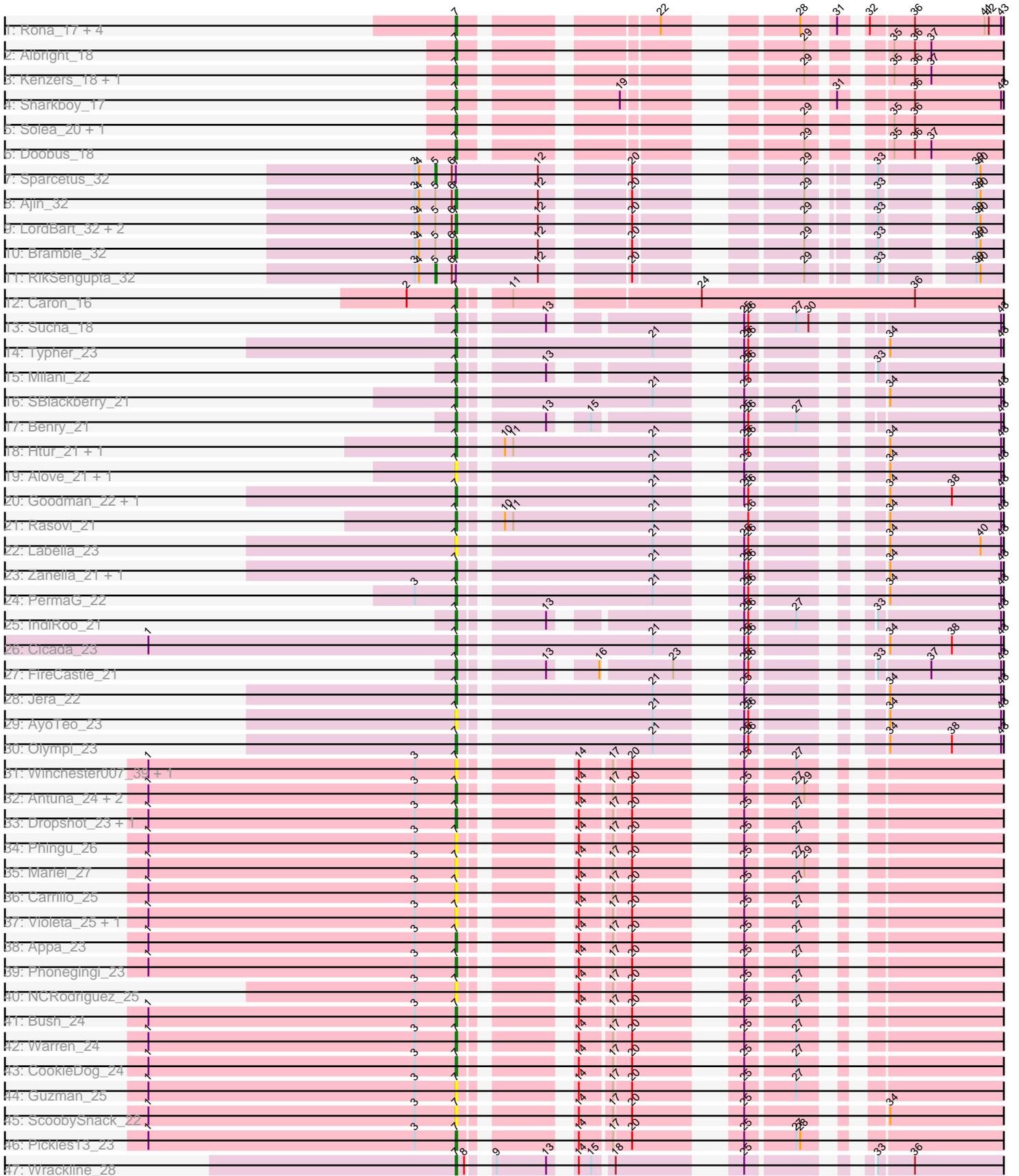# Zoomed Pham 287896

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 287896 Report

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

Pham number 287896 has 64 members, 16 are drafts.

Phages represented in each track:
• Track 1 : Rona_17, Kamdara_17, Kieran_17, ChiliPepper_17, Dismas_17
• Track 2 : Albright_18
• Track 3 : Kenzers_18, Lynlen_18
• Track 4 : Sharkboy_17
• Track 5 : Solea_20, Milomuff_19
• Track 6 : Doobus_18
• Track 7 : Sparcetus_32
• Track 8 : Ajin_32
• Track 9 : LordBart_32, TinyMiny_32, Kors_32
• Track 10 : Bramble_32
• Track 11 : RikSengupta_32
• Track 12 : Caron_16
• Track 13 : Sucha_18
• Track 14 : Typher_23
• Track 15 : Milani_22
• Track 16 : SBlackberry_21
• Track 17 : Benry_21
• Track 18 : Htur_21, Linayshia_21
• Track 19 : Alove_21, Rootkit7_21
• Track 20 : Goodman_22, Johann_22
• Track 21 : Rasovi_21
• Track 22 : Labella_23
• Track 23 : Zanella_21, TurboVicky_21
• Track 24 : PermaG_22
• Track 25 : IndiRoo_21
• Track 26 : Cicada_23
• Track 27 : FireCastle_21
• Track 28 : Jera_22
• Track 29 : AyoTeo_23
• Track 30 : Olympi_23
• Track 31 : Winchester007_39, PhillyJawn_24
• Track 32 : Antuna_24, Losacky_25, MenE_24
• Track 33 : Dropshot_23, Blett_24
• Track 34 : Phingu_26
• Track 35 : Mariel_27
• Track 36 : Carrillo_25
• Track 37 : Violeta_25, Jakelyne_26

• Track 38 : Appa_23
• Track 39 : Phonegingi_23
• Track 40 : NCRodriguez_25
• Track 41 : Bush_24
• Track 42 : Warren_24
• Track 43 : CookieDog_24
• Track 44 : Guzman_25
• Track 45 : ScoobySnack_22
• Track 46 : Pickles13_23
• Track 47 : 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 7, it was called in 46 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ajin_32, Albright_18, Alove_21, Antuna_24, Appa_23, AyoTeo_23, Benry_21, Blett_24, Bramble_32, Bush_24, Caron_16, Carrillo_25, ChiliPepper_17, Cicada_23, CookieDog_24, Dismas_17, Doobus_18, Dropshot_23, FireCastle_21, Goodman_22, Guzman_25, Htur_21, IndiRoo_21, Jakelyne_26, Jera_22, Johann_22, Kamdara_17, Kenzers_18, Kieran_17, Kors_32, Labella_23, Linayshia_21, LordBart_32, Losacky_25, Lynlen_18, Mariel_27, MenE_24, Milani_22, Milomuff_19, NCRodriguez_25, Olympi_23, PermaG_22, PhillyJawn_24, Phingu_26, Phonegingi_23, Pickles13_23, Rasovi_21, Rona_17, Rootkit7_21, SBlackberry_21, ScoobySnack_22, Sharkboy_17, Solea_20, Sucha_18, TinyMiny_32, TurboVicky_21, Typher_23, Violeta_25, Warren_24, Winchester007_39, Wrackline_28, Zanella_21,

Genes that have the "Most Annotated" start but do not call it:
• RikSengupta_32, Sparcetus_32,

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

Summary by start number:

Start 5:
• Found in 7 of 64 (10.9%) of genes in pham
• Manual Annotations of this start: 2 of 48
• Called 28.6% of time when present
• Phage (with cluster) where this start called: RikSengupta_32 (EF), Sparcetus_32 (EF),

Start 7:
• Found in 64 of 64 (100.0%) of genes in pham
• Manual Annotations of this start: 46 of 48
• Called 96.9% of time when present
• Phage (with cluster) where this start called: Ajin_32 (EF), Albright_18 (EB), Alove_21 (EJ), Antuna_24 (GA), Appa_23 (GA), AyoTeo_23 (EJ), Benry_21 (EJ), Blett_24 (GA), Bramble_32 (EF), Bush_24 (GA), Caron_16 (EH), Carrillo_25 (GA),

ChiliPepper_17 (EB), Cicada_23 (EJ), CookieDog_24 (GA), Dismas_17 (EB), Doobus_18 (EB), Dropshot_23 (GA), FireCastle_21 (EJ), Goodman_22 (EJ), Guzman_25 (GA), Htur_21 (EJ), IndiRoo_21 (EJ), Jakelyne_26 (GA), Jera_22 (EJ), Johann_22 (EJ), Kamdara_17 (EB), Kenzers_18 (EB), Kieran_17 (EB), Kors_32 (EF), Labella_23 (EJ), Linayshia_21 (EJ), LordBart_32 (EF), Losacky_25 (GA), Lynlen_18 (EB), Mariel_27 (GA), MenE_24 (GA), Milani_22 (EJ), Milomuff_19 (EB), NCRodriguez_25 (GA), Olympi_23 (EJ), PermaG_22 (EJ), PhillyJawn_24 (GA), Phingu_26 (GA), Phonegingi_23 (GA), Pickles13_23 (GA), Rasovi_21 (EJ), Rona_17 (EB), Rootkit7_21 (EJ), SBlackberry_21 (EJ), ScoobySnack_22 (GA), Sharkboy_17 (EB), Solea_20 (EB), Sucha_18 (EJ), TinyMiny_32 (EF), TurboVicky_21 (EJ), Typher_23 (EJ), Violeta_25 (GA), Warren_24 (GA), Winchester007_39 (GA), 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 7 was manually annotated 10 times for cluster EB.

Info for manual annotations of cluster EF:
•Start number 5 was manually annotated 2 times for cluster EF.
•Start number 7 was manually annotated 5 times for cluster EF.

Info for manual annotations of cluster EH:
•Start number 7 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster EJ:
•Start number 7 was manually annotated 18 times for cluster EJ.

Info for manual annotations of cluster GA:
•Start number 7 was manually annotated 11 times for cluster GA.

Info for manual annotations of cluster GF:
•Start number 7 was manually annotated 1 time for cluster GF.

Gene Information:
Gene: Ajin_32 Start: 18502, Stop: 20436, Start Num: 7
Candidate Starts for Ajin_32:
(3, 18472), (4, 18475), (Start: 5 @18487 has 2 MA's), (6, 18499), (Start: 7 @18502 has 46 MA's), (12, 18562), (20, 18613), (29, 18703), (33, 18733), (39, 18790), (40, 18793), (49, 18883), (58, 18970), (69, 19051), (75, 19135), (84, 19210), (86, 19270), (95, 19351), (101, 19402), (107, 19474), (109, 19495), (110, 19498), (112, 19504), (123, 19582), (128, 19618), (132, 19636), (146, 19792), (153, 19876), (160, 19900), (196, 20116), (204, 20158), (221, 20275), (226, 20296), (236, 20347),

Gene: Albright_18 Start: 13896, Stop: 15746, Start Num: 7
Candidate Starts for Albright_18:
(Start: 7 @13896 has 46 MA's), (29, 14085), (35, 14127), (36, 14142), (37, 14154), (49, 14277), (53, 14316), (67, 14409), (89, 14667), (116, 14895), (121, 14928), (122, 14937), (138, 15060), (175, 15285), (185, 15351), (200, 15453), (203, 15468), (213, 15537), (221, 15585), (229, 15612), (231,

15621), (238, 15672),

Gene: Alove_21 Start: 16231, Stop: 18123, Start Num: 7
Candidate Starts for Alove_21:
(Start: 7 @16231 has 46 MA's), (21, 16360), (25, 16399), (34, 16471), (43, 16552), (44, 16564), (54, 16681), (60, 16723), (74, 16840), (75, 16861), (76, 16864), (80, 16897), (87, 17002), (91, 17041), (92, 17044), (94, 17074), (108, 17212), (109, 17218), (120, 17290), (123, 17305), (126, 17329), (131, 17356), (135, 17404), (157, 17569), (168, 17605), (172, 17629), (173, 17638), (174, 17644), (181, 17698), (202, 17833), (209, 17878), (212, 17896), (214, 17914), (233, 18022), (243, 18088),

Gene: Antuna_24 Start: 14563, Stop: 16431, Start Num: 7
Candidate Starts for Antuna_24:
(1, 14338), (3, 14533), (Start: 7 @14563 has 46 MA's), (14, 14623), (17, 14644), (20, 14656), (25, 14710), (27, 14743), (29, 14749), (51, 14965), (72, 15121), (75, 15175), (76, 15178), (79, 15208), (85, 15280), (97, 15403), (103, 15475), (106, 15508), (109, 15532), (118, 15580), (126, 15643), (157, 15877), (170, 15928), (173, 15946), (177, 15973), (179, 15991), (181, 16006), (205, 16153), (208, 16180), (216, 16243), (233, 16330), (245, 16423),

Gene: Appa_23 Start: 14425, Stop: 16293, Start Num: 7
Candidate Starts for Appa_23:
(1, 14200), (3, 14395), (Start: 7 @14425 has 46 MA's), (14, 14485), (17, 14506), (20, 14518), (25, 14572), (27, 14605), (44, 14734), (72, 14983), (75, 15037), (76, 15040), (79, 15070), (85, 15142), (97, 15265), (103, 15337), (106, 15370), (109, 15394), (118, 15442), (157, 15739), (170, 15790), (173, 15808), (177, 15835), (179, 15853), (181, 15868), (205, 16015), (208, 16042), (216, 16105), (233, 16192), (245, 16285),

Gene: AyoTeo_23 Start: 16358, Stop: 18250, Start Num: 7
Candidate Starts for AyoTeo_23:
(Start: 7 @16358 has 46 MA's), (21, 16487), (25, 16526), (26, 16529), (34, 16598), (43, 16679), (44, 16691), (54, 16808), (74, 16967), (75, 16988), (76, 16991), (80, 17024), (87, 17129), (91, 17168), (92, 17171), (93, 17189), (94, 17201), (108, 17339), (109, 17345), (120, 17417), (123, 17432), (126, 17456), (127, 17462), (131, 17483), (135, 17531), (157, 17696), (159, 17702), (168, 17732), (173, 17765), (174, 17771), (181, 17825), (188, 17864), (209, 18005), (233, 18149), (242, 18194), (243, 18215),

Gene: Benry_21 Start: 14670, Stop: 16571, Start Num: 7
Candidate Starts for Benry_21:
(Start: 7 @14670 has 46 MA's), (13, 14721), (15, 14739), (25, 14817), (26, 14820), (27, 14850), (43, 14967), (44, 14979), (46, 14997), (54, 15099), (55, 15111), (58, 15138), (62, 15183), (73, 15273), (75, 15303), (76, 15306), (79, 15336), (96, 15528), (101, 15570), (106, 15636), (109, 15660), (111, 15666), (117, 15705), (118, 15708), (119, 15726), (122, 15744), (123, 15747), (131, 15798), (136, 15858), (143, 15906), (189, 16194), (194, 16242), (198, 16275), (208, 16329), (213, 16362), (220, 16410), (232, 16452),

Gene: Blett_24 Start: 14578, Stop: 16446, Start Num: 7
Candidate Starts for Blett_24:
(1, 14353), (3, 14548), (Start: 7 @14578 has 46 MA's), (14, 14638), (17, 14659), (20, 14671), (25, 14725), (27, 14758), (44, 14887), (51, 14980), (75, 15190), (76, 15193), (79, 15223), (85, 15295), (97, 15418), (106, 15523), (109, 15547), (118, 15595), (157, 15892), (170, 15943), (173, 15961), (177, 15988), (179, 16006), (181, 16021), (205, 16168), (208, 16195), (216, 16258), (233, 16345), (245, 16438),

Gene: Bramble_32 Start: 18468, Stop: 20402, Start Num: 7

Candidate Starts for Bramble_32:
(3, 18438), (4, 18441), (Start: 5 @18453 has 2 MA's), (6, 18465), (Start: 7 @18468 has 46 MA's), (12, 18528), (20, 18579), (29, 18669), (33, 18699), (39, 18756), (40, 18759), (49, 18849), (58, 18936), (69, 19017), (75, 19101), (84, 19176), (86, 19236), (95, 19317), (101, 19368), (109, 19461), (110, 19464), (112, 19470), (123, 19548), (128, 19584), (132, 19602), (146, 19758), (160, 19866), (196, 20082), (204, 20124), (221, 20241), (226, 20262),

Gene: Bush_24 Start: 14559, Stop: 16421, Start Num: 7
Candidate Starts for Bush_24:
(1, 14334), (3, 14529), (Start: 7 @14559 has 46 MA's), (14, 14619), (17, 14640), (20, 14652), (25, 14706), (27, 14739), (44, 14868), (72, 15117), (73, 15141), (75, 15171), (76, 15174), (79, 15204), (85, 15276), (97, 15399), (106, 15504), (109, 15528), (118, 15576), (126, 15639), (157, 15867), (181, 15996), (190, 16041), (208, 16170), (233, 16320), (243, 16386), (245, 16413),

Gene: Caron_16 Start: 13192, Stop: 15042, Start Num: 7
Candidate Starts for Caron_16:
(2, 13156), (Start: 7 @13192 has 46 MA's), (11, 13219), (24, 13339), (36, 13495), (44, 13570), (83, 13933), (84, 13939), (109, 14224), (114, 14248), (137, 14449), (167, 14623), (223, 14959), (227, 14980), (230, 14992),

Gene: Carrillo_25 Start: 14532, Stop: 16400, Start Num: 7
Candidate Starts for Carrillo_25:
(1, 14307), (3, 14502), (Start: 7 @14532 has 46 MA's), (14, 14592), (17, 14613), (20, 14625), (25, 14679), (27, 14712), (51, 14934), (72, 15090), (75, 15144), (76, 15147), (79, 15177), (85, 15249), (97, 15372), (103, 15444), (106, 15477), (109, 15501), (118, 15549), (126, 15612), (157, 15846), (170, 15897), (173, 15915), (177, 15942), (179, 15960), (181, 15975), (205, 16122), (208, 16149), (216, 16212), (233, 16299), (245, 16392),

Gene: ChiliPepper_17 Start: 13661, Stop: 15667, Start Num: 7
Candidate Starts for ChiliPepper_17:
(Start: 7 @13661 has 46 MA's), (22, 13778), (28, 13847), (31, 13865), (32, 13877), (36, 13907), (41, 13958), (42, 13961), (43, 13970), (47, 14003), (53, 14081), (57, 14123), (68, 14180), (71, 14204), (77, 14267), (82, 14321), (86, 14393), (89, 14432), (90, 14435), (106, 14594), (109, 14618), (116, 14660), (117, 14663), (121, 14693), (130, 14747), (132, 14759), (134, 14795), (135, 14804), (139, 14837), (140, 14849), (158, 14978), (176, 15065), (183, 15122), (184, 15125), (185, 15137), (191, 15185), (197, 15221), (235, 15437), (237, 15455), (239, 15461), (247, 15611), (248, 15620),

Gene: Cicada_23 Start: 16468, Stop: 18345, Start Num: 7
Candidate Starts for Cicada_23:
(1, 16243), (Start: 7 @16468 has 46 MA's), (21, 16597), (25, 16636), (26, 16639), (34, 16708), (38, 16753), (43, 16789), (54, 16918), (75, 17098), (76, 17101), (80, 17134), (87, 17239), (88, 17260), (91, 17278), (92, 17281), (109, 17455), (120, 17527), (123, 17542), (126, 17566), (127, 17572), (131, 17593), (135, 17641), (161, 17809), (162, 17812), (166, 17833), (169, 17845), (180, 17920), (210, 18115), (213, 18136), (214, 18145), (218, 18178), (233, 18244), (239, 18274), (244, 18316),

Gene: CookieDog_24 Start: 14559, Stop: 16421, Start Num: 7
Candidate Starts for CookieDog_24:
(1, 14334), (3, 14529), (Start: 7 @14559 has 46 MA's), (14, 14619), (17, 14640), (20, 14652), (25, 14706), (27, 14739), (52, 14973), (72, 15117), (75, 15171), (76, 15174), (79, 15204), (85, 15276), (97, 15399), (103, 15471), (106, 15504), (109, 15528), (118, 15576), (157, 15867), (205, 16143), (208, 16170), (216, 16233), (233, 16320), (245, 16413),

Gene: Dismas_17 Start: 13661, Stop: 15667, Start Num: 7

Candidate Starts for Dismas_17:
(Start: 7 @13661 has 46 MA's), (22, 13778), (28, 13847), (31, 13865), (32, 13877), (36, 13907), (41, 13958), (42, 13961), (43, 13970), (47, 14003), (53, 14081), (57, 14123), (68, 14180), (71, 14204), (77, 14267), (82, 14321), (86, 14393), (89, 14432), (90, 14435), (106, 14594), (109, 14618), (116, 14660), (117, 14663), (121, 14693), (130, 14747), (132, 14759), (134, 14795), (135, 14804), (139, 14837), (140, 14849), (158, 14978), (176, 15065), (183, 15122), (184, 15125), (185, 15137), (191, 15185), (197, 15221), (235, 15437), (237, 15455), (239, 15461), (247, 15611), (248, 15620),

Gene: Doobus_18 Start: 14247, Stop: 16097, Start Num: 7
Candidate Starts for Doobus_18:
(Start: 7 @14247 has 46 MA's), (29, 14436), (35, 14478), (36, 14493), (37, 14505), (49, 14628), (53, 14667), (67, 14760), (89, 15018), (116, 15246), (121, 15279), (122, 15288), (138, 15411), (175, 15636), (179, 15657), (185, 15702), (200, 15804), (203, 15819), (213, 15888), (221, 15936), (229, 15963), (231, 15972), (238, 16023),

Gene: Dropshot_23 Start: 14425, Stop: 16293, Start Num: 7
Candidate Starts for Dropshot_23:
(1, 14200), (3, 14395), (Start: 7 @14425 has 46 MA's), (14, 14485), (17, 14506), (20, 14518), (25, 14572), (27, 14605), (44, 14734), (51, 14827), (75, 15037), (76, 15040), (79, 15070), (85, 15142), (97, 15265), (106, 15370), (109, 15394), (118, 15442), (157, 15739), (170, 15790), (173, 15808), (177, 15835), (179, 15853), (181, 15868), (205, 16015), (208, 16042), (216, 16105), (233, 16192), (245, 16285),

Gene: FireCastle_21 Start: 16238, Stop: 18142, Start Num: 7
Candidate Starts for FireCastle_21:
(Start: 7 @16238 has 46 MA's), (13, 16289), (16, 16313), (23, 16361), (25, 16385), (26, 16388), (33, 16448), (37, 16484), (43, 16535), (50, 16628), (56, 16694), (73, 16841), (75, 16871), (76, 16874), (82, 16934), (90, 17048), (99, 17111), (104, 17183), (106, 17204), (109, 17228), (117, 17273), (119, 17294), (124, 17321), (131, 17366), (136, 17426), (151, 17540), (186, 17756), (189, 17765), (194, 17813), (208, 17900), (213, 17933), (232, 18023),

Gene: Goodman_22 Start: 16381, Stop: 18258, Start Num: 7
Candidate Starts for Goodman_22:
(Start: 7 @16381 has 46 MA's), (21, 16510), (25, 16549), (26, 16552), (34, 16621), (38, 16666), (43, 16702), (54, 16831), (75, 17011), (76, 17014), (80, 17047), (87, 17152), (88, 17173), (91, 17191), (92, 17194), (109, 17368), (117, 17413), (120, 17440), (123, 17455), (126, 17479), (127, 17485), (131, 17506), (135, 17554), (161, 17722), (162, 17725), (166, 17746), (169, 17758), (180, 17833), (210, 18028), (213, 18049), (214, 18058), (218, 18091), (233, 18157), (239, 18187), (244, 18229),

Gene: Guzman_25 Start: 14840, Stop: 16702, Start Num: 7
Candidate Starts for Guzman_25:
(1, 14615), (3, 14810), (Start: 7 @14840 has 46 MA's), (14, 14900), (17, 14921), (20, 14933), (25, 14987), (27, 15020), (44, 15149), (73, 15422), (75, 15452), (76, 15455), (78, 15470), (79, 15485), (85, 15557), (97, 15680), (103, 15752), (106, 15785), (109, 15809), (115, 15845), (118, 15857), (126, 15920), (157, 16148), (205, 16424), (208, 16451), (216, 16514), (233, 16601), (245, 16694),

Gene: Htur_21 Start: 16411, Stop: 18312, Start Num: 7
Candidate Starts for Htur_21:
(Start: 7 @16411 has 46 MA's), (10, 16432), (11, 16438), (21, 16540), (25, 16579), (26, 16582), (34, 16651), (43, 16732), (46, 16762), (54, 16861), (58, 16903), (74, 17044), (75, 17065), (76, 17068), (80, 17101), (87, 17206), (91, 17245), (92, 17248), (100, 17308), (108, 17416), (109, 17422), (120, 17494), (123, 17509), (126, 17533), (127, 17539), (131, 17560), (135, 17608), (141, 17659), (144, 17680), (161, 17776), (166, 17800), (169, 17812), (178, 17875), (187, 17932), (194, 17986), (205, 18043),

(208, 18070), (209, 18076), (210, 18082), (212, 18094), (218, 18145), (244, 18283),

Gene: IndiRoo_21 Start: 14680, Stop: 16581, Start Num: 7
Candidate Starts for IndiRoo_21:
(Start: 7 @14680 has 46 MA's), (13, 14731), (25, 14827), (26, 14830), (27, 14860), (33, 14890), (43, 14977), (44, 14989), (46, 15007), (54, 15109), (55, 15121), (58, 15148), (73, 15283), (75, 15313), (76, 15316), (79, 15346), (85, 15418), (97, 15541), (106, 15646), (109, 15670), (117, 15715), (118, 15718), (119, 15736), (121, 15745), (122, 15754), (123, 15757), (125, 15766), (131, 15808), (136, 15868), (143, 15916), (151, 15982), (163, 16048), (166, 16072), (186, 16195), (189, 16204), (194, 16252), (198, 16285), (208, 16339), (213, 16372), (232, 16462), (241, 16525),

Gene: Jakelyne_26 Start: 14641, Stop: 16509, Start Num: 7
Candidate Starts for Jakelyne_26:
(1, 14416), (3, 14611), (Start: 7 @14641 has 46 MA's), (14, 14701), (17, 14722), (20, 14734), (25, 14788), (27, 14821), (44, 14950), (51, 15043), (72, 15199), (75, 15253), (76, 15256), (79, 15286), (85, 15358), (97, 15481), (106, 15586), (109, 15610), (118, 15658), (157, 15955), (170, 16006), (173, 16024), (177, 16051), (179, 16069), (181, 16084), (205, 16231), (208, 16258), (216, 16321), (233, 16408), (245, 16501),

Gene: Jera_22 Start: 15478, Stop: 17370, Start Num: 7
Candidate Starts for Jera_22:
(Start: 7 @15478 has 46 MA's), (21, 15607), (25, 15646), (34, 15718), (43, 15799), (44, 15811), (54, 15928), (63, 15994), (74, 16087), (75, 16108), (76, 16111), (80, 16144), (87, 16249), (92, 16291), (93, 16309), (108, 16459), (109, 16465), (120, 16537), (123, 16552), (126, 16576), (127, 16582), (131, 16603), (135, 16651), (157, 16816), (159, 16822), (168, 16852), (172, 16876), (173, 16885), (174, 16891), (177, 16912), (181, 16945), (202, 17080), (207, 17110), (208, 17119), (209, 17125), (242, 17314), (243, 17335),

Gene: Johann_22 Start: 16381, Stop: 18258, Start Num: 7
Candidate Starts for Johann_22:
(Start: 7 @16381 has 46 MA's), (21, 16510), (25, 16549), (26, 16552), (34, 16621), (38, 16666), (43, 16702), (54, 16831), (75, 17011), (76, 17014), (80, 17047), (87, 17152), (88, 17173), (91, 17191), (92, 17194), (109, 17368), (117, 17413), (120, 17440), (123, 17455), (126, 17479), (127, 17485), (131, 17506), (135, 17554), (161, 17722), (162, 17725), (166, 17746), (169, 17758), (180, 17833), (210, 18028), (213, 18049), (214, 18058), (218, 18091), (233, 18157), (239, 18187), (244, 18229),

Gene: Kamdara_17 Start: 13660, Stop: 15666, Start Num: 7
Candidate Starts for Kamdara_17:
(Start: 7 @13660 has 46 MA's), (22, 13777), (28, 13846), (31, 13864), (32, 13876), (36, 13906), (41, 13957), (42, 13960), (43, 13969), (47, 14002), (53, 14080), (57, 14122), (68, 14179), (71, 14203), (77, 14266), (82, 14320), (86, 14392), (89, 14431), (90, 14434), (106, 14593), (109, 14617), (116, 14659), (117, 14662), (121, 14692), (130, 14746), (132, 14758), (134, 14794), (135, 14803), (139, 14836), (140, 14848), (158, 14977), (176, 15064), (183, 15121), (184, 15124), (185, 15136), (191, 15184), (197, 15220), (235, 15436), (237, 15454), (239, 15460), (247, 15610), (248, 15619),

Gene: Kenzers_18 Start: 13986, Stop: 15836, Start Num: 7
Candidate Starts for Kenzers_18:
(Start: 7 @13986 has 46 MA's), (29, 14175), (35, 14217), (36, 14232), (37, 14244), (53, 14406), (89, 14757), (116, 14985), (121, 15018), (132, 15084), (175, 15375), (179, 15396), (185, 15441), (196, 15519), (203, 15558), (213, 15627), (221, 15675), (229, 15702), (231, 15711), (238, 15762),

Gene: Kieran_17 Start: 13664, Stop: 15670, Start Num: 7
Candidate Starts for Kieran_17:

(Start: 7 @13664 has 46 MA's), (22, 13781), (28, 13850), (31, 13868), (32, 13880), (36, 13910), (41, 13961), (42, 13964), (43, 13973), (47, 14006), (53, 14084), (57, 14126), (68, 14183), (71, 14207), (77, 14270), (82, 14324), (86, 14396), (89, 14435), (90, 14438), (106, 14597), (109, 14621), (116, 14663), (117, 14666), (121, 14696), (130, 14750), (132, 14762), (134, 14798), (135, 14807), (139, 14840), (140, 14852), (158, 14981), (176, 15068), (183, 15125), (184, 15128), (185, 15140), (191, 15188), (197, 15224), (235, 15440), (237, 15458), (239, 15464), (247, 15614), (248, 15623),

Gene: Kors_32 Start: 18548, Stop: 20482, Start Num: 7
Candidate Starts for Kors_32:
(3, 18518), (4, 18521), (Start: 5 @18533 has 2 MA's), (6, 18545), (Start: 7 @18548 has 46 MA's), (12, 18608), (20, 18659), (29, 18749), (33, 18779), (39, 18836), (40, 18839), (49, 18929), (58, 19016), (69, 19097), (75, 19181), (84, 19256), (86, 19316), (95, 19397), (101, 19448), (109, 19541), (110, 19544), (112, 19550), (123, 19628), (128, 19664), (132, 19682), (146, 19838), (153, 19922), (160, 19946), (196, 20162), (204, 20204), (221, 20321), (226, 20342),

Gene: Labella_23 Start: 16361, Stop: 18253, Start Num: 7
Candidate Starts for Labella_23:
(Start: 7 @16361 has 46 MA's), (21, 16490), (25, 16529), (26, 16532), (34, 16601), (40, 16667), (43, 16682), (44, 16694), (54, 16811), (74, 16970), (75, 16991), (76, 16994), (80, 17027), (87, 17132), (91, 17171), (92, 17174), (93, 17192), (94, 17204), (108, 17342), (109, 17348), (120, 17420), (123, 17435), (126, 17459), (127, 17465), (131, 17486), (135, 17534), (157, 17699), (159, 17705), (168, 17735), (173, 17768), (174, 17774), (181, 17828), (202, 17963), (208, 18002), (212, 18026), (242, 18197), (243, 18218),

Gene: Linayshia_21 Start: 16403, Stop: 18304, Start Num: 7
Candidate Starts for Linayshia_21:
(Start: 7 @16403 has 46 MA's), (10, 16424), (11, 16430), (21, 16532), (25, 16571), (26, 16574), (34, 16643), (43, 16724), (46, 16754), (54, 16853), (58, 16895), (74, 17036), (75, 17057), (76, 17060), (80, 17093), (87, 17198), (91, 17237), (92, 17240), (100, 17300), (108, 17408), (109, 17414), (120, 17486), (123, 17501), (126, 17525), (127, 17531), (131, 17552), (135, 17600), (141, 17651), (144, 17672), (161, 17768), (166, 17792), (169, 17804), (178, 17867), (187, 17924), (194, 17978), (205, 18035), (208, 18062), (209, 18068), (210, 18074), (212, 18086), (218, 18137), (244, 18275),

Gene: LordBart_32 Start: 18464, Stop: 20398, Start Num: 7
Candidate Starts for LordBart_32:
(3, 18434), (4, 18437), (Start: 5 @18449 has 2 MA's), (6, 18461), (Start: 7 @18464 has 46 MA's), (12, 18524), (20, 18575), (29, 18665), (33, 18695), (39, 18752), (40, 18755), (49, 18845), (58, 18932), (69, 19013), (75, 19097), (84, 19172), (86, 19232), (95, 19313), (101, 19364), (109, 19457), (110, 19460), (112, 19466), (123, 19544), (128, 19580), (132, 19598), (146, 19754), (153, 19838), (160, 19862), (196, 20078), (204, 20120), (221, 20237), (226, 20258),

Gene: Losacky_25 Start: 14705, Stop: 16573, Start Num: 7
Candidate Starts for Losacky_25:
(1, 14480), (3, 14675), (Start: 7 @14705 has 46 MA's), (14, 14765), (17, 14786), (20, 14798), (25, 14852), (27, 14885), (29, 14891), (51, 15107), (72, 15263), (75, 15317), (76, 15320), (79, 15350), (85, 15422), (97, 15545), (103, 15617), (106, 15650), (109, 15674), (118, 15722), (126, 15785), (157, 16019), (170, 16070), (173, 16088), (177, 16115), (179, 16133), (181, 16148), (205, 16295), (208, 16322), (216, 16385), (233, 16472), (245, 16565),

Gene: Lynlen_18 Start: 13986, Stop: 15836, Start Num: 7
Candidate Starts for Lynlen_18:
(Start: 7 @13986 has 46 MA's), (29, 14175), (35, 14217), (36, 14232), (37, 14244), (53, 14406), (89, 14757), (116, 14985), (121, 15018), (132, 15084), (175, 15375), (179, 15396), (185, 15441), (196,

15519), (203, 15558), (213, 15627), (221, 15675), (229, 15702), (231, 15711), (238, 15762),

Gene: Mariel_27 Start: 14997, Stop: 16865, Start Num: 7
Candidate Starts for Mariel_27:
(1, 14772), (3, 14967), (Start: 7 @14997 has 46 MA's), (14, 15057), (17, 15078), (20, 15090), (25, 15144), (27, 15177), (29, 15183), (44, 15306), (75, 15609), (76, 15612), (79, 15642), (85, 15714), (97, 15837), (106, 15942), (109, 15966), (118, 16014), (157, 16311), (170, 16362), (173, 16380), (179, 16425), (181, 16440), (205, 16587), (208, 16614), (216, 16677), (233, 16764), (245, 16857),

Gene: MenE_24 Start: 14693, Stop: 16561, Start Num: 7
Candidate Starts for MenE_24:
(1, 14468), (3, 14663), (Start: 7 @14693 has 46 MA's), (14, 14753), (17, 14774), (20, 14786), (25, 14840), (27, 14873), (29, 14879), (51, 15095), (72, 15251), (75, 15305), (76, 15308), (79, 15338), (85, 15410), (97, 15533), (103, 15605), (106, 15638), (109, 15662), (118, 15710), (126, 15773), (157, 16007), (170, 16058), (173, 16076), (177, 16103), (179, 16121), (181, 16136), (205, 16283), (208, 16310), (216, 16373), (233, 16460), (245, 16553),

Gene: Milani_22 Start: 15329, Stop: 17206, Start Num: 7
Candidate Starts for Milani_22:
(Start: 7 @15329 has 46 MA's), (13, 15380), (25, 15476), (26, 15479), (33, 15539), (46, 15656), (54, 15758), (55, 15770), (63, 15845), (73, 15932), (75, 15962), (76, 15965), (79, 15995), (82, 16025), (84, 16037), (85, 16067), (98, 16199), (106, 16295), (109, 16319), (117, 16364), (118, 16367), (121, 16394), (123, 16406), (125, 16415), (131, 16457), (136, 16517), (164, 16685), (182, 16802), (191, 16859), (194, 16877), (195, 16889), (196, 16892), (200, 16916), (208, 16964), (213, 16997), (222, 17051),

Gene: Milomuff_19 Start: 14384, Stop: 16222, Start Num: 7
Candidate Starts for Milomuff_19:
(Start: 7 @14384 has 46 MA's), (29, 14573), (35, 14615), (36, 14630), (44, 14705), (50, 14777), (53, 14804), (54, 14816), (89, 15155), (116, 15383), (121, 15416), (138, 15548), (150, 15614), (152, 15653), (154, 15668), (171, 15737), (195, 15905), (200, 15932), (206, 15962), (214, 16022), (215, 16025), (229, 16088), (231, 16097),

Gene: NCRodriguez_25 Start: 14754, Stop: 16613, Start Num: 7
Candidate Starts for NCRodriguez_25:
(3, 14724), (Start: 7 @14754 has 46 MA's), (14, 14814), (17, 14835), (20, 14847), (25, 14901), (27, 14934), (44, 15063), (54, 15177), (66, 15252), (72, 15303), (73, 15327), (76, 15360), (79, 15390), (82, 15420), (85, 15462), (97, 15585), (106, 15690), (109, 15714), (118, 15762), (157, 16059), (170, 16110), (173, 16128), (177, 16155), (179, 16173), (181, 16188), (205, 16335), (208, 16362), (216, 16425), (233, 16512), (245, 16605),

Gene: Olympi_23 Start: 16368, Stop: 18245, Start Num: 7
Candidate Starts for Olympi_23:
(Start: 7 @16368 has 46 MA's), (21, 16497), (25, 16536), (26, 16539), (34, 16608), (38, 16653), (43, 16689), (54, 16818), (75, 16998), (76, 17001), (80, 17034), (81, 17058), (87, 17139), (91, 17178), (92, 17181), (102, 17271), (109, 17355), (120, 17427), (123, 17442), (126, 17466), (127, 17472), (131, 17493), (135, 17541), (161, 17709), (162, 17712), (166, 17733), (169, 17745), (180, 17820), (210, 18015), (213, 18036), (214, 18045), (218, 18078), (233, 18144), (239, 18174), (244, 18216),

Gene: PermaG_22 Start: 16442, Stop: 18325, Start Num: 7
Candidate Starts for PermaG_22:
(3, 16412), (Start: 7 @16442 has 46 MA's), (21, 16571), (25, 16610), (26, 16613), (34, 16682), (43, 16763), (54, 16892), (65, 16970), (75, 17072), (76, 17075), (87, 17213), (91, 17252), (92, 17255), (105,

17399), (109, 17429), (123, 17516), (126, 17540), (127, 17546), (131, 17567), (135, 17615), (161, 17783), (162, 17786), (166, 17807), (169, 17819), (192, 17975), (205, 18050), (207, 18068), (216, 18137), (233, 18224), (234, 18227), (240, 18260),

Gene: PhillyJawn_24 Start: 14425, Stop: 16293, Start Num: 7
Candidate Starts for PhillyJawn_24:
(1, 14200), (3, 14395), (Start: 7 @14425 has 46 MA's), (14, 14485), (17, 14506), (20, 14518), (25, 14572), (27, 14605), (44, 14734), (51, 14827), (72, 14983), (75, 15037), (76, 15040), (79, 15070), (85, 15142), (97, 15265), (106, 15370), (109, 15394), (118, 15442), (157, 15739), (170, 15790), (173, 15808), (179, 15853), (181, 15868), (205, 16015), (208, 16042), (216, 16105), (233, 16192), (245, 16285),

Gene: Phingu_26 Start: 14644, Stop: 16512, Start Num: 7
Candidate Starts for Phingu_26:
(1, 14419), (3, 14614), (Start: 7 @14644 has 46 MA's), (14, 14704), (17, 14725), (20, 14737), (25, 14791), (27, 14824), (44, 14953), (51, 15046), (72, 15202), (75, 15256), (76, 15259), (79, 15289), (85, 15361), (97, 15484), (103, 15556), (106, 15589), (109, 15613), (118, 15661), (126, 15724), (157, 15958), (170, 16009), (173, 16027), (179, 16072), (181, 16087), (205, 16234), (208, 16261), (216, 16324), (233, 16411), (245, 16504),

Gene: Phonegingi_23 Start: 14486, Stop: 16339, Start Num: 7
Candidate Starts for Phonegingi_23:
(1, 14261), (3, 14456), (Start: 7 @14486 has 46 MA's), (14, 14546), (17, 14567), (20, 14579), (25, 14633), (27, 14666), (44, 14795), (64, 14984), (72, 15044), (75, 15098), (76, 15101), (79, 15131), (85, 15203), (97, 15326), (101, 15365), (103, 15398), (106, 15431), (109, 15455), (118, 15503), (121, 15530), (125, 15551), (131, 15593), (133, 15620), (170, 15851), (173, 15869), (193, 16016), (208, 16103), (210, 16115), (216, 16160), (218, 16172), (225, 16193), (239, 16268), (244, 16310), (245, 16331),

Gene: Pickles13_23 Start: 14850, Stop: 16718, Start Num: 7
Candidate Starts for Pickles13_23:
(1, 14625), (3, 14820), (Start: 7 @14850 has 46 MA's), (14, 14910), (17, 14931), (20, 14943), (25, 14997), (27, 15030), (28, 15033), (73, 15432), (75, 15462), (76, 15465), (79, 15495), (85, 15567), (97, 15690), (103, 15762), (106, 15795), (109, 15819), (115, 15855), (118, 15867), (121, 15894), (126, 15930), (138, 16026), (157, 16164), (173, 16233), (177, 16260), (205, 16440), (208, 16467), (216, 16530), (233, 16617), (245, 16710),

Gene: Rasovi_21 Start: 16411, Stop: 18312, Start Num: 7
Candidate Starts for Rasovi_21:
(Start: 7 @16411 has 46 MA's), (10, 16432), (11, 16438), (21, 16540), (26, 16582), (34, 16651), (43, 16732), (46, 16762), (54, 16861), (58, 16903), (74, 17044), (75, 17065), (76, 17068), (80, 17101), (87, 17206), (91, 17245), (92, 17248), (100, 17308), (108, 17416), (109, 17422), (120, 17494), (123, 17509), (126, 17533), (127, 17539), (131, 17560), (135, 17608), (141, 17659), (144, 17680), (161, 17776), (166, 17800), (169, 17812), (178, 17875), (187, 17932), (194, 17986), (205, 18043), (208, 18070), (209, 18076), (210, 18082), (212, 18094), (218, 18145), (244, 18283),

Gene: RikSengupta_32 Start: 18570, Stop: 20519, Start Num: 5
Candidate Starts for RikSengupta_32:
(3, 18555), (4, 18558), (Start: 5 @18570 has 2 MA's), (6, 18582), (Start: 7 @18585 has 46 MA's), (12, 18645), (20, 18696), (29, 18786), (33, 18816), (39, 18873), (40, 18876), (45, 18906), (49, 18966), (58, 19053), (69, 19134), (75, 19218), (84, 19293), (86, 19353), (95, 19434), (101, 19485), (109, 19578), (110, 19581), (112, 19587), (123, 19665), (128, 19701), (132, 19719), (146, 19875), (153, 19959), (160, 19983), (196, 20199), (204, 20241), (221, 20358), (226, 20379),

Gene: Rona_17 Start: 13661, Stop: 15667, Start Num: 7
Candidate Starts for Rona_17:
(Start: 7 @13661 has 46 MA's), (22, 13778), (28, 13847), (31, 13865), (32, 13877), (36, 13907), (41, 13958), (42, 13961), (43, 13970), (47, 14003), (53, 14081), (57, 14123), (68, 14180), (71, 14204), (77, 14267), (82, 14321), (86, 14393), (89, 14432), (90, 14435), (106, 14594), (109, 14618), (116, 14660), (117, 14663), (121, 14693), (130, 14747), (132, 14759), (134, 14795), (135, 14804), (139, 14837), (140, 14849), (158, 14978), (176, 15065), (183, 15122), (184, 15125), (185, 15137), (191, 15185), (197, 15221), (235, 15437), (237, 15455), (239, 15461), (247, 15611), (248, 15620),

Gene: Rootkit7_21 Start: 16231, Stop: 18123, Start Num: 7
Candidate Starts for Rootkit7_21:
(Start: 7 @16231 has 46 MA's), (21, 16360), (25, 16399), (34, 16471), (43, 16552), (44, 16564), (54, 16681), (60, 16723), (74, 16840), (75, 16861), (76, 16864), (80, 16897), (87, 17002), (91, 17041), (92, 17044), (94, 17074), (108, 17212), (109, 17218), (120, 17290), (123, 17305), (126, 17329), (131, 17356), (135, 17404), (157, 17569), (168, 17605), (172, 17629), (173, 17638), (174, 17644), (181, 17698), (202, 17833), (209, 17878), (212, 17896), (214, 17914), (233, 18022), (243, 18088),

Gene: SBlackberry_21 Start: 16237, Stop: 18123, Start Num: 7
Candidate Starts for SBlackberry_21:
(Start: 7 @16237 has 46 MA's), (21, 16366), (25, 16405), (34, 16477), (43, 16558), (44, 16570), (54, 16687), (60, 16729), (74, 16846), (75, 16867), (76, 16870), (80, 16903), (87, 17008), (91, 17047), (92, 17050), (94, 17080), (108, 17218), (109, 17224), (120, 17296), (123, 17311), (126, 17335), (127, 17341), (131, 17362), (135, 17410), (142, 17467), (155, 17566), (157, 17575), (159, 17581), (172, 17635), (177, 17671), (210, 17893), (213, 17914), (214, 17923), (218, 17956), (233, 18022), (239, 18052), (244, 18094),

Gene: ScoobySnack_22 Start: 14554, Stop: 16422, Start Num: 7
Candidate Starts for ScoobySnack_22:
(1, 14329), (3, 14524), (Start: 7 @14554 has 46 MA's), (14, 14614), (17, 14635), (20, 14647), (25, 14701), (34, 14770), (44, 14863), (61, 15034), (75, 15166), (76, 15169), (79, 15199), (84, 15241), (85, 15271), (97, 15394), (103, 15466), (106, 15499), (109, 15523), (115, 15559), (118, 15571), (125, 15619), (126, 15634), (157, 15868), (177, 15964), (179, 15982), (188, 16036), (201, 16126), (208, 16171), (224, 16267), (245, 16414),

Gene: Sharkboy_17 Start: 13660, Stop: 15654, Start Num: 7
Candidate Starts for Sharkboy_17:
(Start: 7 @13660 has 46 MA's), (19, 13753), (31, 13864), (36, 13906), (43, 13969), (53, 14080), (59, 14149), (77, 14266), (82, 14320), (109, 14617), (116, 14659), (121, 14692), (129, 14740), (134, 14794), (156, 14971), (158, 14977), (165, 15001), (183, 15106), (195, 15199), (211, 15292), (217, 15355), (237, 15457), (242, 15478), (246, 15544),

Gene: Solea_20 Start: 14384, Stop: 16222, Start Num: 7
Candidate Starts for Solea_20:
(Start: 7 @14384 has 46 MA's), (29, 14573), (35, 14615), (36, 14630), (44, 14705), (50, 14777), (53, 14804), (54, 14816), (89, 15155), (116, 15383), (121, 15416), (138, 15548), (150, 15614), (152, 15653), (154, 15668), (171, 15737), (195, 15905), (200, 15932), (206, 15962), (214, 16022), (215, 16025), (229, 16088), (231, 16097),

Gene: Sparcetus_32 Start: 18449, Stop: 20398, Start Num: 5
Candidate Starts for Sparcetus_32:
(3, 18434), (4, 18437), (Start: 5 @18449 has 2 MA's), (6, 18461), (Start: 7 @18464 has 46 MA's), (12, 18524), (20, 18575), (29, 18665), (33, 18695), (39, 18752), (40, 18755), (49, 18845), (58, 18932), (69,

19013), (75, 19097), (84, 19172), (86, 19232), (95, 19313), (101, 19364), (109, 19457), (110, 19460), (112, 19466), (123, 19544), (128, 19580), (132, 19598), (146, 19754), (153, 19838), (160, 19862), (196, 20078), (204, 20120), (221, 20237), (226, 20258),

Gene: Sucha_18 Start: 13667, Stop: 15568, Start Num: 7
Candidate Starts for Sucha_18:
(Start: 7 @13667 has 46 MA's), (13, 13718), (25, 13814), (26, 13817), (27, 13847), (30, 13856), (43, 13964), (44, 13976), (46, 13994), (54, 14096), (55, 14108), (58, 14135), (64, 14186), (73, 14270), (75, 14300), (76, 14303), (79, 14333), (101, 14567), (106, 14633), (109, 14657), (117, 14702), (118, 14705), (122, 14741), (123, 14744), (131, 14795), (136, 14855), (143, 14903), (186, 15182), (189, 15191), (194, 15239), (198, 15272), (203, 15293), (208, 15326), (232, 15449),

Gene: TinyMiny_32 Start: 18483, Stop: 20417, Start Num: 7
Candidate Starts for TinyMiny_32:
(3, 18453), (4, 18456), (Start: 5 @18468 has 2 MA's), (6, 18480), (Start: 7 @18483 has 46 MA's), (12, 18543), (20, 18594), (29, 18684), (33, 18714), (39, 18771), (40, 18774), (49, 18864), (58, 18951), (69, 19032), (75, 19116), (84, 19191), (86, 19251), (95, 19332), (101, 19383), (109, 19476), (110, 19479), (112, 19485), (123, 19563), (128, 19599), (132, 19617), (146, 19773), (153, 19857), (160, 19881), (196, 20097), (204, 20139), (221, 20256), (226, 20277),

Gene: TurboVicky_21 Start: 16231, Stop: 18123, Start Num: 7
Candidate Starts for TurboVicky_21:
(Start: 7 @16231 has 46 MA's), (21, 16360), (25, 16399), (26, 16402), (34, 16471), (43, 16552), (44, 16564), (54, 16681), (74, 16840), (75, 16861), (76, 16864), (80, 16897), (87, 17002), (91, 17041), (92, 17044), (93, 17062), (94, 17074), (108, 17212), (109, 17218), (120, 17290), (123, 17305), (126, 17329), (127, 17335), (131, 17356), (135, 17404), (157, 17569), (159, 17575), (168, 17605), (173, 17638), (174, 17644), (181, 17698), (188, 17737), (202, 17833), (209, 17878), (212, 17896), (233, 18022), (242, 18067), (243, 18088),

Gene: Typher_23 Start: 16361, Stop: 18253, Start Num: 7
Candidate Starts for Typher_23:
(Start: 7 @16361 has 46 MA's), (21, 16490), (25, 16529), (26, 16532), (34, 16601), (43, 16682), (44, 16694), (54, 16811), (74, 16970), (75, 16991), (76, 16994), (80, 17027), (87, 17132), (91, 17171), (92, 17174), (93, 17192), (94, 17204), (108, 17342), (109, 17348), (120, 17420), (123, 17435), (126, 17459), (127, 17465), (131, 17486), (135, 17534), (157, 17699), (159, 17705), (168, 17735), (173, 17768), (174, 17774), (181, 17828), (202, 17963), (208, 18002), (212, 18026), (242, 18197), (243, 18218),

Gene: Violeta_25 Start: 14523, Stop: 16391, Start Num: 7
Candidate Starts for Violeta_25:
(1, 14298), (3, 14493), (Start: 7 @14523 has 46 MA's), (14, 14583), (17, 14604), (20, 14616), (25, 14670), (27, 14703), (44, 14832), (51, 14925), (72, 15081), (75, 15135), (76, 15138), (79, 15168), (85, 15240), (97, 15363), (106, 15468), (109, 15492), (118, 15540), (157, 15837), (170, 15888), (173, 15906), (177, 15933), (179, 15951), (181, 15966), (205, 16113), (208, 16140), (216, 16203), (233, 16290), (245, 16383),

Gene: Warren_24 Start: 14623, Stop: 16491, Start Num: 7
Candidate Starts for Warren_24:
(1, 14398), (3, 14593), (Start: 7 @14623 has 46 MA's), (14, 14683), (17, 14704), (20, 14716), (25, 14770), (27, 14803), (51, 15025), (72, 15181), (75, 15235), (76, 15238), (79, 15268), (85, 15340), (97, 15463), (103, 15535), (109, 15592), (118, 15640), (126, 15703), (138, 15799), (157, 15937), (170, 15988), (173, 16006), (177, 16033), (208, 16240), (233, 16390), (242, 16435), (245, 16483),

Gene: Winchester007_39 Start: 20543, Stop: 22411, Start Num: 7
Candidate Starts for Winchester007_39:
(1, 20318), (3, 20513), (Start: 7 @20543 has 46 MA's), (14, 20603), (17, 20624), (20, 20636), (25, 20690), (27, 20723), (44, 20852), (51, 20945), (72, 21101), (75, 21155), (76, 21158), (79, 21188), (85, 21260), (97, 21383), (106, 21488), (109, 21512), (118, 21560), (157, 21857), (170, 21908), (173, 21926), (179, 21971), (181, 21986), (205, 22133), (208, 22160), (216, 22223), (233, 22310), (245, 22403),

Gene: Wrackline_28 Start: 15957, Stop: 17840, Start Num: 7
Candidate Starts for Wrackline_28:
(Start: 7 @15957 has 46 MA's), (8, 15963), (9, 15972), (13, 16008), (14, 16017), (15, 16026), (18, 16038), (25, 16104), (33, 16167), (36, 16191), (44, 16266), (48, 16320), (54, 16386), (70, 16509), (75, 16587), (76, 16590), (79, 16620), (84, 16662), (85, 16692), (87, 16728), (90, 16764), (101, 16854), (105, 16914), (109, 16944), (111, 16950), (113, 16956), (115, 16980), (117, 16989), (118, 16992), (121, 17019), (122, 17028), (126, 17055), (131, 17082), (134, 17121), (136, 17142), (145, 17202), (147, 17205), (148, 17214), (149, 17226), (153, 17280), (157, 17295), (194, 17508), (195, 17520), (199, 17544), (204, 17565), (219, 17676), (220, 17679), (228, 17706), (230, 17715), (238, 17766),

Gene: Zanella_21 Start: 16234, Stop: 18126, Start Num: 7
Candidate Starts for Zanella_21:
(Start: 7 @16234 has 46 MA's), (21, 16363), (25, 16402), (26, 16405), (34, 16474), (43, 16555), (44, 16567), (54, 16684), (74, 16843), (75, 16864), (76, 16867), (80, 16900), (87, 17005), (91, 17044), (92, 17047), (93, 17065), (94, 17077), (108, 17215), (109, 17221), (120, 17293), (123, 17308), (126, 17332), (127, 17338), (131, 17359), (135, 17407), (157, 17572), (159, 17578), (168, 17608), (173, 17641), (174, 17647), (181, 17701), (188, 17740), (202, 17836), (209, 17881), (212, 17899), (233, 18025), (242, 18070), (243, 18091),