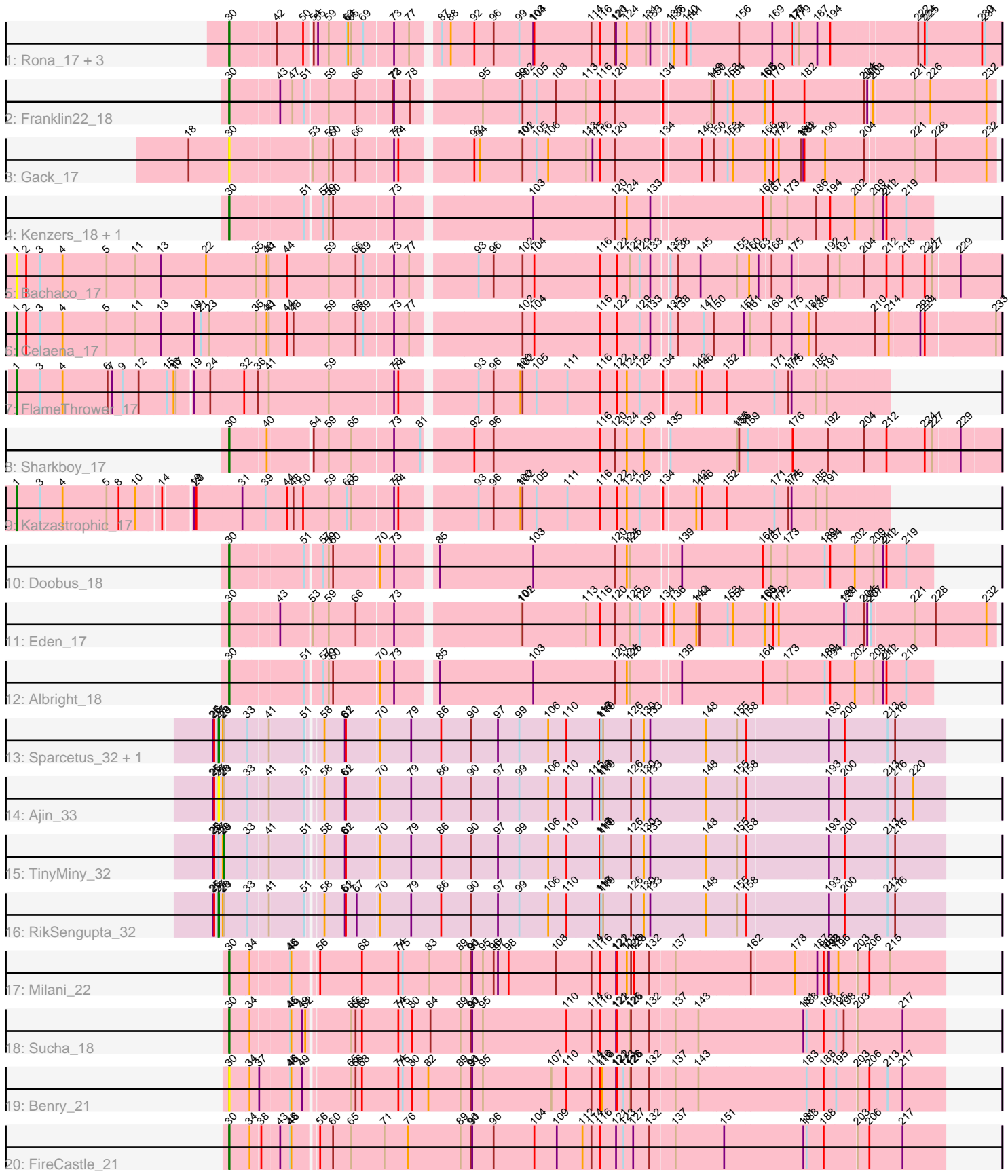


Pham 158133



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 158133 Report

This analysis was run 04/13/24 on database version 558.

Pham number 158133 has 25 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Rona\_17, Kieran\_17, ChiliPepper\_17, Dismas\_17
- Track 2 : Franklin22\_18
- Track 3 : Gack\_17
- Track 4 : Kenzers\_18, Lynlen\_18
- Track 5 : Bachaco\_17
- Track 6 : Celaena\_17
- Track 7 : FlameThrower\_17
- Track 8 : Sharkboy\_17
- Track 9 : Katzastrophic\_17
- Track 10 : Doobus\_18
- Track 11 : Eden\_17
- Track 12 : Albright\_18
- Track 13 : Sparcetus\_32, Kors\_33
- Track 14 : Ajin\_33
- Track 15 : TinyMiny\_32
- Track 16 : RikSengupta\_32
- Track 17 : Milani\_22
- Track 18 : Sucha\_18
- Track 19 : Benry\_21
- Track 20 : FireCastle\_21

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

The start number called the most often in the published annotations is 30, it was called in 14 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Albright\_18, Benry\_21, ChiliPepper\_17, Dismas\_17, Doobus\_18, Eden\_17, FireCastle\_21, Franklin22\_18, Gack\_17, Kenzers\_18, Kieran\_17, Lynlen\_18, Milani\_22, Rona\_17, Sharkboy\_17, Sucha\_18,

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

-

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

- Ajin\_33, Bachaco\_17, Celaena\_17, FlameThrower\_17, Katzastrophic\_17, Kors\_33, RikSengupta\_32, Sparcetus\_32, TinyMiny\_32,

### Summary by start number:

Start 1:

- Found in 4 of 25 ( 16.0% ) of genes in pham
- Manual Annotations of this start: 3 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bachaco\_17 (EB), Celaena\_17 (EB), FlameThrower\_17 (EB), Katzastrophic\_17 (EB),

Start 27:

- Found in 5 of 25 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 2 of 20
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Ajin\_33 (EF), Kors\_33 (EF), RikSengupta\_32 (EF), Sparcetus\_32 (EF),

Start 29:

- Found in 5 of 25 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 1 of 20
- Called 20.0% of time when present
- Phage (with cluster) where this start called: TinyMiny\_32 (EF),

Start 30:

- Found in 16 of 25 ( 64.0% ) of genes in pham
- Manual Annotations of this start: 14 of 20
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Albright\_18 (EB), Benry\_21 (EJ), ChiliPepper\_17 (EB), Dismas\_17 (EB), Doobus\_18 (EB), Eden\_17 (EB), FireCastle\_21 (EJ), Franklin22\_18 (EB), Gack\_17 (EB), Kenzers\_18 (EB), Kieran\_17 (EB), Lynlen\_18 (EB), Milani\_22 (EJ), Rona\_17 (EB), Sharkboy\_17 (EB), Sucha\_18 (EJ),

### Summary by clusters:

There are 3 clusters represented in this pham: EF, EJ, EB,

Info for manual annotations of cluster EB:

- Start number 1 was manually annotated 3 times for cluster EB.
- Start number 30 was manually annotated 11 times for cluster EB.

Info for manual annotations of cluster EF:

- Start number 27 was manually annotated 2 times for cluster EF.
- Start number 29 was manually annotated 1 time for cluster EF.

Info for manual annotations of cluster EJ:

- Start number 30 was manually annotated 3 times for cluster EJ.

### **Gene Information:**

Gene: Ajin\_33 Start: 18487, Stop: 20436, Start Num: 27

Candidate Starts for Ajin\_33:

(25, 18472), (26, 18475), (Start: 27 @18487 has 2 MA's), (28, 18499), (Start: 29 @18502 has 1 MA's), (33, 18562), (41, 18613), (51, 18703), (58, 18733), (61, 18790), (62, 18793), (70, 18883), (79, 18970), (86, 19051), (90, 19135), (97, 19210), (99, 19270), (106, 19351), (110, 19402), (115, 19474), (116, 19495), (117, 19498), (119, 19504), (126, 19582), (130, 19618), (133, 19636), (148, 19792), (155, 19876), (158, 19900), (193, 20116), (200, 20158), (213, 20275), (216, 20296), (220, 20347),

Gene: Albright\_18 Start: 13896, Stop: 15746, Start Num: 30

Candidate Starts for Albright\_18:

(Start: 30 @13896 has 14 MA's), (51, 14085), (57, 14127), (59, 14142), (60, 14154), (70, 14277), (73, 14316), (85, 14409), (103, 14667), (120, 14895), (124, 14928), (125, 14937), (139, 15060), (164, 15285), (173, 15351), (189, 15453), (194, 15468), (202, 15537), (209, 15585), (211, 15612), (212, 15621), (219, 15672),

Gene: Bachaco\_17 Start: 13521, Stop: 16133, Start Num: 1

Candidate Starts for Bachaco\_17:

(Start: 1 @13521 has 3 MA's), (2, 13548), (3, 13587), (4, 13650), (5, 13773), (11, 13854), (13, 13926), (22, 14052), (35, 14190), (40, 14217), (41, 14223), (44, 14271), (59, 14388), (66, 14463), (69, 14484), (73, 14562), (77, 14604), (93, 14760), (96, 14802), (102, 14883), (104, 14916), (116, 15099), (122, 15147), (125, 15183), (129, 15210), (133, 15240), (135, 15276), (138, 15297), (145, 15357), (155, 15453), (160, 15483), (163, 15507), (168, 15531), (175, 15585), (192, 15678), (197, 15708), (204, 15771), (212, 15834), (218, 15879), (224, 15936), (227, 15957), (229, 16023),

Gene: Benry\_21 Start: 14670, Stop: 16571, Start Num: 30

Candidate Starts for Benry\_21:

(Start: 30 @14670 has 14 MA's), (34, 14721), (37, 14739), (45, 14817), (46, 14820), (49, 14850), (65, 14967), (66, 14979), (68, 14997), (74, 15099), (75, 15111), (80, 15138), (82, 15183), (89, 15273), (90, 15303), (91, 15306), (95, 15336), (107, 15528), (110, 15570), (114, 15636), (116, 15660), (118, 15666), (121, 15705), (122, 15708), (123, 15726), (125, 15744), (126, 15747), (132, 15798), (137, 15858), (143, 15906), (183, 16194), (188, 16242), (195, 16275), (203, 16329), (206, 16362), (213, 16410), (217, 16452),

Gene: Celaena\_17 Start: 13457, Stop: 16075, Start Num: 1

Candidate Starts for Celaena\_17:

(Start: 1 @13457 has 3 MA's), (2, 13484), (3, 13523), (4, 13586), (5, 13709), (11, 13790), (13, 13862), (19, 13955), (21, 13973), (23, 13997), (35, 14126), (40, 14153), (41, 14159), (44, 14207), (48, 14225), (59, 14324), (66, 14399), (69, 14420), (73, 14498), (77, 14540), (102, 14819), (104, 14852), (116, 15035), (122, 15083), (129, 15146), (133, 15176), (135, 15212), (138, 15233), (147, 15302), (150, 15329), (157, 15407), (161, 15422), (168, 15473), (175, 15527), (184, 15572), (186, 15593), (210, 15746), (214, 15779), (223, 15857), (224, 15869), (233, 16058),

Gene: ChiliPepper\_17 Start: 13661, Stop: 15667, Start Num: 30

Candidate Starts for ChiliPepper\_17:

(Start: 30 @13661 has 14 MA's), (42, 13778), (50, 13847), (54, 13865), (55, 13877), (59, 13907), (63, 13958), (64, 13961), (65, 13970), (69, 14003), (73, 14081), (77, 14123), (87, 14180), (88, 14204), (92, 14267), (96, 14321), (99, 14393), (103, 14432), (104, 14435), (114, 14594), (116, 14618), (120, 14660), (121, 14663), (124, 14693), (131, 14747), (133, 14759), (135, 14795), (136, 14804), (140, 14837), (141, 14849), (156, 14978), (169, 15065), (176, 15122), (177, 15125), (179, 15137), (187, 15185), (194, 15221), (222, 15437), (224, 15455), (225, 15461), (230, 15611), (231, 15620),

Gene: Dismas\_17 Start: 13661, Stop: 15667, Start Num: 30

Candidate Starts for Dismas\_17:

(Start: 30 @13661 has 14 MA's), (42, 13778), (50, 13847), (54, 13865), (55, 13877), (59, 13907), (63, 13958), (64, 13961), (65, 13970), (69, 14003), (73, 14081), (77, 14123), (87, 14180), (88, 14204), (92, 14267), (96, 14321), (99, 14393), (103, 14432), (104, 14435), (114, 14594), (116, 14618), (120, 14660), (121, 14663), (124, 14693), (131, 14747), (133, 14759), (135, 14795), (136, 14804), (140, 14837), (141, 14849), (156, 14978), (169, 15065), (176, 15122), (177, 15125), (179, 15137), (187, 15185), (194, 15221), (222, 15437), (224, 15455), (225, 15461), (230, 15611), (231, 15620),

Gene: Doobus\_18 Start: 14247, Stop: 16097, Start Num: 30

Candidate Starts for Doobus\_18:

(Start: 30 @14247 has 14 MA's), (51, 14436), (57, 14478), (59, 14493), (60, 14505), (70, 14628), (73, 14667), (85, 14760), (103, 15018), (120, 15246), (124, 15279), (125, 15288), (139, 15411), (164, 15636), (167, 15657), (173, 15702), (189, 15804), (194, 15819), (202, 15888), (209, 15936), (211, 15963), (212, 15972), (219, 16023),

Gene: Eden\_17 Start: 12590, Stop: 14578, Start Num: 30

Candidate Starts for Eden\_17:

(Start: 30 @12590 has 14 MA's), (43, 12713), (53, 12791), (59, 12833), (66, 12908), (73, 13007), (101, 13325), (102, 13328), (113, 13505), (116, 13544), (120, 13586), (125, 13628), (129, 13655), (134, 13709), (136, 13730), (142, 13790), (144, 13799), (153, 13877), (154, 13892), (165, 13976), (166, 13979), (170, 14000), (172, 14015), (199, 14192), (201, 14198), (204, 14240), (205, 14249), (207, 14252), (221, 14360), (228, 14417), (232, 14552),

Gene: FireCastle\_21 Start: 16238, Stop: 18142, Start Num: 30

Candidate Starts for FireCastle\_21:

(Start: 30 @16238 has 14 MA's), (34, 16289), (38, 16313), (43, 16361), (45, 16385), (46, 16388), (56, 16448), (60, 16484), (65, 16535), (71, 16628), (76, 16694), (89, 16841), (90, 16871), (91, 16874), (96, 16934), (104, 17048), (109, 17111), (112, 17183), (114, 17204), (116, 17228), (121, 17273), (123, 17294), (127, 17321), (132, 17366), (137, 17426), (151, 17540), (181, 17756), (183, 17765), (188, 17813), (203, 17900), (206, 17933), (217, 18023),

Gene: FlameThrower\_17 Start: 13345, Stop: 15654, Start Num: 1

Candidate Starts for FlameThrower\_17:

(Start: 1 @13345 has 3 MA's), (3, 13411), (4, 13474), (6, 13600), (7, 13612), (9, 13642), (12, 13687), (15, 13762), (16, 13780), (17, 13786), (19, 13825), (24, 13870), (32, 13957), (36, 13996), (41, 14026), (59, 14194), (73, 14368), (74, 14380), (93, 14566), (96, 14608), (100, 14683), (102, 14689), (105, 14728), (111, 14815), (116, 14905), (122, 14953), (124, 14980), (129, 15016), (134, 15070), (142, 15151), (146, 15166), (152, 15235), (171, 15358), (174, 15394), (175, 15403), (185, 15463), (191, 15490),

Gene: Franklin22\_18 Start: 12769, Stop: 14757, Start Num: 30

Candidate Starts for Franklin22\_18:

(Start: 30 @12769 has 14 MA's), (43, 12892), (47, 12922), (51, 12955), (59, 13015), (66, 13090), (72, 13186), (73, 13189), (78, 13234), (95, 13399), (99, 13501), (102, 13510), (105, 13549), (108, 13603), (113, 13687), (116, 13726), (120, 13768), (134, 13891), (149, 14014), (150, 14020), (153, 14059), (154, 14074), (165, 14158), (166, 14161), (170, 14182), (182, 14269), (204, 14419), (205, 14428), (208, 14437), (221, 14539), (226, 14581), (232, 14731),

Gene: Gack\_17 Start: 12658, Stop: 14643, Start Num: 30

Candidate Starts for Gack\_17:

(18, 12544), (Start: 30 @12658 has 14 MA's), (53, 12859), (59, 12901), (60, 12913), (66, 12976), (73, 13075), (74, 13087), (92, 13261), (94, 13276), (101, 13393), (102, 13396), (105, 13435), (106, 13468),

(113, 13573), (115, 13591), (116, 13612), (120, 13654), (134, 13777), (146, 13873), (150, 13906), (153, 13945), (154, 13960), (166, 14047), (170, 14068), (172, 14083), (180, 14146), (181, 14152), (182, 14155), (190, 14209), (204, 14305), (221, 14425), (228, 14482), (232, 14617),

Gene: Katzastrophic\_17 Start: 13520, Stop: 15796, Start Num: 1

Candidate Starts for Katzastrophic\_17:

(Start: 1 @13520 has 3 MA's), (3, 13586), (4, 13649), (5, 13772), (8, 13805), (10, 13847), (14, 13910), (19, 13976), (20, 13982), (31, 14102), (39, 14159), (44, 14219), (48, 14237), (50, 14264), (59, 14336), (63, 14387), (65, 14399), (73, 14510), (74, 14522), (93, 14708), (96, 14750), (100, 14825), (102, 14831), (105, 14870), (111, 14957), (116, 15047), (122, 15095), (124, 15122), (129, 15158), (134, 15212), (142, 15293), (146, 15308), (152, 15377), (171, 15500), (174, 15536), (175, 15545), (185, 15605), (191, 15632),

Gene: Kenzers\_18 Start: 13986, Stop: 15836, Start Num: 30

Candidate Starts for Kenzers\_18:

(Start: 30 @13986 has 14 MA's), (51, 14175), (57, 14217), (59, 14232), (60, 14244), (73, 14406), (103, 14757), (120, 14985), (124, 15018), (133, 15084), (164, 15375), (167, 15396), (173, 15441), (186, 15519), (194, 15558), (202, 15627), (209, 15675), (211, 15702), (212, 15711), (219, 15762),

Gene: Kieran\_17 Start: 13664, Stop: 15670, Start Num: 30

Candidate Starts for Kieran\_17:

(Start: 30 @13664 has 14 MA's), (42, 13781), (50, 13850), (54, 13868), (55, 13880), (59, 13910), (63, 13961), (64, 13964), (65, 13973), (69, 14006), (73, 14084), (77, 14126), (87, 14183), (88, 14207), (92, 14270), (96, 14324), (99, 14396), (103, 14435), (104, 14438), (114, 14597), (116, 14621), (120, 14663), (121, 14666), (124, 14696), (131, 14750), (133, 14762), (135, 14798), (136, 14807), (140, 14840), (141, 14852), (156, 14981), (169, 15068), (176, 15125), (177, 15128), (179, 15140), (187, 15188), (194, 15224), (222, 15440), (224, 15458), (225, 15464), (230, 15614), (231, 15623),

Gene: Kors\_33 Start: 18533, Stop: 20482, Start Num: 27

Candidate Starts for Kors\_33:

(25, 18518), (26, 18521), (Start: 27 @18533 has 2 MA's), (28, 18545), (Start: 29 @18548 has 1 MA's), (33, 18608), (41, 18659), (51, 18749), (58, 18779), (61, 18836), (62, 18839), (70, 18929), (79, 19016), (86, 19097), (90, 19181), (97, 19256), (99, 19316), (106, 19397), (110, 19448), (116, 19541), (117, 19544), (119, 19550), (126, 19628), (130, 19664), (133, 19682), (148, 19838), (155, 19922), (158, 19946), (193, 20162), (200, 20204), (213, 20321), (216, 20342),

Gene: Lynlen\_18 Start: 13986, Stop: 15836, Start Num: 30

Candidate Starts for Lynlen\_18:

(Start: 30 @13986 has 14 MA's), (51, 14175), (57, 14217), (59, 14232), (60, 14244), (73, 14406), (103, 14757), (120, 14985), (124, 15018), (133, 15084), (164, 15375), (167, 15396), (173, 15441), (186, 15519), (194, 15558), (202, 15627), (209, 15675), (211, 15702), (212, 15711), (219, 15762),

Gene: Milani\_22 Start: 15329, Stop: 17206, Start Num: 30

Candidate Starts for Milani\_22:

(Start: 30 @15329 has 14 MA's), (34, 15380), (45, 15476), (46, 15479), (56, 15539), (68, 15656), (74, 15758), (75, 15770), (83, 15845), (89, 15932), (90, 15962), (91, 15965), (95, 15995), (96, 16025), (97, 16037), (98, 16067), (108, 16199), (114, 16295), (116, 16319), (121, 16364), (122, 16367), (124, 16394), (126, 16406), (128, 16415), (132, 16457), (137, 16517), (162, 16685), (178, 16802), (187, 16859), (188, 16877), (192, 16889), (193, 16892), (196, 16916), (203, 16964), (206, 16997), (215, 17051),

Gene: RikSengupta\_32 Start: 18570, Stop: 20519, Start Num: 27

Candidate Starts for RikSengupta\_32:

(25, 18555), (26, 18558), (Start: 27 @18570 has 2 MA's), (28, 18582), (Start: 29 @18585 has 1 MA's), (33, 18645), (41, 18696), (51, 18786), (58, 18816), (61, 18873), (62, 18876), (67, 18906), (70, 18966), (79, 19053), (86, 19134), (90, 19218), (97, 19293), (99, 19353), (106, 19434), (110, 19485), (116, 19578), (117, 19581), (119, 19587), (126, 19665), (130, 19701), (133, 19719), (148, 19875), (155, 19959), (158, 19983), (193, 20199), (200, 20241), (213, 20358), (216, 20379),

Gene: Rona\_17 Start: 13661, Stop: 15667, Start Num: 30

Candidate Starts for Rona\_17:

(Start: 30 @13661 has 14 MA's), (42, 13778), (50, 13847), (54, 13865), (55, 13877), (59, 13907), (63, 13958), (64, 13961), (65, 13970), (69, 14003), (73, 14081), (77, 14123), (87, 14180), (88, 14204), (92, 14267), (96, 14321), (99, 14393), (103, 14432), (104, 14435), (114, 14594), (116, 14618), (120, 14660), (121, 14663), (124, 14693), (131, 14747), (133, 14759), (135, 14795), (136, 14804), (140, 14837), (141, 14849), (156, 14978), (169, 15065), (176, 15122), (177, 15125), (179, 15137), (187, 15185), (194, 15221), (222, 15437), (224, 15455), (225, 15461), (230, 15611), (231, 15620),

Gene: Sharkboy\_17 Start: 13660, Stop: 15654, Start Num: 30

Candidate Starts for Sharkboy\_17:

(Start: 30 @13660 has 14 MA's), (40, 13753), (54, 13864), (59, 13906), (65, 13969), (73, 14080), (81, 14149), (92, 14266), (96, 14320), (116, 14617), (120, 14659), (124, 14692), (130, 14740), (135, 14794), (155, 14971), (156, 14977), (159, 15001), (176, 15106), (192, 15199), (204, 15292), (212, 15355), (224, 15457), (227, 15478), (229, 15544),

Gene: Sparcetus\_32 Start: 18449, Stop: 20398, Start Num: 27

Candidate Starts for Sparcetus\_32:

(25, 18434), (26, 18437), (Start: 27 @18449 has 2 MA's), (28, 18461), (Start: 29 @18464 has 1 MA's), (33, 18524), (41, 18575), (51, 18665), (58, 18695), (61, 18752), (62, 18755), (70, 18845), (79, 18932), (86, 19013), (90, 19097), (97, 19172), (99, 19232), (106, 19313), (110, 19364), (116, 19457), (117, 19460), (119, 19466), (126, 19544), (130, 19580), (133, 19598), (148, 19754), (155, 19838), (158, 19862), (193, 20078), (200, 20120), (213, 20237), (216, 20258),

Gene: Sucha\_18 Start: 13667, Stop: 15568, Start Num: 30

Candidate Starts for Sucha\_18:

(Start: 30 @13667 has 14 MA's), (34, 13718), (45, 13814), (46, 13817), (49, 13847), (52, 13856), (65, 13964), (66, 13976), (68, 13994), (74, 14096), (75, 14108), (80, 14135), (84, 14186), (89, 14270), (90, 14300), (91, 14303), (95, 14333), (110, 14567), (114, 14633), (116, 14657), (121, 14702), (122, 14705), (125, 14741), (126, 14744), (132, 14795), (137, 14855), (143, 14903), (181, 15182), (183, 15191), (188, 15239), (195, 15272), (198, 15293), (203, 15326), (217, 15449),

Gene: TinyMiny\_32 Start: 18483, Stop: 20417, Start Num: 29

Candidate Starts for TinyMiny\_32:

(25, 18453), (26, 18456), (Start: 27 @18468 has 2 MA's), (28, 18480), (Start: 29 @18483 has 1 MA's), (33, 18543), (41, 18594), (51, 18684), (58, 18714), (61, 18771), (62, 18774), (70, 18864), (79, 18951), (86, 19032), (90, 19116), (97, 19191), (99, 19251), (106, 19332), (110, 19383), (116, 19476), (117, 19479), (119, 19485), (126, 19563), (130, 19599), (133, 19617), (148, 19773), (155, 19857), (158, 19881), (193, 20097), (200, 20139), (213, 20256), (216, 20277),