (117, 19561), (124, 19627), (129, 19657), (132, 19666), (138, 19702), (158, 19837), (164, 19888), (167, 19903), (177, 19939), (186, 19987), (204, 20083), (212, 20122), (283, 20437),

Gene: AyoTeo_23 Start: 16358, Stop: 18250, Start Num: 15

Candidate Starts for AyoTeo_23:

(Start: 15 @16358 has 53 MA's), (35, 16487), (40, 16526), (41, 16529), (49, 16598), (57, 16679), (58, 16691), (68, 16808), (88, 16967), (90, 16988), (91, 16991), (94, 17024), (103, 17129), (107, 17168), (108, 17171), (110, 17189), (111, 17201), (128, 17339), (129, 17345), (142, 17417), (145, 17432), (148, 17456), (150, 17462), (153, 17483), (159, 17531), (193, 17696), (196, 17702), (205, 17732), (210, 17765), (212, 17771), (222, 17825), (229, 17864), (258, 18005), (287, 18149), (293, 18194), (295, 18215),

Gene: BAjuniper_18 Start: 13644, Stop: 16130, Start Num: 13

Candidate Starts for BAjuniper_18:

(Start: 13 @13644 has 20 MA's), (35, 13755), (45, 13833), (51, 13890), (57, 13953), (58, 13965), (66, 14064), (68, 14076), (103, 14382), (104, 14385), (108, 14424), (129, 14601), (137, 14643), (138, 14646), (143, 14676), (158, 14778), (169, 14847), (186, 14928), (217, 15102), (232, 15174), (233,

15177), (248, 15270), (275, 15384), (297, 15534), (299, 15570), (301, 15591), (304, 15735), (307, 15882), (309, 15897), (310, 15912), (311, 15939), (313, 16014), (315, 16020), (317, 16089), (318, 16098), (319, 16113),

Gene: Benry_21 Start: 14670, Stop: 16571, Start Num: 15

Candidate Starts for Benry_21:

(Start: 15 @14670 has 53 MA's), (23, 14721), (26, 14739), (40, 14817), (41, 14820), (44, 14850), (57, 14967), (58, 14979), (60, 14997), (68, 15099), (69, 15111), (72, 15138), (75, 15183), (86, 15273), (90, 15303), (91, 15306), (93, 15336), (113, 15528), (118, 15570), (125, 15636), (129, 15660), (131, 15666), (138, 15705), (139, 15708), (141, 15726), (144, 15744), (145, 15747), (153, 15798), (160, 15858), (171, 15906), (231, 16194), (238, 16242), (244, 16275), (260, 16329), (266, 16362), (277, 16410), (285, 16452),

Gene: Bernstein_17 Start: 12526, Stop: 14229, Start Num: 13

Candidate Starts for Bernstein_17:

(Start: 13 @12526 has 20 MA's), (22, 12574), (32, 12619), (47, 12742), (51, 12772), (66, 12946), (68, 12958), (103, 13264), (104, 13267), (119, 13393), (123, 13444), (129, 13483), (133, 13495), (137, 13525), (139, 13531), (144, 13567), (211, 13933), (228, 14023), (275, 14203), (276, 14206),

Gene: Brahms_17 Start: 12466, Stop: 14169, Start Num: 13

Candidate Starts for Brahms_17:

(Start: 13 @12466 has 20 MA's), (32, 12559), (47, 12682), (51, 12712), (66, 12886), (103, 13204), (104, 13207), (119, 13333), (123, 13384), (129, 13423), (133, 13435), (137, 13465), (139, 13471), (141, 13489), (144, 13507), (165, 13654), (169, 13669), (172, 13678), (183, 13717), (211, 13873), (228, 13963), (275, 14143), (276, 14146),

Gene: Bramble_32 Start: 18468, Stop: 20402, Start Num: 15

Candidate Starts for Bramble_32:

(9, 18438), (10, 18441), (Start: 11 @18453 has 2 MA's), (12, 18465), (Start: 15 @18468 has 53 MA's), (24, 18528), (34, 18579), (45, 18669), (50, 18699), (53, 18756), (54, 18759), (63, 18849), (72, 18936), (81, 19017), (90, 19101), (98, 19176), (102, 19236), (112, 19317), (118, 19368), (129, 19461), (130, 19464), (132, 19470), (145, 19548), (151, 19584), (154, 19602), (181, 19758), (201, 19866), (241, 20082), (249, 20124), (277, 20241), (281, 20262),

Gene: Buldak_17 Start: 13900, Stop: 15591, Start Num: 13

Candidate Starts for Buldak_17:

(Start: 13 @13900 has 20 MA's), (30, 13987), (34, 13999), (40, 14050), (42, 14059), (45, 14089), (51, 14128), (55, 14179), (57, 14191), (58, 14203), (59, 14206), (66, 14302), (78, 14371), (93, 14512), (103, 14620), (116, 14719), (123, 14800), (125, 14815), (126, 14818), (137, 14881), (143, 14914), (144, 14923), (157, 15004), (159, 15025), (162, 15058), (166, 15070), (186, 15151), (191, 15181), (206, 15256), (211, 15283), (228, 15367), (241, 15430), (242, 15433), (274, 15565),

Gene: Bush_24 Start: 14559, Stop: 16421, Start Num: 15

Candidate Starts for Bush_24:

(1, 14334), (9, 14529), (Start: 15 @14559 has 53 MA's), (25, 14619), (28, 14640), (33, 14652), (40, 14706), (44, 14739), (58, 14868), (84, 15117), (86, 15141), (90, 15171), (91, 15174), (93, 15204), (100, 15276), (114, 15399), (125, 15504), (129, 15528), (139, 15576), (148, 15639), (193, 15867), (222, 15996), (231, 16041), (256, 16170), (287, 16320), (295, 16386), (298, 16413),

Gene: Caron_16 Start: 13192, Stop: 15042, Start Num: 13

Candidate Starts for Caron_16:

(8, 13156), (Start: 13 @13192 has 20 MA's), (19, 13219), (39, 13339), (51, 13495), (58, 13570), (97, 13933), (98, 13939), (129, 14224), (134, 14248), (163, 14449), (200, 14623), (269, 14959), (273,

14980), (279, 14992),

Gene: Cen1621_16 Start: 12224, Stop: 14683, Start Num: 13

Candidate Starts for Cen1621_16:

(Start: 13 @12224 has 20 MA's), (43, 12398), (68, 12668), (78, 12722), (91, 12833), (95, 12869), (97, 12899), (103, 12971), (116, 13070), (120, 13127), (123, 13151), (125, 13166), (127, 13181), (139, 13238), (140, 13253), (156, 13352), (179, 13469), (207, 13622), (227, 13724), (232, 13742), (243, 13805), (256, 13862), (264, 13901), (285, 13991), (294, 14063), (302, 14210), (303, 14243), (306, 14378), (308, 14450), (312, 14504), (314, 14573), (316, 14627),

Gene: Chivey_30 Start: 17840, Stop: 19609, Start Num: 15

Candidate Starts for Chivey_30:

(Start: 15 @17840 has 53 MA's), (31, 17942), (41, 18005), (53, 18128), (54, 18131), (56, 18137), (66, 18266), (68, 18278), (79, 18356), (89, 18446), (93, 18491), (102, 18593), (108, 18641), (124, 18788), (129, 18818), (132, 18827), (136, 18854), (138, 18863), (151, 18944), (158, 18998), (164, 19049), (167, 19064), (177, 19100), (203, 19238), (234, 19394), (239, 19412), (283, 19589),

Gene: Clayda5_17 Start: 12466, Stop: 14199, Start Num: 13

Candidate Starts for Clayda5_17:

(Start: 13 @12466 has 20 MA's), (22, 12514), (32, 12559), (42, 12625), (47, 12682), (51, 12712), (66, 12886), (68, 12898), (103, 13204), (104, 13207), (119, 13333), (123, 13384), (129, 13423), (133, 13435), (137, 13465), (139, 13471), (144, 13507), (211, 13873), (275, 14173), (276, 14176),

Gene: Coltrane_17 Start: 12466, Stop: 14169, Start Num: 13

Candidate Starts for Coltrane_17:

(Start: 13 @12466 has 20 MA's), (32, 12559), (47, 12682), (51, 12712), (66, 12886), (103, 13204), (104, 13207), (119, 13333), (123, 13384), (129, 13423), (133, 13435), (137, 13465), (139, 13471), (141, 13489), (144, 13507), (165, 13654), (169, 13669), (172, 13678), (183, 13717), (211, 13873), (228, 13963), (275, 14143), (276, 14146),

Gene: CoolCookie_31 Start: 18685, Stop: 20463, Start Num: 15

Candidate Starts for CoolCookie_31:

(3, 18520), (7, 18646), (Start: 15 @18685 has 53 MA's), (31, 18787), (35, 18808), (41, 18850), (45, 18886), (53, 18973), (66, 19111), (79, 19201), (90, 19303), (102, 19438), (108, 19486), (117, 19567), (124, 19633), (129, 19663), (132, 19672), (138, 19708), (158, 19843), (164, 19894), (167, 19909), (177, 19945), (186, 19993), (212, 20128), (283, 20443),

Gene: Crestdrop_30 Start: 17749, Stop: 19518, Start Num: 15

Candidate Starts for Crestdrop_30:

(5, 17680), (Start: 15 @17749 has 53 MA's), (31, 17851), (41, 17914), (53, 18037), (54, 18040), (56, 18046), (66, 18175), (68, 18187), (93, 18400), (102, 18502), (108, 18550), (117, 18631), (124, 18697), (129, 18727), (132, 18736), (136, 18763), (138, 18772), (151, 18853), (158, 18907), (164, 18958), (167, 18973), (177, 19009), (186, 19057), (239, 19321), (280, 19486), (283, 19498),

Gene: Cybele_31 Start: 18655, Stop: 20433, Start Num: 15

Candidate Starts for Cybele_31:

(3, 18490), (7, 18616), (Start: 15 @18655 has 53 MA's), (31, 18757), (35, 18778), (41, 18820), (45, 18856), (53, 18943), (66, 19081), (79, 19171), (90, 19273), (101, 19399), (102, 19408), (108, 19456), (117, 19537), (124, 19603), (129, 19633), (132, 19642), (136, 19669), (138, 19678), (158, 19813), (164, 19864), (167, 19879), (177, 19915), (186, 19963), (204, 20059), (212, 20098), (283, 20413),

Gene: DannyDe_30 Start: 17832, Stop: 19601, Start Num: 15

Candidate Starts for DannyDe_30:

(5, 17763), (Start: 15 @17832 has 53 MA's), (31, 17934), (41, 17997), (53, 18120), (54, 18123), (56, 18129), (66, 18258), (68, 18270), (93, 18483), (102, 18585), (108, 18633), (117, 18714), (121, 18750), (124, 18780), (129, 18810), (132, 18819), (136, 18846), (138, 18855), (151, 18936), (158, 18990), (164, 19041), (167, 19056), (177, 19092), (186, 19140), (212, 19275), (239, 19404), (280, 19569), (283, 19581),

Gene: Dauntless_30 Start: 18392, Stop: 20161, Start Num: 15

Candidate Starts for Dauntless_30:

(Start: 15 @18392 has 53 MA's), (31, 18494), (41, 18557), (53, 18680), (54, 18683), (56, 18689), (66, 18818), (68, 18830), (93, 19043), (102, 19145), (108, 19193), (117, 19274), (124, 19340), (129, 19370), (132, 19379), (136, 19406), (138, 19415), (151, 19496), (158, 19550), (164, 19601), (167, 19616), (177, 19652), (239, 19964), (270, 20090), (280, 20129), (283, 20141),

Gene: DelaGarza_22 Start: 15128, Stop: 16816, Start Num: 15

Candidate Starts for DelaGarza_22:

(Start: 15 @15128 has 53 MA's), (40, 15275), (41, 15278), (59, 15440), (68, 15557), (69, 15569), (76, 15623), (86, 15710), (90, 15740), (92, 15749), (98, 15815), (103, 15881), (113, 15965), (125, 16073), (129, 16097), (136, 16133), (139, 16145), (144, 16181), (147, 16193), (148, 16208), (149, 16211), (153, 16235), (158, 16274), (160, 16295), (168, 16331), (175, 16352), (187, 16409), (219, 16556), (231, 16607), (237, 16652), (247, 16697), (252, 16721), (259, 16739),

Gene: Doobus_18 Start: 14247, Stop: 16097, Start Num: 13

Candidate Starts for Doobus_18:

(Start: 13 @14247 has 20 MA's), (45, 14436), (49, 14478), (51, 14493), (52, 14505), (62, 14628), (66, 14667), (80, 14760), (105, 15018), (137, 15246), (143, 15279), (144, 15288), (161, 15411), (205, 15636), (208, 15657), (216, 15702), (235, 15804), (238, 15819), (255, 15888), (267, 15936), (272, 15963), (275, 15972), (286, 16023),

Gene: Erudite_30 Start: 18392, Stop: 20161, Start Num: 15

Candidate Starts for Erudite_30:

(Start: 15 @18392 has 53 MA's), (31, 18494), (41, 18557), (53, 18680), (54, 18683), (56, 18689), (66, 18818), (68, 18830), (93, 19043), (102, 19145), (108, 19193), (117, 19274), (124, 19340), (129, 19370), (132, 19379), (136, 19406), (138, 19415), (151, 19496), (158, 19550), (164, 19601), (167, 19616), (177, 19652), (239, 19964), (270, 20090), (280, 20129), (283, 20141),

Gene: FireCastle_21 Start: 16238, Stop: 18142, Start Num: 15

Candidate Starts for FireCastle_21:

(Start: 15 @16238 has 53 MA's), (23, 16289), (27, 16313), (36, 16361), (40, 16385), (41, 16388), (48, 16448), (52, 16484), (57, 16535), (64, 16628), (71, 16694), (86, 16841), (90, 16871), (91, 16874), (96, 16934), (106, 17048), (116, 17111), (122, 17183), (125, 17204), (129, 17228), (138, 17273), (141, 17294), (146, 17321), (153, 17366), (160, 17426), (184, 17540), (228, 17756), (231, 17765), (238, 17813), (260, 17900), (266, 17933), (285, 18023),

Gene: FountainFog_30 Start: 17995, Stop: 19764, Start Num: 15

Candidate Starts for FountainFog_30:

(9, 17965), (10, 17968), (Start: 11 @17980 has 2 MA's), (12, 17992), (Start: 15 @17995 has 53 MA's), (31, 18097), (41, 18160), (53, 18283), (56, 18292), (64, 18394), (66, 18421), (68, 18433), (81, 18532), (102, 18748), (108, 18796), (118, 18880), (124, 18943), (129, 18973), (132, 18982), (138, 19018), (164, 19204), (167, 19219), (177, 19255), (202, 19384), (239, 19567), (283, 19744),

Gene: FreddieHg_30 Start: 17856, Stop: 19625, Start Num: 15

Candidate Starts for FreddieHg_30:

(Start: 15 @17856 has 53 MA's), (31, 17958), (41, 18021), (53, 18144), (54, 18147), (56, 18153), (66, 18282), (68, 18294), (79, 18372), (89, 18462), (93, 18507), (102, 18609), (108, 18657), (124, 18804), (129, 18834), (132, 18843), (136, 18870), (138, 18879), (151, 18960), (158, 19014), (164, 19065), (167, 19080), (177, 19116), (203, 19254), (234, 19410), (239, 19428), (283, 19605),

Gene: Gilda_31 Start: 18679, Stop: 20457, Start Num: 15

Candidate Starts for Gilda_31:

(3, 18514), (7, 18640), (Start: 15 @18679 has 53 MA's), (31, 18781), (35, 18802), (41, 18844), (45, 18880), (53, 18967), (66, 19105), (79, 19195), (90, 19297), (102, 19432), (108, 19480), (117, 19561), (124, 19627), (129, 19657), (132, 19666), (136, 19693), (138, 19702), (158, 19837), (164, 19888), (167, 19903), (177, 19939), (186, 19987), (204, 20083), (212, 20122), (283, 20437),

Gene: Hager_32 Start: 18239, Stop: 20017, Start Num: 15

Candidate Starts for Hager_32:

(9, 18209), (10, 18212), (Start: 11 @18224 has 2 MA's), (12, 18236), (Start: 15 @18239 has 53 MA's), (31, 18341), (41, 18404), (53, 18527), (65, 18662), (66, 18665), (68, 18677), (79, 18755), (90, 18857), (102, 18992), (108, 19040), (109, 19049), (124, 19187), (129, 19217), (132, 19226), (136, 19253), (138, 19262), (158, 19397), (164, 19448), (167, 19463), (186, 19547), (212, 19682), (283, 19997),

Gene: Haunter_31 Start: 18092, Stop: 19870, Start Num: 15

Candidate Starts for Haunter_31:

(7, 18053), (Start: 15 @18092 has 53 MA's), (31, 18194), (35, 18215), (41, 18257), (45, 18293), (53, 18380), (66, 18518), (79, 18608), (90, 18710), (102, 18845), (108, 18893), (117, 18974), (124, 19040), (129, 19070), (132, 19079), (136, 19106), (138, 19115), (158, 19250), (164, 19301), (167, 19316), (177, 19352), (204, 19496), (212, 19535), (247, 19706), (283, 19850),

Gene: Hiddenleaf_30 Start: 17840, Stop: 19609, Start Num: 15

Candidate Starts for Hiddenleaf_30:

(Start: 15 @17840 has 53 MA's), (31, 17942), (41, 18005), (53, 18128), (54, 18131), (56, 18137), (66, 18266), (68, 18278), (79, 18356), (89, 18446), (93, 18491), (102, 18593), (108, 18641), (124, 18788), (129, 18818), (132, 18827), (136, 18854), (138, 18863), (151, 18944), (158, 18998), (164, 19049), (167, 19064), (177, 19100), (203, 19238), (234, 19394), (239, 19412), (283, 19589),

Gene: Honk_16 Start: 12148, Stop: 14262, Start Num: 13

Candidate Starts for Honk_16:

(Start: 13 @12148 has 20 MA's), (38, 12286), (43, 12322), (66, 12580), (78, 12649), (87, 12733), (91, 12760), (97, 12826), (103, 12898), (120, 13054), (125, 13093), (127, 13108), (136, 13153), (156, 13279), (160, 13315), (182, 13405), (197, 13483), (224, 13627), (226, 13633), (234, 13684), (239, 13711), (251, 13762), (262, 13789), (288, 13927), (291, 13948), (296, 13987), (300, 14038), (305, 14188),

Gene: IndiRoo_21 Start: 14680, Stop: 16581, Start Num: 15

Candidate Starts for IndiRoo_21:

(Start: 15 @14680 has 53 MA's), (23, 14731), (40, 14827), (41, 14830), (44, 14860), (48, 14890), (57, 14977), (58, 14989), (60, 15007), (68, 15109), (69, 15121), (72, 15148), (86, 15283), (90, 15313), (91, 15316), (93, 15346), (100, 15418), (114, 15541), (125, 15646), (129, 15670), (138, 15715), (139, 15718), (141, 15736), (143, 15745), (144, 15754), (145, 15757), (147, 15766), (153, 15808), (160, 15868), (171, 15916), (184, 15982), (198, 16048), (205, 16072), (228, 16195), (231, 16204), (238, 16252), (244, 16285), (260, 16339), (266, 16372), (285, 16462), (292, 16525),

Gene: JDawG_30 Start: 18422, Stop: 20188, Start Num: 15

Candidate Starts for JDawG_30:

(Start: 15 @18422 has 53 MA's), (31, 18524), (41, 18587), (49, 18647), (53, 18710), (54, 18713), (56, 18719), (66, 18848), (68, 18860), (102, 19172), (108, 19220), (129, 19397), (132, 19406), (138, 19442), (151, 19523), (158, 19577), (164, 19628), (167, 19643), (177, 19679), (186, 19727), (212, 19862), (239, 19991), (270, 20117), (280, 20156), (283, 20168),

Gene: Jera_22 Start: 15478, Stop: 17370, Start Num: 15

Candidate Starts for Jera_22:

(Start: 15 @15478 has 53 MA's), (35, 15607), (40, 15646), (49, 15718), (57, 15799), (58, 15811), (68, 15928), (76, 15994), (88, 16087), (90, 16108), (91, 16111), (94, 16144), (103, 16249), (108, 16291), (110, 16309), (128, 16459), (129, 16465), (142, 16537), (145, 16552), (148, 16576), (150, 16582), (153, 16603), (159, 16651), (193, 16816), (196, 16822), (205, 16852), (209, 16876), (210, 16885), (212, 16891), (215, 16912), (222, 16945), (247, 17080), (254, 17110), (256, 17119), (258, 17125), (293, 17314), (295, 17335),

Gene: JingleBells_30 Start: 17956, Stop: 19725, Start Num: 15

Candidate Starts for JingleBells_30:

(5, 17887), (Start: 15 @17956 has 53 MA's), (31, 18058), (41, 18121), (53, 18244), (54, 18247), (56, 18253), (66, 18382), (68, 18394), (93, 18607), (102, 18709), (108, 18757), (117, 18838), (124, 18904), (129, 18934), (132, 18943), (136, 18970), (138, 18979), (151, 19060), (158, 19114), (164, 19165), (167, 19180), (177, 19216), (239, 19528), (270, 19654), (280, 19693), (283, 19705),

Gene: Kate_31 Start: 18687, Stop: 20465, Start Num: 15

Candidate Starts for Kate_31:

(3, 18522), (7, 18648), (Start: 15 @18687 has 53 MA's), (31, 18789), (35, 18810), (41, 18852), (45, 18888), (53, 18975), (66, 19113), (79, 19203), (90, 19305), (101, 19431), (102, 19440), (108, 19488), (117, 19569), (124, 19635), (129, 19665), (132, 19674), (136, 19701), (138, 19710), (158, 19845), (164, 19896), (167, 19911), (177, 19947), (186, 19995), (212, 20130), (283, 20445),

Gene: Kenzers_18 Start: 13986, Stop: 15836, Start Num: 13

Candidate Starts for Kenzers_18:

(Start: 13 @13986 has 20 MA's), (45, 14175), (49, 14217), (51, 14232), (52, 14244), (66, 14406), (105, 14757), (137, 14985), (143, 15018), (154, 15084), (205, 15375), (208, 15396), (216, 15441), (233, 15519), (238, 15558), (255, 15627), (267, 15675), (272, 15702), (275, 15711), (286, 15762),

Gene: Kors_32 Start: 18548, Stop: 20482, Start Num: 15

Candidate Starts for Kors_32:

(9, 18518), (10, 18521), (Start: 11 @18533 has 2 MA's), (12, 18545), (Start: 15 @18548 has 53 MA's), (24, 18608), (34, 18659), (45, 18749), (50, 18779), (53, 18836), (54, 18839), (63, 18929), (72, 19016), (81, 19097), (90, 19181), (98, 19256), (102, 19316), (112, 19397), (118, 19448), (129, 19541), (130, 19544), (132, 19550), (145, 19628), (151, 19664), (154, 19682), (181, 19838), (195, 19922), (201, 19946), (241, 20162), (249, 20204), (277, 20321), (281, 20342),

Gene: Krampus_31 Start: 18685, Stop: 20463, Start Num: 15

Candidate Starts for Krampus_31:

(3, 18520), (7, 18646), (Start: 15 @18685 has 53 MA's), (31, 18787), (35, 18808), (41, 18850), (45, 18886), (53, 18973), (66, 19111), (79, 19201), (90, 19303), (102, 19438), (108, 19486), (117, 19567), (124, 19633), (129, 19663), (132, 19672), (138, 19708), (158, 19843), (164, 19894), (167, 19909), (177, 19945), (186, 19993), (212, 20128), (283, 20443),

Gene: Labella_23 Start: 16361, Stop: 18253, Start Num: 15

Candidate Starts for Labella_23:

(Start: 15 @16361 has 53 MA's), (35, 16490), (40, 16529), (41, 16532), (49, 16601), (54, 16667), (57, 16682), (58, 16694), (68, 16811), (88, 16970), (90, 16991), (91, 16994), (94, 17027), (103, 17132),

(107, 17171), (108, 17174), (110, 17192), (111, 17204), (128, 17342), (129, 17348), (142, 17420), (145, 17435), (148, 17459), (150, 17465), (153, 17486), (159, 17534), (193, 17699), (196, 17705), (205, 17735), (210, 17768), (212, 17774), (222, 17828), (247, 17963), (256, 18002), (263, 18026), (293, 18197), (295, 18218),

Gene: Lesiram_23 Start: 15098, Stop: 16786, Start Num: 15

Candidate Starts for Lesiram_23:

(Start: 15 @15098 has 53 MA's), (40, 15245), (41, 15248), (68, 15527), (69, 15539), (76, 15593), (90, 15710), (91, 15713), (92, 15719), (98, 15785), (103, 15851), (113, 15935), (125, 16043), (129, 16067), (131, 16073), (136, 16103), (139, 16115), (144, 16151), (147, 16163), (148, 16178), (149, 16181), (153, 16205), (158, 16244), (160, 16265), (168, 16301), (184, 16364), (219, 16526), (245, 16661), (250, 16688), (259, 16712),

Gene: LordBart_32 Start: 18464, Stop: 20398, Start Num: 15

Candidate Starts for LordBart_32:

(9, 18434), (10, 18437), (Start: 11 @18449 has 2 MA's), (12, 18461), (Start: 15 @18464 has 53 MA's), (24, 18524), (34, 18575), (45, 18665), (50, 18695), (53, 18752), (54, 18755), (63, 18845), (72, 18932), (81, 19013), (90, 19097), (98, 19172), (102, 19232), (112, 19313), (118, 19364), (129, 19457), (130, 19460), (132, 19466), (145, 19544), (151, 19580), (154, 19598), (181, 19754), (195, 19838), (201, 19862), (241, 20078), (249, 20120), (277, 20237), (281, 20258),

Gene: Lynlen_18 Start: 13986, Stop: 15836, Start Num: 13

Candidate Starts for Lynlen_18:

(Start: 13 @13986 has 20 MA's), (45, 14175), (49, 14217), (51, 14232), (52, 14244), (66, 14406), (105, 14757), (137, 14985), (143, 15018), (154, 15084), (205, 15375), (208, 15396), (216, 15441), (233, 15519), (238, 15558), (255, 15627), (267, 15675), (272, 15702), (275, 15711), (286, 15762),

Gene: Milani_22 Start: 15329, Stop: 17206, Start Num: 15

Candidate Starts for Milani_22:

(Start: 15 @15329 has 53 MA's), (23, 15380), (40, 15476), (41, 15479), (48, 15539), (60, 15656), (68, 15758), (69, 15770), (76, 15845), (86, 15932), (90, 15962), (91, 15965), (93, 15995), (96, 16025), (98, 16037), (100, 16067), (115, 16199), (125, 16295), (129, 16319), (138, 16364), (139, 16367), (143, 16394), (145, 16406), (147, 16415), (153, 16457), (160, 16517), (199, 16685), (223, 16802), (234, 16859), (238, 16877), (240, 16889), (241, 16892), (246, 16916), (260, 16964), (266, 16997), (278, 17051),

Gene: Milomuff_19 Start: 14384, Stop: 16222, Start Num: 13

Candidate Starts for Milomuff_19:

(Start: 13 @14384 has 20 MA's), (45, 14573), (49, 14615), (51, 14630), (58, 14705), (64, 14777), (66, 14804), (68, 14816), (105, 15155), (137, 15383), (143, 15416), (161, 15548), (179, 15614), (185, 15653), (188, 15668), (200, 15737), (232, 15905), (235, 15932), (243, 15962), (259, 16022), (261, 16025), (272, 16088), (275, 16097),

Gene: MortySmith_29 Start: 17815, Stop: 19581, Start Num: 15

Candidate Starts for MortySmith_29:

(Start: 15 @17815 has 53 MA's), (31, 17917), (41, 17980), (53, 18103), (54, 18106), (56, 18112), (66, 18241), (68, 18253), (102, 18565), (108, 18613), (129, 18790), (132, 18799), (138, 18835), (151, 18916), (164, 19021), (167, 19036), (177, 19072), (212, 19255), (239, 19384), (283, 19561),

Gene: NarutoRun_31 Start: 18678, Stop: 20456, Start Num: 15

Candidate Starts for NarutoRun_31:

(3, 18513), (6, 18636), (7, 18639), (Start: 15 @18678 has 53 MA's), (31, 18780), (35, 18801), (41, 18843), (45, 18879), (53, 18966), (66, 19104), (79, 19194), (90, 19296), (102, 19431), (108, 19479),

(117, 19560), (124, 19626), (129, 19656), (132, 19665), (136, 19692), (138, 19701), (158, 19836), (164, 19887), (167, 19902), (177, 19938), (186, 19986), (212, 20121), (283, 20436),

Gene: Neptune_31 Start: 18655, Stop: 20433, Start Num: 15

Candidate Starts for Neptune_31:

(3, 18490), (7, 18616), (Start: 15 @18655 has 53 MA's), (31, 18757), (35, 18778), (41, 18820), (45, 18856), (53, 18943), (66, 19081), (79, 19171), (90, 19273), (101, 19399), (102, 19408), (108, 19456), (117, 19537), (124, 19603), (129, 19633), (132, 19642), (136, 19669), (138, 19678), (158, 19813), (164, 19864), (167, 19879), (177, 19915), (186, 19963), (204, 20059), (212, 20098), (283, 20413),

Gene: OhDear_31 Start: 18684, Stop: 20462, Start Num: 15

Candidate Starts for OhDear_31:

(3, 18519), (7, 18645), (Start: 15 @18684 has 53 MA's), (31, 18786), (35, 18807), (41, 18849), (45, 18885), (53, 18972), (66, 19110), (79, 19200), (90, 19302), (101, 19428), (102, 19437), (108, 19485), (117, 19566), (124, 19632), (129, 19662), (132, 19671), (136, 19698), (138, 19707), (158, 19842), (164, 19893), (167, 19908), (177, 19944), (186, 19992), (212, 20127), (283, 20442),

Gene: Olliecat_17 Start: 13859, Stop: 15553, Start Num: 13

Candidate Starts for Olliecat_17:

(2, 13682), (Start: 13 @13859 has 20 MA's), (18, 13880), (19, 13889), (45, 14048), (51, 14087), (55, 14138), (57, 14150), (58, 14162), (59, 14165), (66, 14261), (67, 14270), (68, 14273), (83, 14372), (103, 14579), (116, 14678), (123, 14759), (125, 14774), (137, 14840), (152, 14927), (157, 14963), (186, 15110), (194, 15158), (206, 15215), (211, 15242), (218, 15281), (220, 15287), (221, 15290), (243, 15398), (259, 15458), (265, 15488), (268, 15500), (274, 15527),

Gene: OverHedge_31 Start: 18645, Stop: 20423, Start Num: 15

Candidate Starts for OverHedge_31:

(3, 18480), (7, 18606), (Start: 15 @18645 has 53 MA's), (31, 18747), (35, 18768), (41, 18810), (45, 18846), (53, 18933), (66, 19071), (79, 19161), (90, 19263), (101, 19389), (102, 19398), (108, 19446), (117, 19527), (124, 19593), (129, 19623), (132, 19632), (136, 19659), (138, 19668), (158, 19803), (164, 19854), (167, 19869), (177, 19905), (186, 19953), (212, 20088), (283, 20403),

Gene: Pharpay_31 Start: 18700, Stop: 20478, Start Num: 15

Candidate Starts for Pharpay_31:

(3, 18535), (7, 18661), (Start: 15 @18700 has 53 MA's), (31, 18802), (35, 18823), (41, 18865), (45, 18901), (53, 18988), (66, 19126), (79, 19216), (102, 19453), (108, 19501), (117, 19582), (124, 19648), (129, 19678), (132, 19687), (138, 19723), (158, 19858), (164, 19909), (167, 19924), (177, 19960), (186, 20008), (204, 20104), (212, 20143), (283, 20458),

Gene: PhunaPhoke_31 Start: 18673, Stop: 20451, Start Num: 15

Candidate Starts for PhunaPhoke_31:

(3, 18508), (7, 18634), (Start: 15 @18673 has 53 MA's), (31, 18775), (35, 18796), (41, 18838), (45, 18874), (53, 18961), (66, 19099), (79, 19189), (90, 19291), (101, 19417), (102, 19426), (108, 19474), (117, 19555), (124, 19621), (129, 19651), (132, 19660), (136, 19687), (138, 19696), (158, 19831), (164, 19882), (167, 19897), (177, 19933), (186, 19981), (204, 20077), (212, 20116), (283, 20431),

Gene: Potty_31 Start: 18678, Stop: 20456, Start Num: 15

Candidate Starts for Potty_31:

(3, 18513), (7, 18639), (Start: 15 @18678 has 53 MA's), (31, 18780), (35, 18801), (41, 18843), (45, 18879), (53, 18966), (66, 19104), (79, 19194), (90, 19296), (102, 19431), (108, 19479), (117, 19560), (124, 19626), (129, 19656), (132, 19665), (138, 19701), (158, 19836), (164, 19887), (167, 19902), (177, 19938), (186, 19986), (212, 20121), (283, 20436),

Gene: Rachella_31 Start: 18681, Stop: 20459, Start Num: 15

Candidate Starts for Rachella_31:

(3, 18516), (7, 18642), (Start: 15 @18681 has 53 MA's), (31, 18783), (35, 18804), (41, 18846), (45, 18882), (53, 18969), (66, 19107), (79, 19197), (90, 19299), (102, 19434), (108, 19482), (117, 19563), (124, 19629), (129, 19659), (132, 19668), (136, 19695), (138, 19704), (158, 19839), (164, 19890), (167, 19905), (177, 19941), (186, 19989), (204, 20085), (212, 20124), (247, 20295), (283, 20439),

Gene: Rie18_31 Start: 18192, Stop: 19970, Start Num: 15

Candidate Starts for Rie18_31:

(9, 18162), (10, 18165), (Start: 11 @18177 has 2 MA's), (12, 18189), (Start: 15 @18192 has 53 MA's), (31, 18294), (41, 18357), (53, 18480), (66, 18618), (68, 18630), (79, 18708), (90, 18810), (102, 18945), (108, 18993), (118, 19077), (124, 19140), (129, 19170), (132, 19179), (136, 19206), (138, 19215), (151, 19296), (158, 19350), (164, 19401), (167, 19416), (186, 19500), (212, 19635), (230, 19725), (283, 19950),

Gene: RikSengupta_32 Start: 18570, Stop: 20519, Start Num: 11

Candidate Starts for RikSengupta_32:

(9, 18555), (10, 18558), (Start: 11 @18570 has 2 MA's), (12, 18582), (Start: 15 @18585 has 53 MA's), (24, 18645), (34, 18696), (45, 18786), (50, 18816), (53, 18873), (54, 18876), (59, 18906), (63, 18966), (72, 19053), (81, 19134), (90, 19218), (98, 19293), (102, 19353), (112, 19434), (118, 19485), (129, 19578), (130, 19581), (132, 19587), (145, 19665), (151, 19701), (154, 19719), (181, 19875), (195, 19959), (201, 19983), (241, 20199), (249, 20241), (277, 20358), (281, 20379),

Gene: Rollins_17 Start: 12526, Stop: 14229, Start Num: 13

Candidate Starts for Rollins_17:

(Start: 13 @12526 has 20 MA's), (22, 12574), (32, 12619), (47, 12742), (51, 12772), (66, 12946), (68, 12958), (103, 13264), (104, 13267), (119, 13393), (123, 13444), (129, 13483), (133, 13495), (137, 13525), (139, 13531), (144, 13567), (211, 13933), (228, 14023), (275, 14203), (276, 14206),

Gene: Rootkit7_21 Start: 16231, Stop: 18123, Start Num: 15

Candidate Starts for Rootkit7_21:

(Start: 15 @16231 has 53 MA's), (35, 16360), (40, 16399), (49, 16471), (57, 16552), (58, 16564), (68, 16681), (74, 16723), (88, 16840), (90, 16861), (91, 16864), (94, 16897), (103, 17002), (107, 17041), (108, 17044), (111, 17074), (128, 17212), (129, 17218), (142, 17290), (145, 17305), (148, 17329), (153, 17356), (159, 17404), (193, 17569), (205, 17605), (209, 17629), (210, 17638), (212, 17644), (222, 17698), (247, 17833), (258, 17878), (263, 17896), (266, 17914), (287, 18022), (295, 18088),

Gene: Shayna_17 Start: 13717, Stop: 15447, Start Num: 14

Candidate Starts for Shayna_17:

(Start: 14 @13717 has 2 MA's), (Start: 15 @13720 has 53 MA's), (18, 13741), (21, 13759), (47, 13918), (51, 13948), (52, 13960), (66, 14122), (73, 14167), (135, 14692), (192, 15013), (249, 15313), (257, 15337), (271, 15409),

Gene: SilentWarrior_30 Start: 17848, Stop: 19617, Start Num: 15

Candidate Starts for SilentWarrior_30:

(Start: 15 @17848 has 53 MA's), (31, 17950), (41, 18013), (53, 18136), (54, 18139), (56, 18145), (66, 18274), (68, 18286), (93, 18499), (102, 18601), (108, 18649), (117, 18730), (124, 18796), (129, 18826), (132, 18835), (136, 18862), (138, 18871), (151, 18952), (158, 19006), (164, 19057), (167, 19072), (177, 19108), (186, 19156), (212, 19291), (239, 19420), (280, 19585), (283, 19597),

Gene: Skylord_17 Start: 12466, Stop: 14169, Start Num: 13

Candidate Starts for Skylord_17:

(Start: 13 @12466 has 20 MA's), (22, 12514), (32, 12559), (47, 12682), (51, 12712), (66, 12886), (103, 13204), (104, 13207), (119, 13333), (123, 13384), (129, 13423), (133, 13435), (137, 13465), (139, 13471), (141, 13489), (144, 13507), (165, 13654), (169, 13669), (172, 13678), (183, 13717), (211, 13873), (228, 13963), (275, 14143), (276, 14146),

Gene: Snakehole_31 Start: 17937, Stop: 19706, Start Num: 15

Candidate Starts for Snakehole_31:

(Start: 15 @17937 has 53 MA's), (31, 18039), (41, 18102), (53, 18225), (54, 18228), (56, 18234), (66, 18363), (68, 18375), (79, 18453), (89, 18543), (93, 18588), (102, 18690), (108, 18738), (124, 18885), (129, 18915), (132, 18924), (136, 18951), (138, 18960), (151, 19041), (158, 19095), (164, 19146), (167, 19161), (177, 19197), (203, 19335), (234, 19491), (239, 19509), (283, 19686),

Gene: Solea_20 Start: 14384, Stop: 16222, Start Num: 13

Candidate Starts for Solea_20:

(Start: 13 @14384 has 20 MA's), (45, 14573), (49, 14615), (51, 14630), (58, 14705), (64, 14777), (66, 14804), (68, 14816), (105, 15155), (137, 15383), (143, 15416), (161, 15548), (179, 15614), (185, 15653), (188, 15668), (200, 15737), (232, 15905), (235, 15932), (243, 15962), (259, 16022), (261, 16025), (272, 16088), (275, 16097),

Gene: Sparcetus_32 Start: 18449, Stop: 20398, Start Num: 11

Candidate Starts for Sparcetus_32:

(9, 18434), (10, 18437), (Start: 11 @18449 has 2 MA's), (12, 18461), (Start: 15 @18464 has 53 MA's), (24, 18524), (34, 18575), (45, 18665), (50, 18695), (53, 18752), (54, 18755), (63, 18845), (72, 18932), (81, 19013), (90, 19097), (98, 19172), (102, 19232), (112, 19313), (118, 19364), (129, 19457), (130, 19460), (132, 19466), (145, 19544), (151, 19580), (154, 19598), (181, 19754), (195, 19838), (201, 19862), (241, 20078), (249, 20120), (277, 20237), (281, 20258),

Gene: Squircle_17 Start: 13858, Stop: 15552, Start Num: 13

Candidate Starts for Squircle_17:

(2, 13681), (Start: 13 @13858 has 20 MA's), (18, 13879), (19, 13888), (45, 14047), (51, 14086), (55, 14137), (57, 14149), (58, 14161), (59, 14164), (66, 14260), (67, 14269), (68, 14272), (83, 14371), (103, 14578), (116, 14677), (123, 14758), (125, 14773), (137, 14839), (152, 14926), (157, 14962), (186, 15109), (194, 15157), (206, 15214), (211, 15241), (218, 15280), (220, 15286), (221, 15289), (243, 15397), (259, 15457), (265, 15487), (268, 15499), (274, 15526),

Gene: Sucha_18 Start: 13667, Stop: 15568, Start Num: 15

Candidate Starts for Sucha_18:

(Start: 15 @13667 has 53 MA's), (23, 13718), (40, 13814), (41, 13817), (44, 13847), (46, 13856), (57, 13964), (58, 13976), (60, 13994), (68, 14096), (69, 14108), (72, 14135), (77, 14186), (86, 14270), (90, 14300), (91, 14303), (93, 14333), (118, 14567), (125, 14633), (129, 14657), (138, 14702), (139, 14705), (144, 14741), (145, 14744), (153, 14795), (160, 14855), (171, 14903), (228, 15182), (231, 15191), (238, 15239), (244, 15272), (248, 15293), (260, 15326), (285, 15449),

Gene: SunnyD_17 Start: 13717, Stop: 15447, Start Num: 14

Candidate Starts for SunnyD_17:

(Start: 14 @13717 has 2 MA's), (Start: 15 @13720 has 53 MA's), (18, 13741), (21, 13759), (47, 13918), (51, 13948), (52, 13960), (66, 14122), (73, 14167), (135, 14692), (192, 15013), (249, 15313), (257, 15337), (271, 15409),

Gene: Sweetums_24 Start: 15209, Stop: 16897, Start Num: 15

Candidate Starts for Sweetums_24:

(Start: 15 @15209 has 53 MA's), (40, 15356), (41, 15359), (59, 15521), (68, 15638), (69, 15650), (76, 15704), (90, 15821), (92, 15830), (98, 15896), (103, 15962), (113, 16046), (125, 16154), (129, 16178),

(136, 16214), (139, 16226), (144, 16262), (147, 16274), (148, 16289), (149, 16292), (153, 16316), (158, 16355), (160, 16376), (168, 16412), (175, 16433), (187, 16490), (219, 16637), (231, 16688), (237, 16733), (247, 16778), (259, 16820),

Gene: Tedro_31 Start: 18151, Stop: 19929, Start Num: 15

Candidate Starts for Tedro_31:

(3, 17986), (7, 18112), (Start: 15 @18151 has 53 MA's), (31, 18253), (35, 18274), (41, 18316), (45, 18352), (53, 18439), (66, 18577), (79, 18667), (90, 18769), (101, 18895), (102, 18904), (108, 18952), (117, 19033), (124, 19099), (129, 19129), (132, 19138), (136, 19165), (138, 19174), (158, 19309), (164, 19360), (167, 19375), (177, 19411), (186, 19459), (204, 19555), (212, 19594), (247, 19765), (283, 19909),

Gene: Teng_24 Start: 15125, Stop: 16837, Start Num: 15

Candidate Starts for Teng_24:

(Start: 15 @15125 has 53 MA's), (40, 15272), (41, 15275), (49, 15341), (59, 15437), (70, 15581), (79, 15659), (80, 15677), (85, 15731), (90, 15764), (91, 15767), (92, 15773), (93, 15797), (98, 15839), (99, 15857), (103, 15905), (113, 15989), (117, 16028), (118, 16031), (125, 16097), (129, 16121), (136, 16157), (139, 16169), (147, 16217), (148, 16232), (149, 16235), (153, 16259), (155, 16274), (160, 16319), (170, 16358), (176, 16382), (187, 16433), (188, 16436), (201, 16490), (213, 16541), (214, 16547), (231, 16631), (239, 16688), (252, 16745),

Gene: Tiggy93_31 Start: 18684, Stop: 20462, Start Num: 15

Candidate Starts for Tiggy93_31:

(3, 18519), (7, 18645), (Start: 15 @18684 has 53 MA's), (31, 18786), (35, 18807), (41, 18849), (45, 18885), (53, 18972), (66, 19110), (79, 19200), (90, 19302), (101, 19428), (102, 19437), (108, 19485), (117, 19566), (124, 19632), (129, 19662), (132, 19671), (136, 19698), (138, 19707), (158, 19842), (164, 19893), (167, 19908), (177, 19944), (186, 19992), (204, 20088), (212, 20127), (247, 20298), (283, 20442),

Gene: TinyMiny_32 Start: 18483, Stop: 20417, Start Num: 15

Candidate Starts for TinyMiny_32:

(9, 18453), (10, 18456), (Start: 11 @18468 has 2 MA's), (12, 18480), (Start: 15 @18483 has 53 MA's), (24, 18543), (34, 18594), (45, 18684), (50, 18714), (53, 18771), (54, 18774), (63, 18864), (72, 18951), (81, 19032), (90, 19116), (98, 19191), (102, 19251), (112, 19332), (118, 19383), (129, 19476), (130, 19479), (132, 19485), (145, 19563), (151, 19599), (154, 19617), (181, 19773), (195, 19857), (201, 19881), (241, 20097), (249, 20139), (277, 20256), (281, 20277),

Gene: Tongui_30 Start: 18184, Stop: 19953, Start Num: 15

Candidate Starts for Tongui_30:

(9, 18154), (10, 18157), (Start: 11 @18169 has 2 MA's), (12, 18181), (Start: 15 @18184 has 53 MA's), (20, 18217), (31, 18286), (41, 18349), (53, 18472), (56, 18481), (64, 18583), (66, 18610), (68, 18622), (102, 18937), (108, 18985), (124, 19132), (129, 19162), (132, 19171), (136, 19198), (138, 19207), (164, 19393), (172, 19420), (177, 19444), (189, 19513), (192, 19525), (202, 19573), (203, 19582), (212, 19627), (225, 19693), (283, 19933),

Gene: TurboVicky_21 Start: 16231, Stop: 18123, Start Num: 15

Candidate Starts for TurboVicky_21:

(Start: 15 @16231 has 53 MA's), (35, 16360), (40, 16399), (41, 16402), (49, 16471), (57, 16552), (58, 16564), (68, 16681), (88, 16840), (90, 16861), (91, 16864), (94, 16897), (103, 17002), (107, 17041), (108, 17044), (110, 17062), (111, 17074), (128, 17212), (129, 17218), (142, 17290), (145, 17305), (148, 17329), (150, 17335), (153, 17356), (159, 17404), (193, 17569), (196, 17575), (205, 17605), (210, 17638), (212, 17644), (222, 17698), (229, 17737), (247, 17833), (258, 17878), (263, 17896), (287, 18022), (293, 18067), (295, 18088),

Gene: Typher_23 Start: 16361, Stop: 18253, Start Num: 15

Candidate Starts for Typher_23:

(Start: 15 @16361 has 53 MA's), (35, 16490), (40, 16529), (41, 16532), (49, 16601), (57, 16682), (58, 16694), (68, 16811), (88, 16970), (90, 16991), (91, 16994), (94, 17027), (103, 17132), (107, 17171), (108, 17174), (110, 17192), (111, 17204), (128, 17342), (129, 17348), (142, 17420), (145, 17435), (148, 17459), (150, 17465), (153, 17486), (159, 17534), (193, 17699), (196, 17705), (205, 17735), (210, 17768), (212, 17774), (222, 17828), (247, 17963), (256, 18002), (263, 18026), (293, 18197), (295, 18218),

Gene: Vitas_17 Start: 12466, Stop: 14169, Start Num: 13

Candidate Starts for Vitas_17:

(Start: 13 @12466 has 20 MA's), (22, 12514), (32, 12559), (47, 12682), (51, 12712), (66, 12886), (68, 12898), (103, 13204), (104, 13207), (119, 13333), (123, 13384), (129, 13423), (133, 13435), (137, 13465), (139, 13471), (144, 13507), (213, 13879), (228, 13963), (275, 14143), (276, 14146),

Gene: Wrackline_28 Start: 15957, Stop: 17840, Start Num: 15

Candidate Starts for Wrackline_28:

(Start: 15 @15957 has 53 MA's), (16, 15963), (17, 15972), (23, 16008), (25, 16017), (26, 16026), (29, 16038), (40, 16104), (48, 16167), (51, 16191), (58, 16266), (61, 16320), (68, 16386), (82, 16509), (90, 16587), (91, 16590), (93, 16620), (98, 16662), (100, 16692), (103, 16728), (106, 16764), (118, 16854), (124, 16914), (129, 16944), (131, 16950), (133, 16956), (136, 16980), (138, 16989), (139, 16992), (143, 17019), (144, 17028), (148, 17055), (153, 17082), (158, 17121), (160, 17142), (173, 17202), (174, 17205), (178, 17214), (180, 17226), (190, 17280), (193, 17295), (238, 17508), (240, 17520), (245, 17544), (249, 17565), (276, 17676), (277, 17679), (282, 17706), (284, 17715), (290, 17766),

Gene: Zanella_21 Start: 16234, Stop: 18126, Start Num: 15

Candidate Starts for Zanella_21:

(Start: 15 @16234 has 53 MA's), (35, 16363), (40, 16402), (41, 16405), (49, 16474), (57, 16555), (58, 16567), (68, 16684), (88, 16843), (90, 16864), (91, 16867), (94, 16900), (103, 17005), (107, 17044), (108, 17047), (110, 17065), (111, 17077), (128, 17215), (129, 17221), (142, 17293), (145, 17308), (148, 17332), (150, 17338), (153, 17359), (159, 17407), (193, 17572), (196, 17578), (205, 17608), (210, 17641), (212, 17647), (222, 17701), (229, 17740), (247, 17836), (258, 17881), (263, 17899), (287, 18025), (293, 18070), (295, 18091),