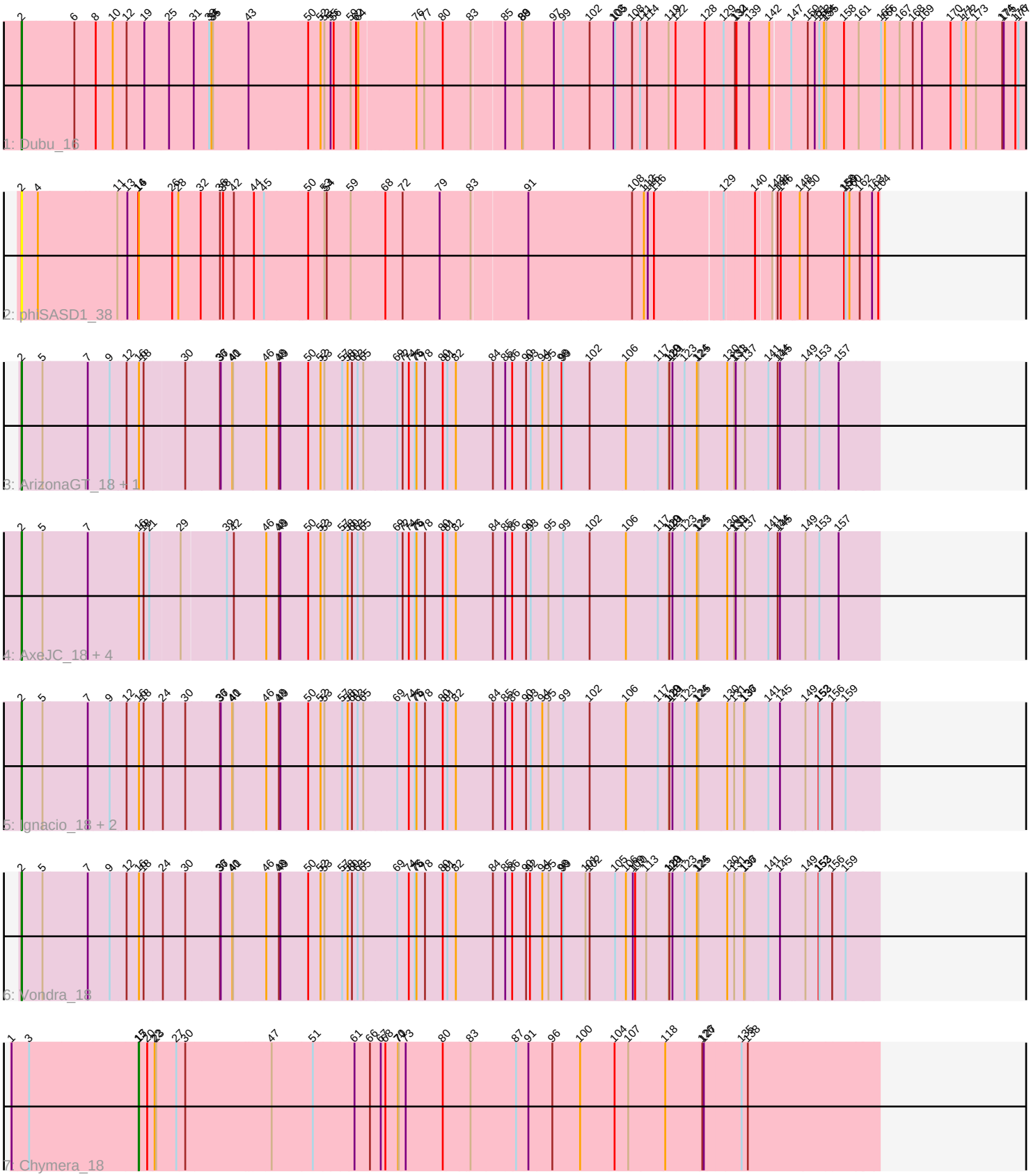
Pham 348170


1: Dubu_16
2: phiSASD1_38
3: ArizonaGT_18 + 1
4: AxeJC_18 + 4
5: Ignacio_18 + 2
6: Vondra_18
7: Chymera_18

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 348170 Report

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

Pham number 348170 has 14 members, 1 are drafts.

Phages represented in each track:
• Track 1 : Dubu_16
• Track 2 : phiSASD1_38
• Track 3 : ArizonaGT_18, Cumberbatch_18
• Track 4 : AxeJC_18, FrumpyGal_18, Eastland_18, Piccadilly_18, Eklok_18
• Track 5 : Ignacio_18, HFrancette_18, Schlegelian_18
• Track 6 : Vondra_18
• Track 7 : Chymera_18

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

The start number called the most often in the published annotations is 2, it was called in 12 of the 13 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ArizonaGT_18, AxeJC_18, Cumberbatch_18, Dubu_16, Eastland_18, Eklok_18, FrumpyGal_18, HFrancette_18, Ignacio_18, Piccadilly_18, Schlegelian_18, Vondra_18, phiSASD1_38,

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

Genes that do not have the "Most Annotated" start:
• Chymera_18,

Summary by start number:

Start 2:
• Found in 13 of 14 (92.9%) of genes in pham
• Manual Annotations of this start: 12 of 13
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ArizonaGT_18 (BP), AxeJC_18 (BP), Cumberbatch_18 (BP), Dubu_16 (BJ), Eastland_18 (BP), Eklok_18 (BP), FrumpyGal_18 (BP), HFrancette_18 (BP), Ignacio_18 (BP), Piccadilly_18 (BP), Schlegelian_18 (BP), Vondra_18 (BP), phiSASD1_38 (BJ),

Start 15:
• Found in 1 of 14 (7.1%) of genes in pham
• Manual Annotations of this start: 1 of 13
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chymera_18 (singleton),

Summary by clusters:

There are 3 clusters represented in this pham: singleton, BP, BJ,

Info for manual annotations of cluster BJ:
•Start number 2 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster BP:
•Start number 2 was manually annotated 11 times for cluster BP.

Gene Information:

Gene: ArizonaGT_18 Start: 13326, Stop: 16589, Start Num: 2
Candidate Starts for ArizonaGT_18:
(Start: 2 @13326 has 12 MA's), (5, 13404), (7, 13578), (9, 13659), (12, 13722), (16, 13767), (18, 13785), (30, 13938), (36, 14070), (37, 14073), (40, 14118), (41, 14121), (46, 14247), (48, 14295), (49, 14301), (50, 14409), (52, 14457), (53, 14472), (57, 14541), (58, 14562), (60, 14577), (63, 14598), (65, 14619), (69, 14742), (72, 14763), (74, 14787), (75, 14811), (76, 14817), (78, 14847), (80, 14916), (81, 14934), (82, 14967), (84, 15111), (85, 15159), (86, 15186), (90, 15240), (93, 15258), (94, 15303), (95, 15327), (98, 15378), (99, 15384), (102, 15486), (106, 15621), (117, 15744), (119, 15786), (120, 15789), (121, 15801), (123, 15846), (124, 15894), (125, 15900), (130, 16011), (131, 16038), (133, 16044), (137, 16080), (141, 16170), (144, 16206), (145, 16215), (149, 16311), (153, 16362), (157, 16434),

Gene: AxeJC_18 Start: 13340, Stop: 16588, Start Num: 2
Candidate Starts for AxeJC_18:
(Start: 2 @13340 has 12 MA's), (5, 13418), (7, 13592), (16, 13784), (18, 13802), (21, 13823), (29, 13931), (39, 14093), (42, 14120), (46, 14246), (48, 14294), (49, 14300), (50, 14408), (52, 14456), (53, 14471), (57, 14540), (58, 14561), (60, 14576), (63, 14597), (65, 14618), (69, 14741), (72, 14762), (74, 14786), (75, 14810), (76, 14816), (78, 14846), (80, 14915), (81, 14933), (82, 14966), (84, 15110), (85, 15158), (86, 15185), (90, 15239), (93, 15257), (95, 15326), (99, 15383), (102, 15485), (106, 15620), (117, 15743), (119, 15785), (120, 15788), (121, 15800), (123, 15845), (124, 15893), (125, 15899), (130, 16010), (131, 16037), (133, 16043), (137, 16079), (141, 16169), (144, 16205), (145, 16214), (149, 16310), (153, 16361), (157, 16433),

Gene: Chymera_18 Start: 12990, Stop: 15758, Start Num: 15
Candidate Starts for Chymera_18:
(1, 12510), (3, 12576), (Start: 15 @12990 has 1 MA's), (17, 12993), (20, 13023), (22, 13050), (23, 13056), (27, 13134), (30, 13167), (47, 13488), (51, 13647), (61, 13803), (66, 13863), (67, 13905), (68, 13923), (70, 13968), (71, 13971), (73, 13995), (80, 14136), (83, 14238), (87, 14406), (91, 14448), (96, 14538), (100, 14646), (104, 14775), (107, 14823), (118, 14958), (126, 15096), (127, 15102), (135, 15240), (138, 15264),

Gene: Cumberbatch_18 Start: 13326, Stop: 16589, Start Num: 2

Candidate Starts for Cumberbatch_18:
(Start: 2 @13326 has 12 MA's), (5, 13404), (7, 13578), (9, 13659), (12, 13722), (16, 13767), (18, 13785), (30, 13938), (36, 14070), (37, 14073), (40, 14118), (41, 14121), (46, 14247), (48, 14295), (49, 14301), (50, 14409), (52, 14457), (53, 14472), (57, 14541), (58, 14562), (60, 14577), (63, 14598), (65, 14619), (69, 14742), (72, 14763), (74, 14787), (75, 14811), (76, 14817), (78, 14847), (80, 14916), (81, 14934), (82, 14967), (84, 15111), (85, 15159), (86, 15186), (90, 15240), (93, 15258), (94, 15303), (95, 15327), (98, 15378), (99, 15384), (102, 15486), (106, 15621), (117, 15744), (119, 15786), (120, 15789), (121, 15801), (123, 15846), (124, 15894), (125, 15900), (130, 16011), (131, 16038), (133, 16044), (137, 16080), (141, 16170), (144, 16206), (145, 16215), (149, 16311), (153, 16362), (157, 16434),

Gene: Dubu_16 Start: 11016, Stop: 14837, Start Num: 2
Candidate Starts for Dubu_16:
(Start: 2 @11016 has 12 MA's), (6, 11208), (8, 11289), (10, 11355), (12, 11406), (19, 11475), (25, 11568), (31, 11664), (33, 11724), (34, 11733), (35, 11739), (43, 11877), (50, 12105), (52, 12153), (53, 12168), (55, 12192), (56, 12204), (59, 12270), (62, 12291), (64, 12300), (76, 12510), (77, 12540), (80, 12612), (83, 12711), (85, 12828), (88, 12894), (89, 12897), (97, 13017), (99, 13053), (102, 13152), (103, 13245), (105, 13251), (108, 13317), (111, 13347), (114, 13374), (119, 13458), (122, 13485), (128, 13596), (129, 13659), (132, 13701), (134, 13707), (139, 13752), (142, 13821), (147, 13890), (150, 13947), (151, 13971), (153, 13989), (154, 14007), (155, 14016), (158, 14085), (161, 14142), (165, 14229), (166, 14244), (167, 14301), (168, 14352), (169, 14388), (170, 14499), (171, 14541), (172, 14559), (173, 14598), (174, 14700), (175, 14706), (176, 14751), (177, 14763),

Gene: Eastland_18 Start: 13325, Stop: 16573, Start Num: 2
Candidate Starts for Eastland_18:
(Start: 2 @13325 has 12 MA's), (5, 13403), (7, 13577), (16, 13769), (18, 13787), (21, 13808), (29, 13916), (39, 14078), (42, 14105), (46, 14231), (48, 14279), (49, 14285), (50, 14393), (52, 14441), (53, 14456), (57, 14525), (58, 14546), (60, 14561), (63, 14582), (65, 14603), (69, 14726), (72, 14747), (74, 14771), (75, 14795), (76, 14801), (78, 14831), (80, 14900), (81, 14918), (82, 14951), (84, 15095), (85, 15143), (86, 15170), (90, 15224), (93, 15242), (95, 15311), (99, 15368), (102, 15470), (106, 15605), (117, 15728), (119, 15770), (120, 15773), (121, 15785), (123, 15830), (124, 15878), (125, 15884), (130, 15995), (131, 16022), (133, 16028), (137, 16064), (141, 16154), (144, 16190), (145, 16199), (149, 16295), (153, 16346), (157, 16418),

Gene: Eklok_18 Start: 13340, Stop: 16588, Start Num: 2
Candidate Starts for Eklok_18:
(Start: 2 @13340 has 12 MA's), (5, 13418), (7, 13592), (16, 13784), (18, 13802), (21, 13823), (29, 13931), (39, 14093), (42, 14120), (46, 14246), (48, 14294), (49, 14300), (50, 14408), (52, 14456), (53, 14471), (57, 14540), (58, 14561), (60, 14576), (63, 14597), (65, 14618), (69, 14741), (72, 14762), (74, 14786), (75, 14810), (76, 14816), (78, 14846), (80, 14915), (81, 14933), (82, 14966), (84, 15110), (85, 15158), (86, 15185), (90, 15239), (93, 15257), (95, 15326), (99, 15383), (102, 15485), (106, 15620), (117, 15743), (119, 15785), (120, 15788), (121, 15800), (123, 15845), (124, 15893), (125, 15899), (130, 16010), (131, 16037), (133, 16043), (137, 16079), (141, 16169), (144, 16205), (145, 16214), (149, 16310), (153, 16361), (157, 16433),

Gene: FrumpyGal_18 Start: 13325, Stop: 16573, Start Num: 2
Candidate Starts for FrumpyGal_18:
(Start: 2 @13325 has 12 MA's), (5, 13403), (7, 13577), (16, 13769), (18, 13787), (21, 13808), (29, 13916), (39, 14078), (42, 14105), (46, 14231), (48, 14279), (49, 14285), (50, 14393), (52, 14441), (53, 14456), (57, 14525), (58, 14546), (60, 14561), (63, 14582), (65, 14603), (69, 14726), (72, 14747), (74, 14771), (75, 14795), (76, 14801), (78, 14831), (80, 14900), (81, 14918), (82, 14951), (84, 15095), (85, 15143), (86, 15170), (90, 15224), (93, 15242), (95, 15311), (99, 15368), (102, 15470), (106, 15605), (117, 15728), (119, 15770), (120, 15773), (121, 15785), (123, 15830), (124, 15878), (125, 15884),

(130, 15995), (131, 16022), (133, 16028), (137, 16064), (141, 16154), (144, 16190), (145, 16199), (149, 16295), (153, 16346), (157, 16418),

Gene: HFrancette_18 Start: 13339, Stop: 16602, Start Num: 2
Candidate Starts for HFrancette_18:
(Start: 2 @13339 has 12 MA's), (5, 13417), (7, 13591), (9, 13672), (12, 13735), (16, 13780), (18, 13798), (24, 13864), (30, 13951), (36, 14083), (37, 14086), (40, 14131), (41, 14134), (46, 14260), (48, 14308), (49, 14314), (50, 14422), (52, 14470), (53, 14485), (57, 14554), (58, 14575), (60, 14590), (63, 14611), (65, 14632), (69, 14755), (74, 14800), (75, 14824), (76, 14830), (78, 14860), (80, 14929), (81, 14947), (82, 14980), (84, 15124), (85, 15172), (86, 15199), (90, 15253), (93, 15271), (94, 15316), (95, 15340), (99, 15397), (102, 15499), (106, 15634), (117, 15757), (119, 15799), (120, 15802), (121, 15814), (123, 15859), (124, 15907), (125, 15913), (130, 16024), (131, 16051), (136, 16090), (137, 16093), (141, 16183), (145, 16228), (149, 16324), (152, 16372), (153, 16375), (156, 16423), (159, 16474),

Gene: Ignacio_18 Start: 13339, Stop: 16602, Start Num: 2
Candidate Starts for Ignacio_18:
(Start: 2 @13339 has 12 MA's), (5, 13417), (7, 13591), (9, 13672), (12, 13735), (16, 13780), (18, 13798), (24, 13864), (30, 13951), (36, 14083), (37, 14086), (40, 14131), (41, 14134), (46, 14260), (48, 14308), (49, 14314), (50, 14422), (52, 14470), (53, 14485), (57, 14554), (58, 14575), (60, 14590), (63, 14611), (65, 14632), (69, 14755), (74, 14800), (75, 14824), (76, 14830), (78, 14860), (80, 14929), (81, 14947), (82, 14980), (84, 15124), (85, 15172), (86, 15199), (90, 15253), (93, 15271), (94, 15316), (95, 15340), (99, 15397), (102, 15499), (106, 15634), (117, 15757), (119, 15799), (120, 15802), (121, 15814), (123, 15859), (124, 15907), (125, 15913), (130, 16024), (131, 16051), (136, 16090), (137, 16093), (141, 16183), (145, 16228), (149, 16324), (152, 16372), (153, 16375), (156, 16423), (159, 16474),

Gene: Piccadilly_18 Start: 13324, Stop: 16572, Start Num: 2
Candidate Starts for Piccadilly_18:
(Start: 2 @13324 has 12 MA's), (5, 13402), (7, 13576), (16, 13768), (18, 13786), (21, 13807), (29, 13915), (39, 14077), (42, 14104), (46, 14230), (48, 14278), (49, 14284), (50, 14392), (52, 14440), (53, 14455), (57, 14524), (58, 14545), (60, 14560), (63, 14581), (65, 14602), (69, 14725), (72, 14746), (74, 14770), (75, 14794), (76, 14800), (78, 14830), (80, 14899), (81, 14917), (82, 14950), (84, 15094), (85, 15142), (86, 15169), (90, 15223), (93, 15241), (95, 15310), (99, 15367), (102, 15469), (106, 15604), (117, 15727), (119, 15769), (120, 15772), (121, 15784), (123, 15829), (124, 15877), (125, 15883), (130, 15994), (131, 16021), (133, 16027), (137, 16063), (141, 16153), (144, 16189), (145, 16198), (149, 16294), (153, 16345), (157, 16417),

Gene: Schlegelian_18 Start: 13324, Stop: 16587, Start Num: 2
Candidate Starts for Schlegelian_18:
(Start: 2 @13324 has 12 MA's), (5, 13402), (7, 13576), (9, 13657), (12, 13720), (16, 13765), (18, 13783), (24, 13849), (30, 13936), (36, 14068), (37, 14071), (40, 14116), (41, 14119), (46, 14245), (48, 14293), (49, 14299), (50, 14407), (52, 14455), (53, 14470), (57, 14539), (58, 14560), (60, 14575), (63, 14596), (65, 14617), (69, 14740), (74, 14785), (75, 14809), (76, 14815), (78, 14845), (80, 14914), (81, 14932), (82, 14965), (84, 15109), (85, 15157), (86, 15184), (90, 15238), (93, 15256), (94, 15301), (95, 15325), (99, 15382), (102, 15484), (106, 15619), (117, 15742), (119, 15784), (120, 15787), (121, 15799), (123, 15844), (124, 15892), (125, 15898), (130, 16009), (131, 16036), (136, 16075), (137, 16078), (141, 16168), (145, 16213), (149, 16309), (152, 16357), (153, 16360), (156, 16408), (159, 16459),

Gene: Vondra_18 Start: 13338, Stop: 16601, Start Num: 2
Candidate Starts for Vondra_18:

(Start: 2 @13338 has 12 MA's), (5, 13416), (7, 13590), (9, 13671), (12, 13734), (16, 13779), (18, 13797), (24, 13863), (30, 13950), (36, 14082), (37, 14085), (40, 14130), (41, 14133), (46, 14259), (48, 14307), (49, 14313), (50, 14421), (52, 14469), (53, 14484), (57, 14553), (58, 14574), (60, 14589), (63, 14610), (65, 14631), (69, 14754), (74, 14799), (75, 14823), (76, 14829), (78, 14859), (80, 14928), (81, 14946), (82, 14979), (84, 15123), (85, 15171), (86, 15198), (90, 15252), (92, 15267), (94, 15315), (95, 15339), (98, 15390), (99, 15396), (101, 15483), (102, 15498), (105, 15597), (106, 15633), (109, 15660), (110, 15669), (113, 15711), (119, 15798), (120, 15801), (121, 15813), (123, 15858), (124, 15906), (125, 15912), (130, 16023), (131, 16050), (136, 16089), (137, 16092), (141, 16182), (145, 16227), (149, 16323), (152, 16371), (153, 16374), (156, 16422), (159, 16473),

Gene: phiSASD1_38 Start: 11644, Stop: 14799, Start Num: 2
Candidate Starts for phiSASD1_38:
(Start: 2 @11644 has 12 MA's), (4, 11698), (11, 12004), (13, 12040), (14, 12076), (16, 12079), (26, 12208), (28, 12232), (32, 12316), (36, 12391), (38, 12403), (42, 12445), (44, 12523), (45, 12562), (50, 12730), (53, 12793), (54, 12802), (59, 12895), (68, 13027), (72, 13093), (79, 13228), (83, 13339), (91, 13546), (108, 13945), (112, 13990), (115, 14005), (116, 14029), (129, 14266), (140, 14356), (143, 14410), (144, 14419), (146, 14431), (148, 14500), (150, 14530), (158, 14665), (159, 14671), (160, 14686), (162, 14725), (163, 14770), (164, 14794),