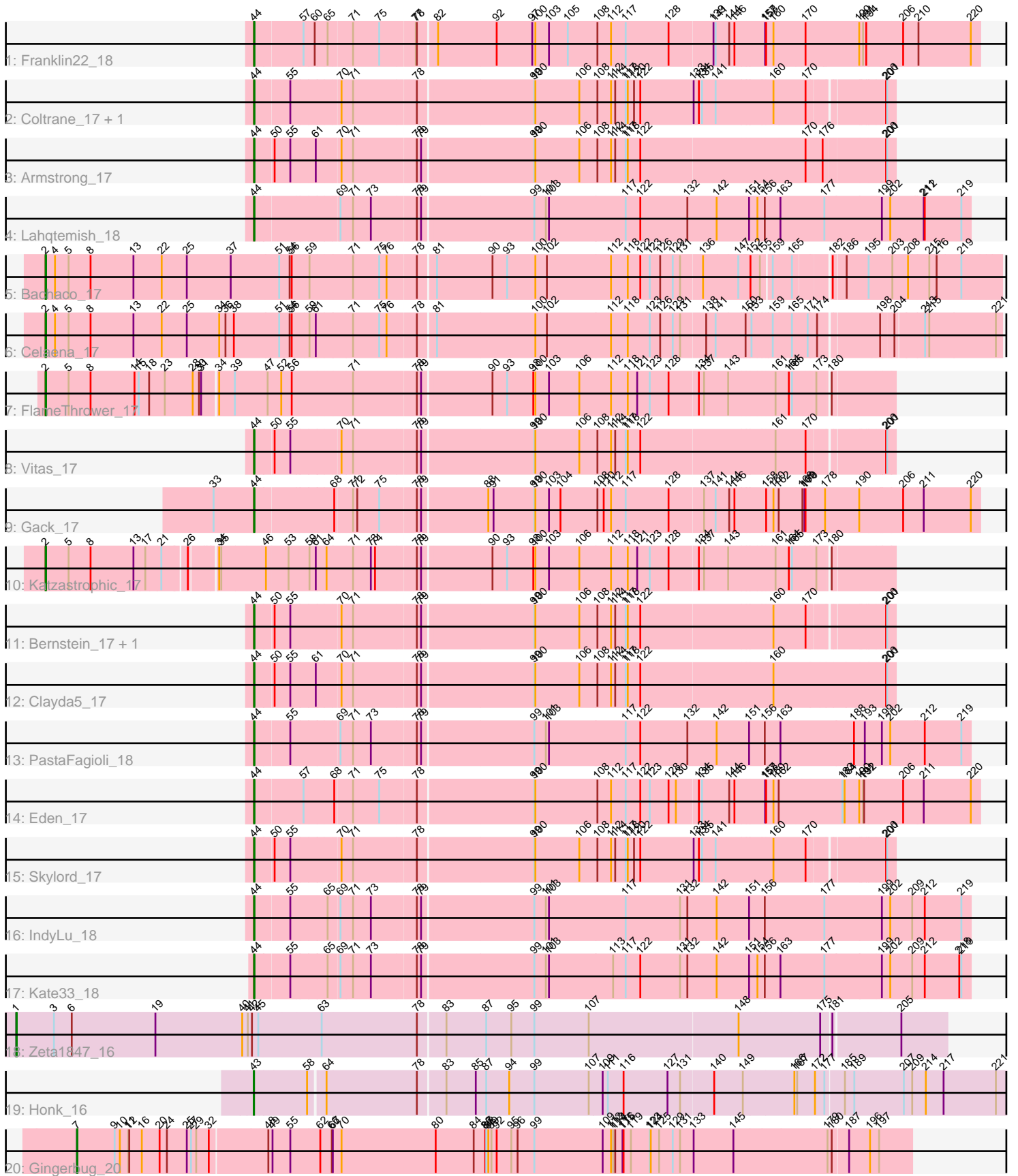


Pham 295085



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 295085 Report

This analysis was run 04/18/26 on database version 643.

Pham number 295085 has 22 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Franklin22\_18
- Track 2 : Coltrane\_17, Brahms\_17
- Track 3 : Armstrong\_17
- Track 4 : Lahqtemish\_18
- Track 5 : Bachaco\_17
- Track 6 : Celaena\_17
- Track 7 : FlameThrower\_17
- Track 8 : Vitas\_17
- Track 9 : Gack\_17
- Track 10 : Katzastrophic\_17
- Track 11 : Bernstein\_17, Rollins\_17
- Track 12 : Clayda5\_17
- Track 13 : PastaFagioli\_18
- Track 14 : Eden\_17
- Track 15 : Skylord\_17
- Track 16 : IndyLu\_18
- Track 17 : Kate33\_18
- Track 18 : Zeta1847\_16
- Track 19 : Honk\_16
- Track 20 : Gingerbug\_20

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

The start number called the most often in the published annotations is 44, it was called in 15 of the 22 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Armstrong\_17, Bernstein\_17, Brahms\_17, Clayda5\_17, Coltrane\_17, Eden\_17, Franklin22\_18, Gack\_17, IndyLu\_18, Kate33\_18, Lahqtemish\_18, PastaFagioli\_18, Rollins\_17, Skylord\_17, Vitas\_17,

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

-

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

- Bachaco\_17, Celaena\_17, FlameThrower\_17, Gingerbug\_20, Honk\_16, Katzastrophic\_17, Zeta1847\_16,

### Summary by start number:

Start 1:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zeta1847\_16 (EH),

Start 2:

- Found in 4 of 22 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 4 of 22
- 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 7:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gingerbug\_20 (GF),

Start 43:

- Found in 1 of 22 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Honk\_16 (EH),

Start 44:

- Found in 15 of 22 ( 68.2% ) of genes in pham
- Manual Annotations of this start: 15 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Armstrong\_17 (EB), Bernstein\_17 (EB), Brahms\_17 (EB), Clayda5\_17 (EB), Coltrane\_17 (EB), Eden\_17 (EB), Franklin22\_18 (EB), Gack\_17 (EB), IndyLu\_18 (EB), Kate33\_18 (EB), Lahqtemish\_18 (EB), PastaFagioli\_18 (EB), Rollins\_17 (EB), Skylord\_17 (EB), Vitas\_17 (EB),

### Summary by clusters:

There are 3 clusters represented in this pham: GF, EH, EB,

Info for manual annotations of cluster EB:

- Start number 2 was manually annotated 4 times for cluster EB.
- Start number 44 was manually annotated 15 times for cluster EB.

Info for manual annotations of cluster EH:

- Start number 1 was manually annotated 1 time for cluster EH.
- Start number 43 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster GF:

- Start number 7 was manually annotated 1 time for cluster GF.

### **Gene Information:**

Gene: Armstrong\_17 Start: 12466, Stop: 14193, Start Num: 44

Candidate Starts for Armstrong\_17:

(Start: 44 @12466 has 15 MA's), (50, 12514), (55, 12559), (61, 12625), (70, 12682), (71, 12712), (78, 12886), (79, 12898), (99, 13204), (100, 13207), (106, 13333), (108, 13384), (112, 13423), (114, 13435), (117, 13465), (118, 13471), (122, 13507), (170, 13963), (176, 14011), (200, 14167), (201, 14170),

Gene: Bachaco\_17 Start: 13521, Stop: 16133, Start Num: 2

Candidate Starts for Bachaco\_17:

(Start: 2 @13521 has 4 MA's), (4, 13548), (5, 13587), (8, 13650), (13, 13773), (22, 13854), (25, 13926), (37, 14052), (51, 14190), (54, 14217), (56, 14223), (59, 14271), (71, 14388), (75, 14463), (76, 14484), (78, 14562), (81, 14604), (90, 14760), (93, 14802), (100, 14883), (102, 14916), (112, 15099), (118, 15147), (122, 15183), (123, 15210), (126, 15240), (129, 15276), (131, 15297), (136, 15357), (147, 15453), (152, 15483), (155, 15507), (159, 15531), (165, 15585), (182, 15678), (186, 15708), (195, 15771), (203, 15834), (208, 15879), (215, 15936), (216, 15957), (219, 16023),

Gene: Bernstein\_17 Start: 12526, Stop: 14229, Start Num: 44

Candidate Starts for Bernstein\_17:

(Start: 44 @12526 has 15 MA's), (50, 12574), (55, 12619), (70, 12742), (71, 12772), (78, 12946), (79, 12958), (99, 13264), (100, 13267), (106, 13393), (108, 13444), (112, 13483), (114, 13495), (117, 13525), (118, 13531), (122, 13567), (160, 13933), (170, 14023), (200, 14203), (201, 14206),

Gene: Brahms\_17 Start: 12466, Stop: 14169, Start Num: 44

Candidate Starts for Brahms\_17:

(Start: 44 @12466 has 15 MA's), (55, 12559), (70, 12682), (71, 12712), (78, 12886), (99, 13204), (100, 13207), (106, 13333), (108, 13384), (112, 13423), (114, 13435), (117, 13465), (118, 13471), (120, 13489), (122, 13507), (133, 13654), (134, 13669), (135, 13678), (141, 13717), (160, 13873), (170, 13963), (200, 14143), (201, 14146),

Gene: Celaena\_17 Start: 13457, Stop: 16075, Start Num: 2

Candidate Starts for Celaena\_17:

(Start: 2 @13457 has 4 MA's), (4, 13484), (5, 13523), (8, 13586), (13, 13709), (22, 13790), (25, 13862), (34, 13955), (36, 13973), (38, 13997), (51, 14126), (54, 14153), (56, 14159), (59, 14207), (61, 14225), (71, 14324), (75, 14399), (76, 14420), (78, 14498), (81, 14540), (100, 14819), (102, 14852), (112, 15035), (118, 15083), (123, 15146), (126, 15176), (129, 15212), (131, 15233), (138, 15302), (141, 15329), (150, 15407), (153, 15422), (159, 15473), (165, 15527), (171, 15572), (174, 15593), (198, 15746), (204, 15779), (213, 15857), (215, 15869), (221, 16058),

Gene: Clayda5\_17 Start: 12466, Stop: 14199, Start Num: 44

Candidate Starts for Clayda5\_17:

(Start: 44 @12466 has 15 MA's), (50, 12514), (55, 12559), (61, 12625), (70, 12682), (71, 12712), (78, 12886), (79, 12898), (99, 13204), (100, 13207), (106, 13333), (108, 13384), (112, 13423), (114, 13435), (117, 13465), (118, 13471), (122, 13507), (160, 13873), (200, 14173), (201, 14176),

Gene: Coltrane\_17 Start: 12466, Stop: 14169, Start Num: 44

Candidate Starts for Coltrane\_17:

(Start: 44 @12466 has 15 MA's), (55, 12559), (70, 12682), (71, 12712), (78, 12886), (99, 13204), (100, 13207), (106, 13333), (108, 13384), (112, 13423), (114, 13435), (117, 13465), (118, 13471), (120, 13489), (122, 13507), (133, 13654), (134, 13669), (135, 13678), (141, 13717), (160, 13873), (170, 13963), (200, 14143), (201, 14146),

Gene: Eden\_17 Start: 12590, Stop: 14578, Start Num: 44

Candidate Starts for Eden\_17:

(Start: 44 @12590 has 15 MA's), (57, 12713), (68, 12791), (71, 12833), (75, 12908), (78, 13007), (99, 13325), (100, 13328), (108, 13505), (112, 13544), (117, 13586), (122, 13628), (123, 13655), (128, 13709), (130, 13730), (134, 13790), (135, 13799), (144, 13877), (146, 13892), (157, 13976), (158, 13979), (160, 14000), (162, 14015), (183, 14192), (184, 14198), (190, 14240), (191, 14249), (192, 14252), (206, 14360), (211, 14417), (220, 14552),

Gene: FlameThrower\_17 Start: 13345, Stop: 15654, Start Num: 2

Candidate Starts for FlameThrower\_17:

(Start: 2 @13345 has 4 MA's), (5, 13411), (8, 13474), (14, 13600), (15, 13612), (18, 13642), (23, 13687), (28, 13762), (30, 13780), (31, 13786), (34, 13825), (39, 13870), (47, 13957), (52, 13996), (56, 14026), (71, 14194), (78, 14368), (79, 14380), (90, 14566), (93, 14608), (98, 14683), (100, 14689), (103, 14728), (106, 14815), (112, 14905), (118, 14953), (121, 14980), (123, 15016), (128, 15070), (134, 15151), (137, 15166), (143, 15235), (161, 15358), (164, 15394), (165, 15403), (173, 15463), (180, 15490),

Gene: Franklin22\_18 Start: 12769, Stop: 14757, Start Num: 44

Candidate Starts for Franklin22\_18:

(Start: 44 @12769 has 15 MA's), (57, 12892), (60, 12922), (65, 12955), (71, 13015), (75, 13090), (77, 13186), (78, 13189), (82, 13234), (92, 13399), (97, 13501), (100, 13510), (103, 13549), (105, 13603), (108, 13687), (112, 13726), (117, 13768), (128, 13891), (139, 14014), (141, 14020), (144, 14059), (146, 14074), (157, 14158), (158, 14161), (160, 14182), (170, 14269), (190, 14419), (191, 14428), (194, 14437), (206, 14539), (210, 14581), (220, 14731),

Gene: Gack\_17 Start: 12658, Stop: 14643, Start Num: 44

Candidate Starts for Gack\_17:

(33, 12544), (Start: 44 @12658 has 15 MA's), (68, 12859), (71, 12901), (72, 12913), (75, 12976), (78, 13075), (79, 13087), (88, 13261), (91, 13276), (99, 13393), (100, 13396), (103, 13435), (104, 13468), (108, 13573), (110, 13591), (112, 13612), (117, 13654), (128, 13777), (137, 13873), (141, 13906), (144, 13945), (146, 13960), (158, 14047), (160, 14068), (162, 14083), (168, 14146), (169, 14152), (170, 14155), (178, 14209), (190, 14305), (206, 14425), (211, 14482), (220, 14617),

Gene: Gingerbug\_20 Start: 14337, Stop: 16679, Start Num: 7

Candidate Starts for Gingerbug\_20:

(Start: 7 @14337 has 1 MA's), (9, 14445), (10, 14460), (11, 14484), (12, 14487), (16, 14523), (20, 14574), (24, 14595), (25, 14652), (27, 14664), (29, 14679), (32, 14715), (48, 14871), (49, 14883), (55, 14934), (62, 15018), (66, 15051), (67, 15054), (70, 15078), (80, 15345), (84, 15453), (86, 15486), (87, 15489), (88, 15495), (89, 15504), (92, 15519), (95, 15561), (96, 15579), (99, 15627), (109, 15819), (112, 15843), (113, 15849), (114, 15855), (115, 15876), (116, 15879), (119, 15900), (123, 15954), (124, 15957), (125, 15981), (129, 16020), (131, 16041), (133, 16074), (145, 16188), (179, 16452), (180, 16464), (187, 16503), (196, 16563), (197, 16587),

Gene: Honk\_16 Start: 12148, Stop: 14262, Start Num: 43

Candidate Starts for Honk\_16:

(Start: 43 @12148 has 1 MA's), (58, 12286), (64, 12322), (78, 12580), (83, 12649), (85, 12733), (87, 12760), (94, 12826), (99, 12898), (107, 13054), (109, 13093), (111, 13108), (116, 13153), (127, 13279), (131, 13315), (140, 13405), (149, 13483), (166, 13627), (167, 13633), (172, 13684), (177,

13711), (185, 13762), (189, 13789), (207, 13927), (209, 13948), (214, 13987), (217, 14038), (221, 14188),

Gene: IndyLu\_18 Start: 13944, Stop: 15914, Start Num: 44

Candidate Starts for IndyLu\_18:

(Start: 44 @13944 has 15 MA's), (55, 14037), (65, 14133), (69, 14157), (71, 14190), (73, 14241), (78, 14364), (79, 14376), (99, 14682), (101, 14715), (103, 14724), (117, 14943), (131, 15099), (132, 15120), (142, 15204), (151, 15294), (156, 15339), (177, 15504), (199, 15663), (202, 15687), (209, 15750), (212, 15783), (219, 15888),

Gene: Kate33\_18 Start: 13943, Stop: 15916, Start Num: 44

Candidate Starts for Kate33\_18:

(Start: 44 @13943 has 15 MA's), (55, 14036), (65, 14132), (69, 14156), (71, 14189), (73, 14240), (78, 14363), (79, 14375), (99, 14681), (101, 14714), (103, 14723), (113, 14906), (117, 14942), (122, 14984), (131, 15098), (132, 15119), (142, 15203), (151, 15296), (154, 15320), (156, 15341), (163, 15380), (177, 15506), (199, 15665), (202, 15689), (209, 15752), (212, 15785), (218, 15884), (219, 15890),

Gene: Katzastrophic\_17 Start: 13520, Stop: 15796, Start Num: 2

Candidate Starts for Katzastrophic\_17:

(Start: 2 @13520 has 4 MA's), (5, 13586), (8, 13649), (13, 13772), (17, 13805), (21, 13847), (26, 13910), (34, 13976), (35, 13982), (46, 14102), (53, 14159), (59, 14219), (61, 14237), (64, 14264), (71, 14336), (73, 14387), (74, 14399), (78, 14510), (79, 14522), (90, 14708), (93, 14750), (98, 14825), (100, 14831), (103, 14870), (106, 14957), (112, 15047), (118, 15095), (121, 15122), (123, 15158), (128, 15212), (134, 15293), (137, 15308), (143, 15377), (161, 15500), (164, 15536), (165, 15545), (173, 15605), (180, 15632),

Gene: Lahqtemish\_18 Start: 13989, Stop: 15962, Start Num: 44

Candidate Starts for Lahqtemish\_18:

(Start: 44 @13989 has 15 MA's), (69, 14202), (71, 14235), (73, 14286), (78, 14409), (79, 14421), (99, 14727), (101, 14760), (103, 14769), (117, 14988), (122, 15030), (132, 15165), (142, 15249), (151, 15342), (154, 15366), (156, 15387), (163, 15426), (177, 15552), (199, 15711), (202, 15735), (211, 15828), (212, 15831), (219, 15936),

Gene: PastaFagioli\_18 Start: 13977, Stop: 15950, Start Num: 44

Candidate Starts for PastaFagioli\_18:

(Start: 44 @13977 has 15 MA's), (55, 14070), (69, 14190), (71, 14223), (73, 14274), (78, 14397), (79, 14409), (99, 14715), (101, 14748), (103, 14757), (117, 14976), (122, 15018), (132, 15153), (142, 15237), (151, 15330), (156, 15375), (163, 15414), (188, 15624), (193, 15654), (199, 15699), (202, 15723), (212, 15819), (219, 15924),

Gene: Rollins\_17 Start: 12526, Stop: 14229, Start Num: 44

Candidate Starts for Rollins\_17:

(Start: 44 @12526 has 15 MA's), (50, 12574), (55, 12619), (70, 12742), (71, 12772), (78, 12946), (79, 12958), (99, 13264), (100, 13267), (106, 13393), (108, 13444), (112, 13483), (114, 13495), (117, 13525), (118, 13531), (122, 13567), (160, 13933), (170, 14023), (200, 14203), (201, 14206),

Gene: Skylord\_17 Start: 12466, Stop: 14169, Start Num: 44

Candidate Starts for Skylord\_17:

(Start: 44 @12466 has 15 MA's), (50, 12514), (55, 12559), (70, 12682), (71, 12712), (78, 12886), (99, 13204), (100, 13207), (106, 13333), (108, 13384), (112, 13423), (114, 13435), (117, 13465), (118, 13471), (120, 13489), (122, 13507), (133, 13654), (134, 13669), (135, 13678), (141, 13717), (160, 13873), (170, 13963), (200, 14143), (201, 14146),

Gene: Vitas\_17 Start: 12466, Stop: 14169, Start Num: 44

Candidate Starts for Vitas\_17:

(Start: 44 @12466 has 15 MA's), (50, 12514), (55, 12559), (70, 12682), (71, 12712), (78, 12886), (79, 12898), (99, 13204), (100, 13207), (106, 13333), (108, 13384), (112, 13423), (114, 13435), (117, 13465), (118, 13471), (122, 13507), (161, 13879), (170, 13963), (200, 14143), (201, 14146),

Gene: Zeta1847\_16 Start: 13524, Stop: 16088, Start Num: 1

Candidate Starts for Zeta1847\_16:

(Start: 1 @13524 has 1 MA's), (3, 13632), (6, 13683), (19, 13923), (40, 14172), (41, 14187), (42, 14199), (45, 14217), (63, 14394), (78, 14664), (83, 14733), (87, 14844), (95, 14916), (99, 14982), (107, 15132), (148, 15552), (175, 15765), (181, 15792), (205, 15969),