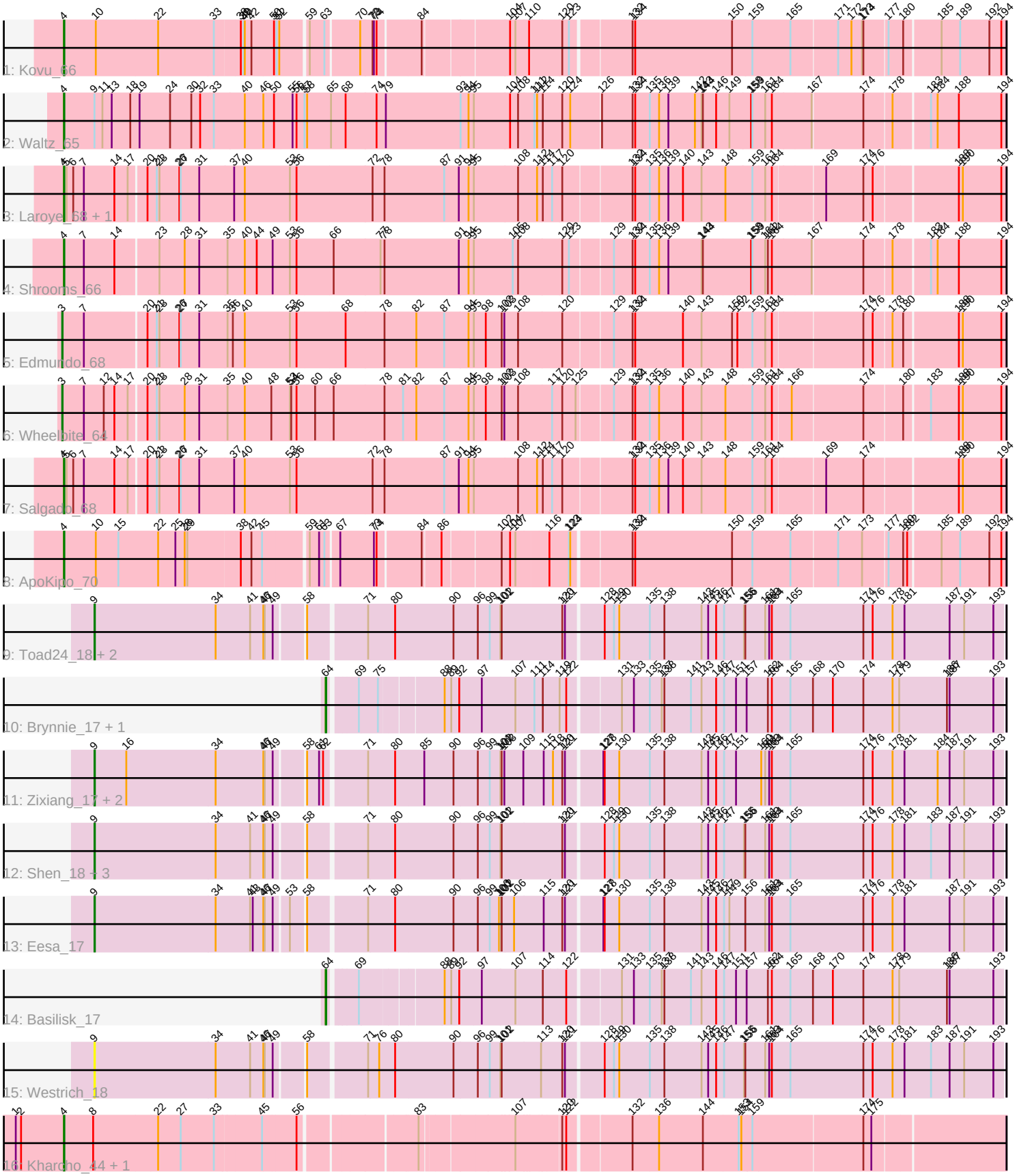
Pham 344306


1: Kovu_66
2: Waltz_65
3: Laroye_68 + 1
4: Shrooms_66
5: Edmundo_68
6: Wheelbite_64
7: Salgado_68
8: ApoKipo_70
9: Toad24_18 + 2
10: Brynnie_17 + 1
11: Zixiang_17 + 2
12: Shen_18 + 3
13: Eesa_17
14: Basilisk_17
15: Westrich_18
16: Khardho_44 + 1

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 344306 Report

This analysis was run 11/14/26 on database version 672.

Pham number 344306 has 26 members, 4 are drafts.

Phages represented in each track:
- Track 1 : Kovu_66
- Track 2 : Waltz_65
- Track 3 : Laroye_68, LiSara_65
- Track 4 : Shrooms_66
- Track 5 : Edmundo_68
- Track 6 : Wheelbite_64
- Track 7 : Salgado_68
- Track 8 : ApoKipo_70
- Track 9 : Toad24_18, Orcanus_17, KendraB23_18
- Track 10 : Brynnie_17, Ruchi_17
- Track 11 : Zixiang_17, Niblet_17, Chicken_17
- Track 12 : Shen_18, Pelletreau_18, Gravel_18, Amanises_18
- Track 13 : Eesa_17
- Track 14 : Basilisk_17
- Track 15 : Westrich_18
- Track 16 : Kharcho_44, Ottawa_44

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

The start number called the most often in the published annotations is 4, it was called in 9 of the 22 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- ApoKipo_70, Kharcho_44, Kovu_66, Laroye_68, LiSara_65, Ottawa_44, Salgado_68, Shrooms_66, Waltz_65,

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

Genes that do not have the "Most Annotated" start:
- Amanises_18, Basilisk_17, Brynnie_17, Chicken_17, Edmundo_68, Eesa_17, Gravel_18, KendraB23_18, Niblet_17, Orcanus_17, Pelletreau_18, Ruchi_17, Shen_18, Toad24_18, Westrich_18, Wheelbite_64, Zixiang_17,

Summary by start number:

Start 3:
• Found in 2 of 26 (7.7%) of genes in pham
• Manual Annotations of this start: 2 of 22
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Edmundo_68 (AL), Wheelbite_64 (AL),

Start 4:
• Found in 9 of 26 (34.6%) of genes in pham
• Manual Annotations of this start: 9 of 22
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ApoKipo_70 (AL), Kharcho_44 (FM), Kovu_66 (AL), Laroye_68 (AL), LiSara_65 (AL), Ottawa_44 (FM), Salgado_68 (AL), Shrooms_66 (AL), Waltz_65 (AL),

Start 9:
• Found in 13 of 26 (50.0%) of genes in pham
• Manual Annotations of this start: 8 of 22
• Called 92.3% of time when present
• Phage (with cluster) where this start called: Amanises_18 (AS1), Chicken_17 (AS1), Eesa_17 (AS1), Gravel_18 (AS1), KendraB23_18 (AS1), Niblet_17 (AS1), Orcanus_17 (AS1), Pelletreau_18 (AS1), Shen_18 (AS1), Toad24_18 (AS1), Westrich_18 (AS1), Zixiang_17 (AS1),

Start 64:
• Found in 3 of 26 (11.5%) of genes in pham
• Manual Annotations of this start: 3 of 22
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Basilisk_17 (AS1), Brynnie_17 (AS1), Ruchi_17 (AS1),

Summary by clusters:

There are 3 clusters represented in this pham: AS1, AL, FM,

Info for manual annotations of cluster AL:
•Start number 3 was manually annotated 2 times for cluster AL.
•Start number 4 was manually annotated 7 times for cluster AL.

Info for manual annotations of cluster AS1:
•Start number 9 was manually annotated 8 times for cluster AS1.
•Start number 64 was manually annotated 3 times for cluster AS1.

Info for manual annotations of cluster FM:
•Start number 4 was manually annotated 2 times for cluster FM.

Gene Information:

Gene: Amanises_18 Start: 12534, Stop: 14528, Start Num: 9
Candidate Starts for Amanises_18:

(Start: 9 @12534 has 8 MA's), (34, 12807), (41, 12885), (46, 12915), (47, 12918), (49, 12936), (58, 12996), (71, 13119), (80, 13179), (90, 13308), (96, 13362), (99, 13389), (101, 13413), (102, 13416), (120, 13551), (121, 13557), (128, 13635), (129, 13656), (130, 13668), (135, 13737), (138, 13770), (143, 13854), (145, 13869), (146, 13887), (147, 13905), (155, 13950), (156, 13953), (161, 13998), (163, 14007), (164, 14013), (165, 14055), (174, 14220), (176, 14241), (178, 14286), (181, 14313), (183, 14373), (187, 14415), (191, 14448), (193, 14508),

Gene: ApoKipo_70 Start: 40430, Stop: 42421, Start Num: 4
Candidate Starts for ApoKipo_70:
(Start: 4 @40430 has 9 MA's), (10, 40502), (15, 40553), (22, 40640), (25, 40679), (28, 40700), (29, 40706), (38, 40817), (42, 40841), (45, 40865), (59, 40955), (61, 40976), (63, 40988), (67, 41015), (73, 41090), (74, 41096), (84, 41186), (86, 41225), (102, 41348), (104, 41366), (107, 41378), (116, 41444), (123, 41486), (124, 41489), (132, 41609), (134, 41615), (150, 41828), (159, 41873), (165, 41957), (171, 42059), (173, 42113), (177, 42167), (180, 42197), (182, 42206), (185, 42275), (189, 42317), (192, 42383), (194, 42410),

Gene: Basilisk_17 Start: 13206, Stop: 14657, Start Num: 64
Candidate Starts for Basilisk_17:
(Start: 64 @13206 has 3 MA's), (69, 13260), (88, 13431), (89, 13446), (92, 13464), (97, 13512), (107, 13587), (114, 13644), (122, 13695), (131, 13803), (133, 13830), (135, 13866), (137, 13893), (138, 13899), (141, 13959), (143, 13983), (146, 14016), (147, 14034), (151, 14061), (157, 14085), (162, 14133), (164, 14142), (165, 14184), (168, 14235), (170, 14280), (174, 14349), (178, 14415), (179, 14430), (186, 14538), (187, 14544), (193, 14637),

Gene: Brynnie_17 Start: 13018, Stop: 14469, Start Num: 64
Candidate Starts for Brynnie_17:
(Start: 64 @13018 has 3 MA's), (69, 13072), (75, 13114), (88, 13243), (89, 13258), (92, 13276), (97, 13324), (107, 13399), (111, 13438), (114, 13456), (119, 13492), (122, 13507), (131, 13615), (133, 13642), (135, 13678), (137, 13705), (138, 13711), (141, 13771), (143, 13795), (146, 13828), (147, 13846), (151, 13873), (157, 13897), (162, 13945), (164, 13954), (165, 13996), (168, 14047), (170, 14092), (174, 14161), (178, 14227), (179, 14242), (186, 14350), (187, 14356), (193, 14449),

Gene: Chicken_17 Start: 12413, Stop: 14407, Start Num: 9
Candidate Starts for Chicken_17:
(Start: 9 @12413 has 8 MA's), (16, 12485), (34, 12686), (46, 12794), (47, 12797), (49, 12815), (58, 12875), (61, 12902), (62, 12911), (71, 12998), (80, 13058), (85, 13121), (90, 13187), (96, 13241), (99, 13268), (101, 13292), (102, 13295), (103, 13301), (109, 13343), (115, 13388), (118, 13409), (120, 13430), (121, 13436), (127, 13511), (128, 13514), (130, 13547), (135, 13616), (138, 13649), (143, 13733), (145, 13748), (146, 13766), (147, 13784), (151, 13811), (160, 13868), (161, 13877), (163, 13886), (164, 13892), (165, 13934), (174, 14099), (176, 14120), (178, 14165), (181, 14192), (184, 14267), (187, 14294), (191, 14327), (193, 14387),

Gene: Edmundo_68 Start: 40159, Stop: 42213, Start Num: 3
Candidate Starts for Edmundo_68:
(Start: 3 @40159 has 2 MA's), (7, 40204), (20, 40336), (21, 40357), (23, 40363), (26, 40408), (27, 40411), (31, 40453), (35, 40516), (36, 40528), (40, 40555), (53, 40657), (56, 40672), (68, 40777), (78, 40864), (82, 40936), (87, 40999), (94, 41053), (95, 41065), (98, 41092), (102, 41128), (103, 41134), (108, 41164), (120, 41260), (129, 41365), (132, 41407), (134, 41413), (140, 41521), (143, 41563), (150, 41629), (152, 41641), (159, 41674), (161, 41701), (164, 41716), (174, 41908), (176, 41929), (178, 41968), (180, 41989), (188, 42106), (190, 42115), (194, 42202),

Gene: Eesa_17 Start: 12627, Stop: 14621, Start Num: 9
Candidate Starts for Eesa_17:

(Start: 9 @12627 has 8 MA's), (34, 12900), (41, 12978), (43, 12984), (46, 13008), (47, 13011), (49, 13029), (53, 13059), (58, 13089), (71, 13212), (80, 13272), (90, 13401), (96, 13455), (99, 13482), (100, 13503), (101, 13506), (102, 13509), (106, 13536), (115, 13602), (120, 13644), (121, 13650), (127, 13725), (128, 13728), (130, 13761), (135, 13830), (138, 13863), (143, 13947), (145, 13962), (146, 13980), (147, 13998), (149, 14010), (156, 14046), (161, 14091), (163, 14100), (164, 14106), (165, 14148), (174, 14313), (176, 14334), (178, 14379), (181, 14406), (187, 14508), (191, 14541), (193, 14601),

Gene: Gravel_18 Start: 12533, Stop: 14527, Start Num: 9
Candidate Starts for Gravel_18:
(Start: 9 @12533 has 8 MA's), (34, 12806), (41, 12884), (46, 12914), (47, 12917), (49, 12935), (58, 12995), (71, 13118), (80, 13178), (90, 13307), (96, 13361), (99, 13388), (101, 13412), (102, 13415), (120, 13550), (121, 13556), (128, 13634), (129, 13655), (130, 13667), (135, 13736), (138, 13769), (143, 13853), (145, 13868), (146, 13886), (147, 13904), (155, 13949), (156, 13952), (161, 13997), (163, 14006), (164, 14012), (165, 14054), (174, 14219), (176, 14240), (178, 14285), (181, 14312), (183, 14372), (187, 14414), (191, 14447), (193, 14507),

Gene: KendraB23_18 Start: 12534, Stop: 14528, Start Num: 9
Candidate Starts for KendraB23_18:
(Start: 9 @12534 has 8 MA's), (34, 12807), (41, 12885), (46, 12915), (47, 12918), (49, 12936), (58, 12996), (71, 13119), (80, 13179), (90, 13308), (96, 13362), (99, 13389), (101, 13413), (102, 13416), (120, 13551), (121, 13557), (128, 13635), (129, 13656), (130, 13668), (135, 13737), (138, 13770), (143, 13854), (145, 13869), (146, 13887), (147, 13905), (155, 13950), (156, 13953), (161, 13998), (163, 14007), (164, 14013), (165, 14055), (174, 14220), (176, 14241), (178, 14286), (181, 14313), (187, 14415), (191, 14448), (193, 14508),

Gene: Kharcho_44 Start: 22045, Stop: 24006, Start Num: 4
Candidate Starts for Kharcho_44:
(1, 21937), (2, 21949), (Start: 4 @22045 has 9 MA's), (8, 22111), (22, 22252), (27, 22303), (33, 22378), (45, 22477), (56, 22546), (83, 22777), (107, 22969), (120, 23056), (122, 23065), (132, 23194), (136, 23251), (144, 23350), (153, 23428), (154, 23434), (159, 23458), (174, 23701), (175, 23719),

Gene: Kovu_66 Start: 40087, Stop: 42081, Start Num: 4
Candidate Starts for Kovu_66:
(Start: 4 @40087 has 9 MA's), (10, 40159), (22, 40297), (33, 40420), (38, 40474), (39, 40480), (40, 40483), (42, 40498), (50, 40546), (51, 40549), (52, 40555), (59, 40612), (63, 40645), (70, 40717), (72, 40744), (73, 40747), (74, 40753), (84, 40843), (104, 41023), (107, 41035), (110, 41065), (120, 41131), (123, 41146), (132, 41269), (134, 41275), (150, 41488), (159, 41533), (165, 41617), (171, 41719), (172, 41749), (173, 41773), (174, 41776), (177, 41827), (180, 41857), (185, 41935), (189, 41977), (192, 42043), (194, 42070),

Gene: Laroye_68 Start: 39550, Stop: 41604, Start Num: 4
Candidate Starts for Laroye_68:
(Start: 4 @39550 has 9 MA's), (5, 39556), (6, 39571), (7, 39595), (14, 39664), (17, 39691), (20, 39727), (21, 39748), (23, 39754), (26, 39799), (27, 39802), (31, 39844), (37, 39922), (40, 39946), (53, 40048), (56, 40063), (72, 40228), (78, 40255), (87, 40390), (91, 40423), (94, 40444), (95, 40456), (108, 40555), (112, 40597), (114, 40609), (117, 40630), (120, 40651), (132, 40798), (134, 40804), (135, 40837), (136, 40858), (139, 40879), (140, 40912), (143, 40954), (148, 41005), (159, 41065), (161, 41092), (164, 41107), (169, 41215), (174, 41299), (176, 41320), (188, 41497), (190, 41506), (194, 41593),

Gene: LiSara_65 Start: 39712, Stop: 41766, Start Num: 4
Candidate Starts for LiSara_65:

(Start: 4 @39712 has 9 MA's), (5, 39718), (6, 39733), (7, 39757), (14, 39826), (17, 39853), (20, 39889), (21, 39910), (23, 39916), (26, 39961), (27, 39964), (31, 40006), (37, 40084), (40, 40108), (53, 40210), (56, 40225), (72, 40390), (78, 40417), (87, 40552), (91, 40585), (94, 40606), (95, 40618), (108, 40717), (112, 40759), (114, 40771), (117, 40792), (120, 40813), (132, 40960), (134, 40966), (135, 40999), (136, 41020), (139, 41041), (140, 41074), (143, 41116), (148, 41167), (159, 41227), (161, 41254), (164, 41269), (169, 41377), (174, 41461), (176, 41482), (188, 41659), (190, 41668), (194, 41755),

Gene: Niblet_17 Start: 12413, Stop: 14407, Start Num: 9
Candidate Starts for Niblet_17:
(Start: 9 @12413 has 8 MA's), (16, 12485), (34, 12686), (46, 12794), (47, 12797), (49, 12815), (58, 12875), (61, 12902), (62, 12911), (71, 12998), (80, 13058), (85, 13121), (90, 13187), (96, 13241), (99, 13268), (101, 13292), (102, 13295), (103, 13301), (109, 13343), (115, 13388), (118, 13409), (120, 13430), (121, 13436), (127, 13511), (128, 13514), (130, 13547), (135, 13616), (138, 13649), (143, 13733), (145, 13748), (146, 13766), (147, 13784), (151, 13811), (160, 13868), (161, 13877), (163, 13886), (164, 13892), (165, 13934), (174, 14099), (176, 14120), (178, 14165), (181, 14192), (184, 14267), (187, 14294), (191, 14327), (193, 14387),

Gene: Orcanus_17 Start: 12327, Stop: 14321, Start Num: 9
Candidate Starts for Orcanus_17:
(Start: 9 @12327 has 8 MA's), (34, 12600), (41, 12678), (46, 12708), (47, 12711), (49, 12729), (58, 12789), (71, 12912), (80, 12972), (90, 13101), (96, 13155), (99, 13182), (101, 13206), (102, 13209), (120, 13344), (121, 13350), (128, 13428), (129, 13449), (130, 13461), (135, 13530), (138, 13563), (143, 13647), (145, 13662), (146, 13680), (147, 13698), (155, 13743), (156, 13746), (161, 13791), (163, 13800), (164, 13806), (165, 13848), (174, 14013), (176, 14034), (178, 14079), (181, 14106), (187, 14208), (191, 14241), (193, 14301),

Gene: Ottawa_44 Start: 22043, Stop: 24004, Start Num: 4
Candidate Starts for Ottawa_44:
(1, 21935), (2, 21947), (Start: 4 @22043 has 9 MA's), (8, 22109), (22, 22250), (27, 22301), (33, 22376), (45, 22475), (56, 22544), (83, 22775), (107, 22967), (120, 23054), (122, 23063), (132, 23192), (136, 23249), (144, 23348), (153, 23426), (154, 23432), (159, 23456), (174, 23699), (175, 23717),

Gene: Pelletreau_18 Start: 12533, Stop: 14527, Start Num: 9
Candidate Starts for Pelletreau_18:
(Start: 9 @12533 has 8 MA's), (34, 12806), (41, 12884), (46, 12914), (47, 12917), (49, 12935), (58, 12995), (71, 13118), (80, 13178), (90, 13307), (96, 13361), (99, 13388), (101, 13412), (102, 13415), (120, 13550), (121, 13556), (128, 13634), (129, 13655), (130, 13667), (135, 13736), (138, 13769), (143, 13853), (145, 13868), (146, 13886), (147, 13904), (155, 13949), (156, 13952), (161, 13997), (163, 14006), (164, 14012), (165, 14054), (174, 14219), (176, 14240), (178, 14285), (181, 14312), (183, 14372), (187, 14414), (191, 14447), (193, 14507),

Gene: Ruchi_17 Start: 13152, Stop: 14603, Start Num: 64
Candidate Starts for Ruchi_17:
(Start: 64 @13152 has 3 MA's), (69, 13206), (75, 13248), (88, 13377), (89, 13392), (92, 13410), (97, 13458), (107, 13533), (111, 13572), (114, 13590), (119, 13626), (122, 13641), (131, 13749), (133, 13776), (135, 13812), (137, 13839), (138, 13845), (141, 13905), (143, 13929), (146, 13962), (147, 13980), (151, 14007), (157, 14031), (162, 14079), (164, 14088), (165, 14130), (168, 14181), (170, 14226), (174, 14295), (178, 14361), (179, 14376), (186, 14484), (187, 14490), (193, 14583),

Gene: Salgado_68 Start: 39366, Stop: 41420, Start Num: 4
Candidate Starts for Salgado_68:
(Start: 4 @39366 has 9 MA's), (5, 39372), (6, 39387), (7, 39411), (14, 39480), (17, 39507), (20, 39543), (21, 39564), (23, 39570), (26, 39615), (27, 39618), (31, 39660), (37, 39738), (40, 39762), (53, 39864),

(56, 39879), (72, 40044), (78, 40071), (87, 40206), (91, 40239), (94, 40260), (95, 40272), (108, 40371), (112, 40413), (114, 40425), (117, 40446), (120, 40467), (132, 40614), (134, 40620), (135, 40653), (136, 40674), (139, 40695), (140, 40728), (143, 40770), (148, 40821), (159, 40881), (161, 40908), (164, 40923), (169, 41031), (174, 41115), (188, 41313), (190, 41322), (194, 41409),

Gene: Shen_18 Start: 12534, Stop: 14528, Start Num: 9
Candidate Starts for Shen_18:
(Start: 9 @12534 has 8 MA's), (34, 12807), (41, 12885), (46, 12915), (47, 12918), (49, 12936), (58, 12996), (71, 13119), (80, 13179), (90, 13308), (96, 13362), (99, 13389), (101, 13413), (102, 13416), (120, 13551), (121, 13557), (128, 13635), (129, 13656), (130, 13668), (135, 13737), (138, 13770), (143, 13854), (145, 13869), (146, 13887), (147, 13905), (155, 13950), (156, 13953), (161, 13998), (163, 14007), (164, 14013), (165, 14055), (174, 14220), (176, 14241), (178, 14286), (181, 14313), (183, 14373), (187, 14415), (191, 14448), (193, 14508),

Gene: Shrooms_66 Start: 37884, Stop: 39941, Start Num: 4
Candidate Starts for Shrooms_66:
(Start: 4 @37884 has 9 MA's), (7, 37929), (14, 37998), (23, 38088), (28, 38145), (31, 38178), (35, 38241), (40, 38280), (44, 38307), (49, 38343), (53, 38382), (56, 38397), (66, 38475), (77, 38580), (78, 38589), (91, 38757), (94, 38778), (95, 38790), (105, 38877), (108, 38889), (120, 38985), (123, 39000), (129, 39090), (132, 39132), (134, 39138), (135, 39171), (136, 39192), (139, 39213), (143, 39288), (144, 39291), (158, 39396), (159, 39399), (161, 39426), (162, 39432), (164, 39441), (167, 39525), (174, 39636), (178, 39696), (183, 39771), (184, 39786), (188, 39834), (194, 39930),

Gene: Toad24_18 Start: 12534, Stop: 14528, Start Num: 9
Candidate Starts for Toad24_18:
(Start: 9 @12534 has 8 MA's), (34, 12807), (41, 12885), (46, 12915), (47, 12918), (49, 12936), (58, 12996), (71, 13119), (80, 13179), (90, 13308), (96, 13362), (99, 13389), (101, 13413), (102, 13416), (120, 13551), (121, 13557), (128, 13635), (129, 13656), (130, 13668), (135, 13737), (138, 13770), (143, 13854), (145, 13869), (146, 13887), (147, 13905), (155, 13950), (156, 13953), (161, 13998), (163, 14007), (164, 14013), (165, 14055), (174, 14220), (176, 14241), (178, 14286), (181, 14313), (187, 14415), (191, 14448), (193, 14508),

Gene: Waltz_65 Start: 37882, Stop: 39954, Start Num: 4
Candidate Starts for Waltz_65:
(Start: 4 @37882 has 9 MA's), (Start: 9 @37951 has 8 MA's), (11, 37969), (13, 37990), (18, 38032), (19, 38053), (24, 38122), (30, 38167), (32, 38185), (33, 38215), (40, 38284), (46, 38326), (50, 38350), (55, 38389), (56, 38398), (57, 38416), (58, 38422), (65, 38476), (68, 38509), (74, 38578), (79, 38599), (93, 38767), (94, 38785), (95, 38797), (104, 38878), (108, 38896), (111, 38932), (112, 38938), (114, 38950), (120, 38992), (124, 39010), (126, 39076), (132, 39145), (134, 39151), (135, 39184), (136, 39205), (139, 39226), (142, 39286), (143, 39301), (144, 39304), (146, 39334), (149, 39361), (158, 39409), (159, 39412), (161, 39439), (164, 39454), (167, 39538), (174, 39649), (178, 39709), (183, 39784), (184, 39799), (188, 39847), (194, 39943),

Gene: Westrich_18 Start: 12522, Stop: 14516, Start Num: 9
Candidate Starts for Westrich_18:
(Start: 9 @12522 has 8 MA's), (34, 12795), (41, 12873), (46, 12903), (47, 12906), (49, 12924), (58, 12984), (71, 13107), (76, 13131), (80, 13167), (90, 13296), (96, 13350), (99, 13377), (101, 13401), (102, 13404), (113, 13491), (120, 13539), (121, 13545), (128, 13623), (129, 13644), (130, 13656), (135, 13725), (138, 13758), (143, 13842), (145, 13857), (146, 13875), (147, 13893), (155, 13938), (156, 13941), (161, 13986), (163, 13995), (164, 14001), (165, 14043), (174, 14208), (176, 14229), (178, 14274), (181, 14301), (183, 14361), (187, 14403), (191, 14436), (193, 14496),

Gene: Wheelbite_64 Start: 39523, Stop: 41577, Start Num: 3

Candidate Starts for Wheelbite_64:
(Start: 3 @39523 has 2 MA's), (7, 39568), (12, 39613), (14, 39637), (17, 39664), (20, 39700), (21, 39721), (23, 39727), (28, 39784), (31, 39817), (35, 39880), (40, 39919), (48, 39979), (53, 40021), (54, 40024), (56, 40036), (60, 40075), (66, 40114), (78, 40228), (81, 40270), (82, 40300), (87, 40363), (94, 40417), (95, 40429), (98, 40456), (102, 40492), (103, 40498), (108, 40528), (117, 40603), (120, 40624), (125, 40654), (129, 40729), (132, 40771), (134, 40777), (135, 40810), (136, 40831), (140, 40885), (143, 40927), (148, 40978), (159, 41038), (161, 41065), (164, 41080), (166, 41119), (174, 41272), (180, 41353), (183, 41407), (188, 41470), (190, 41479), (194, 41566),

Gene: Zixiang_17 Start: 12413, Stop: 14407, Start Num: 9
Candidate Starts for Zixiang_17:
(Start: 9 @12413 has 8 MA's), (16, 12485), (34, 12686), (46, 12794), (47, 12797), (49, 12815), (58, 12875), (61, 12902), (62, 12911), (71, 12998), (80, 13058), (85, 13121), (90, 13187), (96, 13241), (99, 13268), (101, 13292), (102, 13295), (103, 13301), (109, 13343), (115, 13388), (118, 13409), (120, 13430), (121, 13436), (127, 13511), (128, 13514), (130, 13547), (135, 13616), (138, 13649), (143, 13733), (145, 13748), (146, 13766), (147, 13784), (151, 13811), (160, 13868), (161, 13877), (163, 13886), (164, 13892), (165, 13934), (174, 14099), (176, 14120), (178, 14165), (181, 14192), (184, 14267), (187, 14294), (191, 14327), (193, 14387),