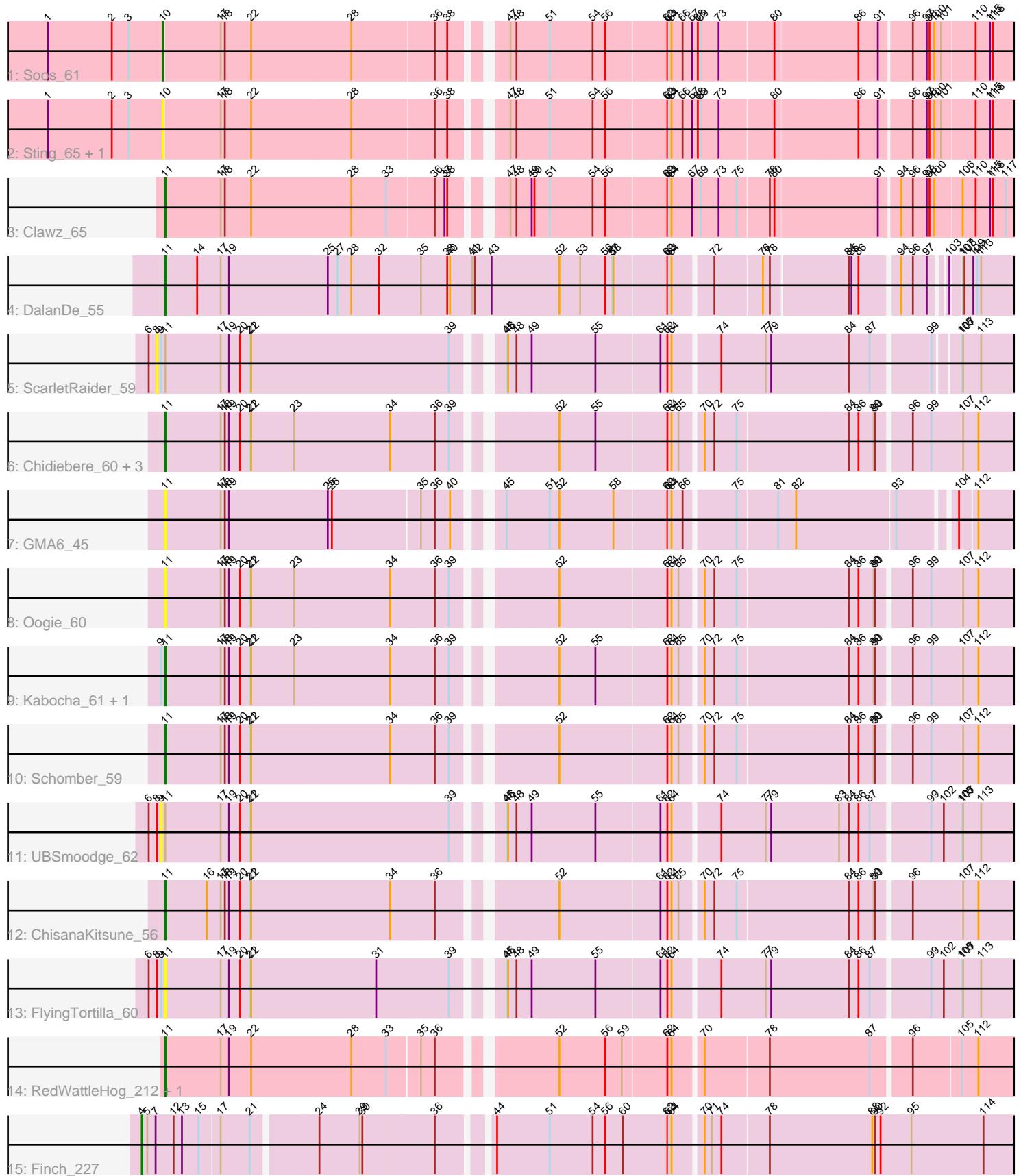


Zoomed Pham 5603



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 5603 Report

This analysis was run 04/05/24 on database version 557.

Pham number 5603 has 21 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Soos_61
- Track 2 : Sting_65, DonTron_65
- Track 3 : Clawz_65
- Track 4 : DalanDe_55
- Track 5 : ScarletRaider_59
- Track 6 : Chidiebere_60, Pakusa_58, Aloki_58, Hanem_60
- Track 7 : GMA6_45
- Track 8 : Oogie_60
- Track 9 : Kabocha_61, Gray_60
- Track 10 : Schomber_59
- Track 11 : UBSmoodge_62
- Track 12 : ChisanaKitsune_56
- Track 13 : FlyingTortilla_60
- Track 14 : RedWattleHog_212, Stormageddon_213
- Track 15 : Finch_227

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

The start number called the most often in the published annotations is 11, it was called in 10 of the 12 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aloki_58, Chidiebere_60, ChisanaKitsune_56, Clawz_65, DalanDe_55, FlyingTortilla_60, GMA6_45, Gray_60, Hanem_60, Kabocha_61, Oogie_60, Pakusa_58, RedWattleHog_212, Schomber_59, Stormageddon_213,

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

- ScarletRaider_59, UBSmoodge_62,

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

- DonTron_65, Finch_227, Soos_61, Sting_65,

Summary by start number:

Start 4:

- Found in 1 of 21 (4.8%) of genes in pham
- Manual Annotations of this start: 1 of 12
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Finch_227 (singleton),

Start 8:

- Found in 3 of 21 (14.3%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: ScarletRaider_59 (DQ),

Start 9:

- Found in 5 of 21 (23.8%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: UBSmoodge_62 (DQ),

Start 10:

- Found in 3 of 21 (14.3%) of genes in pham
- Manual Annotations of this start: 1 of 12
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonTron_65 (CP), Soos_61 (CP), Sting_65 (CP),

Start 11:

- Found in 17 of 21 (81.0%) of genes in pham
- Manual Annotations of this start: 10 of 12
- Called 88.2% of time when present
- Phage (with cluster) where this start called: Aloki_58 (DQ), Chidiebere_60 (DQ), ChisanaKitsune_56 (DQ), Clawz_65 (CP), DalanDe_55 (DQ), FlyingTortilla_60 (DQ), GMA6_45 (DQ), Gray_60 (DQ), Hanem_60 (DQ), Kabocha_61 (DQ), Oogie_60 (DQ), Pakusa_58 (DQ), RedWattleHog_212 (DX), Schomber_59 (DQ), Stormageddon_213 (DX),

Summary by clusters:

There are 4 clusters represented in this pham: singleton, CP, DX, DQ,

Info for manual annotations of cluster CP:

- Start number 10 was manually annotated 1 time for cluster CP.
- Start number 11 was manually annotated 1 time for cluster CP.

Info for manual annotations of cluster DQ:

- Start number 11 was manually annotated 7 times for cluster DQ.

Info for manual annotations of cluster DX:

- Start number 11 was manually annotated 2 times for cluster DX.

Gene Information:

Gene: Aloki_58 Start: 46748, Stop: 49939, Start Num: 11

Candidate Starts for Aloki_58:

(Start: 11 @46748 has 10 MA's), (17, 46868), (18, 46877), (19, 46886), (20, 46910), (21, 46931), (22, 46934), (23, 47027), (34, 47234), (36, 47330), (39, 47360), (52, 47543), (55, 47621), (62, 47768), (64, 47777), (65, 47792), (70, 47834), (72, 47855), (75, 47903), (84, 48137), (86, 48158), (89, 48191), (90, 48194), (96, 48257), (99, 48296), (107, 48362), (112, 48389), (119, 48476), (121, 48500), (126, 48581), (134, 48644), (142, 48740), (143, 48746), (151, 48893), (153, 48905), (163, 49010), (169, 49079), (170, 49082), (173, 49097), (174, 49109), (180, 49211), (181, 49226), (182, 49229), (183, 49247), (184, 49259), (185, 49262), (186, 49265), (199, 49427), (207, 49604), (213, 49685), (214, 49706), (215, 49721), (221, 49850), (223, 49892),

Gene: Chidiebere_60 Start: 46748, Stop: 49939, Start Num: 11

Candidate Starts for Chidiebere_60:

(Start: 11 @46748 has 10 MA's), (17, 46868), (18, 46877), (19, 46886), (20, 46910), (21, 46931), (22, 46934), (23, 47027), (34, 47234), (36, 47330), (39, 47360), (52, 47543), (55, 47621), (62, 47768), (64, 47777), (65, 47792), (70, 47834), (72, 47855), (75, 47903), (84, 48137), (86, 48158), (89, 48191), (90, 48194), (96, 48257), (99, 48296), (107, 48362), (112, 48389), (119, 48476), (121, 48500), (126, 48581), (134, 48644), (142, 48740), (143, 48746), (151, 48893), (153, 48905), (163, 49010), (169, 49079), (170, 49082), (173, 49097), (174, 49109), (180, 49211), (181, 49226), (182, 49229), (183, 49247), (184, 49259), (185, 49262), (186, 49265), (199, 49427), (207, 49604), (213, 49685), (214, 49706), (215, 49721), (221, 49850), (223, 49892),

Gene: ChisanaKitsune_56 Start: 45542, Stop: 48733, Start Num: 11

Candidate Starts for ChisanaKitsune_56:

(Start: 11 @45542 has 10 MA's), (16, 45632), (17, 45662), (18, 45671), (19, 45680), (20, 45704), (21, 45725), (22, 45728), (34, 46028), (36, 46124), (52, 46337), (61, 46547), (62, 46562), (64, 46571), (65, 46586), (70, 46628), (72, 46649), (75, 46697), (84, 46931), (86, 46952), (89, 46985), (90, 46988), (96, 47051), (107, 47156), (112, 47183), (119, 47270), (121, 47294), (126, 47375), (134, 47438), (142, 47534), (143, 47540), (151, 47687), (153, 47699), (163, 47804), (169, 47873), (170, 47876), (173, 47891), (174, 47903), (180, 48005), (181, 48020), (182, 48023), (183, 48041), (184, 48053), (185, 48056), (186, 48059), (199, 48221), (207, 48398), (213, 48479), (214, 48500), (215, 48515), (221, 48644), (223, 48686),

Gene: Clawz_65 Start: 41660, Stop: 44431, Start Num: 11

Candidate Starts for Clawz_65:

(Start: 11 @41660 has 10 MA's), (17, 41780), (18, 41789), (22, 41846), (28, 42062), (33, 42137), (36, 42236), (37, 42257), (38, 42263), (47, 42350), (48, 42359), (49, 42392), (50, 42398), (51, 42431), (54, 42524), (56, 42551), (62, 42677), (63, 42680), (64, 42686), (67, 42731), (69, 42749), (73, 42788), (75, 42827), (78, 42890), (80, 42896), (91, 43112), (94, 43151), (96, 43175), (97, 43205), (98, 43211), (100, 43220), (106, 43274), (110, 43298), (115, 43325), (116, 43331), (117, 43358), (118, 43385), (129, 43520), (134, 43556), (135, 43568), (137, 43574), (138, 43598), (144, 43703), (147, 43736), (149, 43778), (152, 43808), (155, 43820), (160, 43880), (162, 43913), (166, 43943), (168, 43979), (171, 43988), (172, 43991), (175, 44012), (176, 44030), (177, 44048), (180, 44111), (191, 44198), (194, 44234),

Gene: DalanDe_55 Start: 49671, Stop: 52865, Start Num: 11

Candidate Starts for DalanDe_55:

(Start: 11 @49671 has 10 MA's), (14, 49740), (17, 49791), (19, 49809), (25, 50022), (27, 50043), (28, 50073), (32, 50133), (35, 50223), (38, 50280), (40, 50286), (41, 50334), (42, 50340), (43, 50376), (52, 50517), (53, 50562), (56, 50616), (57, 50631), (58, 50634), (62, 50742), (63, 50745), (64, 50751), (72, 50829), (76, 50928), (78, 50943), (84, 51099), (85, 51105), (86, 51120), (94, 51195), (96, 51219), (97, 51249), (103, 51276), (107, 51291), (108, 51294), (109, 51309), (111, 51315), (113, 51324), (127, 51513), (130, 51546), (134, 51573), (142, 51669), (143, 51675), (146, 51747), (148, 51798), (154,

51846), (158, 51882), (162, 51948), (164, 51957), (170, 52023), (180, 52152), (182, 52170), (184, 52200), (185, 52203), (188, 52227), (193, 52281), (199, 52368), (200, 52374), (205, 52488), (208, 52548), (210, 52578), (212, 52623), (214, 52647), (215, 52662), (216, 52719), (217, 52728), (219, 52767), (223, 52833),

Gene: DonTron_65 Start: 41893, Stop: 44667, Start Num: 10

Candidate Starts for DonTron_65:

(1, 41644), (2, 41782), (3, 41818), (Start: 10 @41893 has 1 MA's), (17, 42013), (18, 42022), (22, 42079), (28, 42295), (36, 42469), (38, 42496), (47, 42583), (48, 42592), (51, 42664), (54, 42757), (56, 42784), (62, 42910), (63, 42913), (64, 42919), (66, 42943), (67, 42964), (68, 42976), (69, 42982), (73, 43021), (80, 43129), (86, 43303), (91, 43345), (96, 43408), (97, 43438), (98, 43444), (100, 43453), (101, 43468), (110, 43531), (115, 43558), (116, 43564), (134, 43789), (135, 43801), (138, 43831), (144, 43936), (147, 43969), (149, 44011), (152, 44041), (157, 44074), (160, 44116), (166, 44179), (172, 44227), (175, 44248), (179, 44344), (185, 44392), (189, 44431), (191, 44434), (203, 44572),

Gene: Finch_227 Start: 135487, Stop: 138330, Start Num: 4

Candidate Starts for Finch_227:

(Start: 4 @135487 has 1 MA's), (5, 135499), (7, 135517), (12, 135556), (13, 135574), (15, 135610), (17, 135652), (21, 135712), (24, 135844), (29, 135931), (30, 135937), (36, 136090), (44, 136189), (51, 136300), (54, 136393), (56, 136420), (60, 136459), (62, 136555), (63, 136558), (64, 136564), (70, 136621), (71, 136636), (74, 136657), (78, 136756), (88, 136978), (90, 136984), (92, 136996), (95, 137062), (114, 137218), (120, 137308), (124, 137350), (128, 137422), (129, 137434), (131, 137449), (136, 137485), (140, 137536), (162, 137827), (165, 137857), (181, 138043), (190, 138118), (192, 138136), (197, 138196), (198, 138223), (202, 138253),

Gene: FlyingTortilla_60 Start: 50367, Stop: 53561, Start Num: 11

Candidate Starts for FlyingTortilla_60:

(6, 50334), (8, 50352), (9, 50361), (Start: 11 @50367 has 10 MA's), (17, 50487), (19, 50505), (20, 50529), (21, 50550), (22, 50553), (31, 50823), (39, 50979), (45, 51054), (46, 51057), (48, 51072), (49, 51102), (55, 51240), (61, 51372), (62, 51387), (64, 51396), (74, 51489), (77, 51585), (79, 51597), (84, 51762), (86, 51783), (87, 51807), (99, 51921), (102, 51945), (105, 51981), (107, 51984), (113, 52017), (126, 52203), (137, 52284), (153, 52527), (162, 52629), (169, 52701), (184, 52881), (185, 52884), (187, 52899), (199, 53049), (213, 53304), (214, 53325), (215, 53340), (217, 53406), (221, 53469), (223, 53511),

Gene: GMA6_45 Start: 38130, Stop: 41393, Start Num: 11

Candidate Starts for GMA6_45:

(Start: 11 @38130 has 10 MA's), (17, 38250), (18, 38259), (19, 38268), (25, 38481), (26, 38490), (35, 38673), (36, 38703), (40, 38736), (45, 38808), (51, 38895), (52, 38916), (58, 39033), (62, 39141), (63, 39144), (64, 39150), (66, 39174), (75, 39276), (81, 39357), (82, 39396), (93, 39606), (104, 39708), (112, 39738), (122, 39849), (123, 39864), (126, 39906), (132, 39957), (139, 40014), (141, 40059), (145, 40122), (150, 40185), (156, 40227), (159, 40269), (161, 40293), (167, 40353), (178, 40464), (182, 40536), (184, 40566), (185, 40569), (196, 40692), (199, 40734), (206, 40878), (209, 40926), (211, 40959), (212, 40986), (218, 41124), (220, 41151), (222, 41175), (223, 41196), (224, 41235), (225, 41292), (226, 41352),

Gene: Gray_60 Start: 46749, Stop: 49940, Start Num: 11

Candidate Starts for Gray_60:

(9, 46743), (Start: 11 @46749 has 10 MA's), (17, 46869), (18, 46878), (19, 46887), (20, 46911), (21, 46932), (22, 46935), (23, 47028), (34, 47235), (36, 47331), (39, 47361), (52, 47544), (55, 47622), (62, 47769), (64, 47778), (65, 47793), (70, 47835), (72, 47856), (75, 47904), (84, 48138), (86, 48159), (89, 48192), (90, 48195), (96, 48258), (99, 48297), (107, 48363), (112, 48390), (119, 48477), (121, 48501), (126, 48582), (134, 48645), (142, 48741), (143, 48747), (151, 48894), (153, 48906), (163, 49011),

(169, 49080), (170, 49083), (173, 49098), (174, 49110), (180, 49212), (181, 49227), (182, 49230), (183, 49248), (184, 49260), (185, 49263), (186, 49266), (199, 49428), (207, 49605), (213, 49686), (214, 49707), (215, 49722), (221, 49851), (223, 49893),

Gene: Hanem_60 Start: 46748, Stop: 49939, Start Num: 11

Candidate Starts for Hanem_60:

(Start: 11 @46748 has 10 MA's), (17, 46868), (18, 46877), (19, 46886), (20, 46910), (21, 46931), (22, 46934), (23, 47027), (34, 47234), (36, 47330), (39, 47360), (52, 47543), (55, 47621), (62, 47768), (64, 47777), (65, 47792), (70, 47834), (72, 47855), (75, 47903), (84, 48137), (86, 48158), (89, 48191), (90, 48194), (96, 48257), (99, 48296), (107, 48362), (112, 48389), (119, 48476), (121, 48500), (126, 48581), (134, 48644), (142, 48740), (143, 48746), (151, 48893), (153, 48905), (163, 49010), (169, 49079), (170, 49082), (173, 49097), (174, 49109), (180, 49211), (181, 49226), (182, 49229), (183, 49247), (184, 49259), (185, 49262), (186, 49265), (199, 49427), (207, 49604), (213, 49685), (214, 49706), (215, 49721), (221, 49850), (223, 49892),

Gene: Kabocha_61 Start: 47561, Stop: 50752, Start Num: 11

Candidate Starts for Kabocha_61:

(9, 47555), (Start: 11 @47561 has 10 MA's), (17, 47681), (18, 47690), (19, 47699), (20, 47723), (21, 47744), (22, 47747), (23, 47840), (34, 48047), (36, 48143), (39, 48173), (52, 48356), (55, 48434), (62, 48581), (64, 48590), (65, 48605), (70, 48647), (72, 48668), (75, 48716), (84, 48950), (86, 48971), (89, 49004), (90, 49007), (96, 49070), (99, 49109), (107, 49175), (112, 49202), (119, 49289), (121, 49313), (126, 49394), (134, 49457), (142, 49553), (143, 49559), (151, 49706), (153, 49718), (163, 49823), (169, 49892), (170, 49895), (173, 49910), (174, 49922), (180, 50024), (181, 50039), (182, 50042), (183, 50060), (184, 50072), (185, 50075), (186, 50078), (199, 50240), (207, 50417), (213, 50498), (214, 50519), (215, 50534), (221, 50663), (223, 50705),

Gene: Oogie_60 Start: 48469, Stop: 51660, Start Num: 11

Candidate Starts for Oogie_60:

(Start: 11 @48469 has 10 MA's), (17, 48589), (18, 48598), (19, 48607), (20, 48631), (21, 48652), (22, 48655), (23, 48748), (34, 48955), (36, 49051), (39, 49081), (52, 49264), (62, 49489), (64, 49498), (65, 49513), (70, 49555), (72, 49576), (75, 49624), (84, 49858), (86, 49879), (89, 49912), (90, 49915), (96, 49978), (99, 50017), (107, 50083), (112, 50110), (119, 50197), (121, 50221), (126, 50302), (134, 50365), (142, 50461), (143, 50467), (151, 50614), (153, 50626), (163, 50731), (169, 50800), (170, 50803), (173, 50818), (174, 50830), (180, 50932), (181, 50947), (184, 50980), (185, 50983), (186, 50986), (200, 51154), (213, 51406), (214, 51427), (215, 51442), (221, 51571), (223, 51613),

Gene: Pakusa_58 Start: 46490, Stop: 49681, Start Num: 11

Candidate Starts for Pakusa_58:

(Start: 11 @46490 has 10 MA's), (17, 46610), (18, 46619), (19, 46628), (20, 46652), (21, 46673), (22, 46676), (23, 46769), (34, 46976), (36, 47072), (39, 47102), (52, 47285), (55, 47363), (62, 47510), (64, 47519), (65, 47534), (70, 47576), (72, 47597), (75, 47645), (84, 47879), (86, 47900), (89, 47933), (90, 47936), (96, 47999), (99, 48038), (107, 48104), (112, 48131), (119, 48218), (121, 48242), (126, 48323), (134, 48386), (142, 48482), (143, 48488), (151, 48635), (153, 48647), (163, 48752), (169, 48821), (170, 48824), (173, 48839), (174, 48851), (180, 48953), (181, 48968), (182, 48971), (183, 48989), (184, 49001), (185, 49004), (186, 49007), (199, 49169), (207, 49346), (213, 49427), (214, 49448), (215, 49463), (221, 49592), (223, 49634),

Gene: RedWattleHog_212 Start: 131562, Stop: 134759, Start Num: 11

Candidate Starts for RedWattleHog_212:

(Start: 11 @131562 has 10 MA's), (17, 131682), (19, 131700), (22, 131748), (28, 131964), (33, 132039), (35, 132105), (36, 132135), (52, 132348), (56, 132447), (59, 132483), (62, 132573), (64, 132582), (70, 132639), (78, 132774), (87, 132984), (96, 133059), (105, 133155), (112, 133185), (123, 133320), (125, 133374), (133, 133431), (134, 133440), (143, 133542), (156, 133734), (162, 133824),

(164, 133833), (170, 133899), (173, 133914), (174, 133926), (181, 134043), (184, 134076), (185, 134079), (188, 134103), (193, 134157), (195, 134187), (201, 134253), (204, 134298), (209, 134436), (212, 134499), (216, 134595), (220, 134664), (221, 134667), (223, 134715),

Gene: ScarletRaider_59 Start: 49660, Stop: 52848, Start Num: 8

Candidate Starts for ScarletRaider_59:

(6, 49642), (8, 49660), (9, 49669), (Start: 11 @49675 has 10 MA's), (17, 49795), (19, 49813), (20, 49837), (21, 49858), (22, 49861), (39, 50287), (45, 50362), (46, 50365), (48, 50380), (49, 50410), (55, 50548), (61, 50680), (62, 50695), (64, 50704), (74, 50797), (77, 50893), (79, 50905), (84, 51070), (87, 51115), (99, 51226), (105, 51268), (107, 51271), (113, 51304), (126, 51490), (137, 51571), (153, 51814), (162, 51916), (169, 51988), (184, 52168), (185, 52171), (187, 52186), (199, 52336), (213, 52591), (214, 52612), (215, 52627), (217, 52693), (221, 52756), (223, 52798),

Gene: Schomber_59 Start: 46498, Stop: 49689, Start Num: 11

Candidate Starts for Schomber_59:

(Start: 11 @46498 has 10 MA's), (17, 46618), (18, 46627), (19, 46636), (20, 46660), (21, 46681), (22, 46684), (34, 46984), (36, 47080), (39, 47110), (52, 47293), (62, 47518), (64, 47527), (65, 47542), (70, 47584), (72, 47605), (75, 47653), (84, 47887), (86, 47908), (89, 47941), (90, 47944), (96, 48007), (99, 48046), (107, 48112), (112, 48139), (119, 48226), (121, 48250), (126, 48331), (134, 48394), (142, 48490), (143, 48496), (151, 48643), (153, 48655), (163, 48760), (169, 48829), (170, 48832), (173, 48847), (174, 48859), (180, 48961), (181, 48976), (182, 48979), (183, 48997), (184, 49009), (185, 49012), (186, 49015), (199, 49177), (207, 49354), (213, 49435), (214, 49456), (215, 49471), (221, 49600), (223, 49642),

Gene: Soos_61 Start: 41060, Stop: 43834, Start Num: 10

Candidate Starts for Soos_61:

(1, 40811), (2, 40949), (3, 40985), (Start: 10 @41060 has 1 MA's), (17, 41180), (18, 41189), (22, 41246), (28, 41462), (36, 41636), (38, 41663), (47, 41750), (48, 41759), (51, 41831), (54, 41924), (56, 41951), (62, 42077), (63, 42080), (64, 42086), (66, 42110), (67, 42131), (68, 42143), (69, 42149), (73, 42188), (80, 42296), (86, 42470), (91, 42512), (96, 42575), (97, 42605), (98, 42611), (100, 42620), (101, 42635), (110, 42698), (115, 42725), (116, 42731), (134, 42956), (135, 42968), (138, 42998), (144, 43103), (147, 43136), (149, 43178), (152, 43208), (157, 43241), (160, 43283), (166, 43346), (172, 43394), (175, 43415), (179, 43511), (180, 43514), (185, 43559), (189, 43598), (191, 43601), (203, 43739),

Gene: Sting_65 Start: 41499, Stop: 44273, Start Num: 10

Candidate Starts for Sting_65:

(1, 41250), (2, 41388), (3, 41424), (Start: 10 @41499 has 1 MA's), (17, 41619), (18, 41628), (22, 41685), (28, 41901), (36, 42075), (38, 42102), (47, 42189), (48, 42198), (51, 42270), (54, 42363), (56, 42390), (62, 42516), (63, 42519), (64, 42525), (66, 42549), (67, 42570), (68, 42582), (69, 42588), (73, 42627), (80, 42735), (86, 42909), (91, 42951), (96, 43014), (97, 43044), (98, 43050), (100, 43059), (101, 43074), (110, 43137), (115, 43164), (116, 43170), (134, 43395), (135, 43407), (138, 43437), (144, 43542), (147, 43575), (149, 43617), (152, 43647), (157, 43680), (160, 43722), (166, 43785), (172, 43833), (175, 43854), (179, 43950), (185, 43998), (189, 44037), (191, 44040), (203, 44178),

Gene: Stormageddon_213 Start: 132509, Stop: 135706, Start Num: 11

Candidate Starts for Stormageddon_213:

(Start: 11 @132509 has 10 MA's), (17, 132629), (19, 132647), (22, 132695), (28, 132911), (33, 132986), (35, 133052), (36, 133082), (52, 133295), (56, 133394), (59, 133430), (62, 133520), (64, 133529), (70, 133586), (78, 133721), (87, 133931), (96, 134006), (105, 134102), (112, 134132), (123, 134267), (125, 134321), (133, 134378), (134, 134387), (143, 134489), (156, 134681), (162, 134771), (164, 134780), (170, 134846), (173, 134861), (174, 134873), (181, 134990), (184, 135023), (185, 135026), (188, 135050), (193, 135104), (195, 135134), (201, 135200), (204, 135245), (209, 135383),

(212, 135446), (216, 135542), (220, 135611), (221, 135614), (223, 135662),

Gene: UBSmoodge_62 Start: 50127, Stop: 53327, Start Num: 9

Candidate Starts for UBSmoodge_62:

(6, 50100), (8, 50118), (9, 50127), (Start: 11 @50133 has 10 MA's), (17, 50253), (19, 50271), (20, 50295), (21, 50316), (22, 50319), (39, 50745), (45, 50820), (46, 50823), (48, 50838), (49, 50868), (55, 51006), (61, 51138), (62, 51153), (64, 51162), (74, 51255), (77, 51351), (79, 51363), (83, 51507), (84, 51528), (86, 51549), (87, 51573), (99, 51687), (102, 51711), (105, 51747), (107, 51750), (113, 51783), (126, 51969), (130, 52005), (137, 52050), (153, 52293), (162, 52395), (169, 52467), (184, 52647), (185, 52650), (187, 52665), (199, 52815), (213, 53070), (214, 53091), (215, 53106), (217, 53172), (221, 53235), (223, 53277),