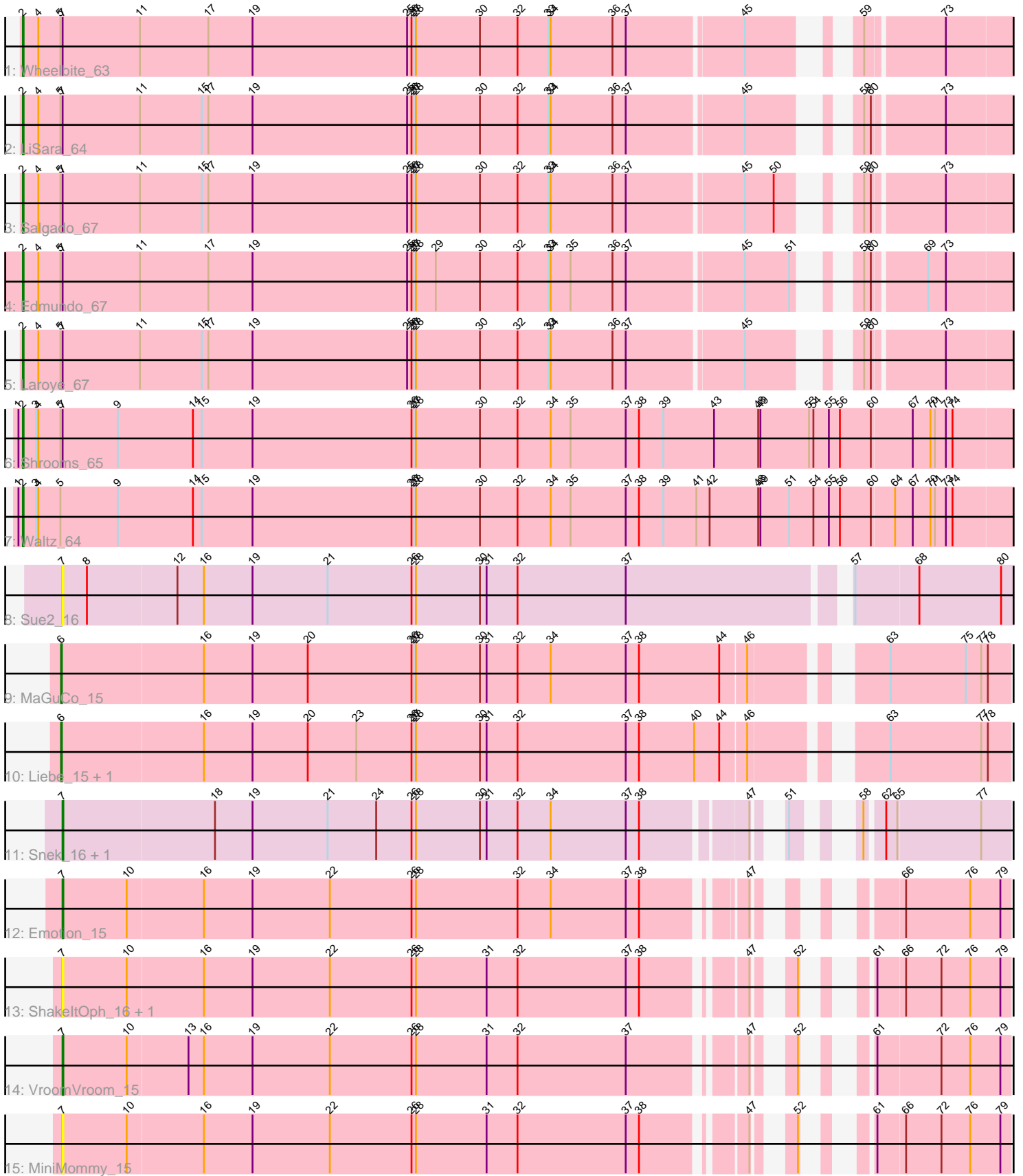


# Zoomed Pham 156715



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 156715 Report

This analysis was run 04/12/24 on database version 558.

Pham number 156715 has 18 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Wheelbite\_63
- Track 2 : LiSara\_64
- Track 3 : Salgado\_67
- Track 4 : Edmundo\_67
- Track 5 : Laroye\_67
- Track 6 : Shrooms\_65
- Track 7 : Waltz\_64
- Track 8 : Sue2\_16
- Track 9 : MaGuCo\_15
- Track 10 : Liebe\_15, Maureen\_15
- Track 11 : Snek\_16, Tweety19\_16
- Track 12 : Emotion\_15
- Track 13 : ShakeltOph\_16, JasmineDragon\_16
- Track 14 : VroomVroom\_15
- Track 15 : MiniMommy\_15

### ***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 7 of the 14 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Edmundo\_67, Laroye\_67, LiSara\_64, Salgado\_67, Shrooms\_65, Waltz\_64, Wheelbite\_63,

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

- 

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

- Emotion\_15, JasmineDragon\_16, Liebe\_15, MaGuCo\_15, Maureen\_15, MiniMommy\_15, ShakeltOph\_16, Snek\_16, Sue2\_16, Tweety19\_16, VroomVroom\_15,

**Summary by start number:**

Start 2:

- Found in 7 of 18 ( 38.9% ) of genes in pham
- Manual Annotations of this start: 7 of 14
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Edmundo\_67 (AL), Laroye\_67 (AL), LiSara\_64 (AL), Salgado\_67 (AL), Shrooms\_65 (AL), Waltz\_64 (AL), Wheelbite\_63 (AL),

Start 6:

- Found in 3 of 18 ( 16.7% ) of genes in pham
- Manual Annotations of this start: 3 of 14
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Liebe\_15 (AZ2), MaGuCo\_15 (AZ2), Maureen\_15 (AZ2),

Start 7:

- Found in 14 of 18 ( 77.8% ) of genes in pham
- Manual Annotations of this start: 4 of 14
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Emotion\_15 (AZ4), JasmineDragon\_16 (AZ4), MiniMommy\_15 (AZ4), ShakeltOph\_16 (AZ4), Sneek\_16 (AZ3), Sue2\_16 (AZ1), Tweety19\_16 (AZ3), VroomVroom\_15 (AZ4),

**Summary by clusters:**

There are 5 clusters represented in this pham: AZ1, AZ2, AZ3, AZ4, AL,

Info for manual annotations of cluster AL:

- Start number 2 was manually annotated 7 times for cluster AL.

Info for manual annotations of cluster AZ2:

- Start number 6 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 7 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 7 was manually annotated 2 times for cluster AZ4.

**Gene Information:**

Gene: Edmundo\_67 Start: 37140, Stop: 40157, Start Num: 2

Candidate Starts for Edmundo\_67:

(Start: 2 @37140 has 7 MA's), (4, 37161), (5, 37191), (Start: 7 @37194 has 4 MA's), (11, 37299), (17, 37392), (19, 37452), (25, 37662), (26, 37668), (27, 37671), (28, 37674), (29, 37701), (30, 37761), (32, 37812), (33, 37854), (34, 37857), (35, 37884), (36, 37941), (37, 37959), (45, 38109), (51, 38169), (59, 38202), (60, 38211), (69, 38277), (73, 38301), (82, 38397), (91, 38445), (92, 38448), (95, 38460), (97, 38481), (99, 38493), (105, 38544), (115, 38637), (116, 38652), (127, 38727), (133, 38760), (135, 38772), (137, 38781), (139, 38811), (140, 38826), (142, 38835), (144, 38850), (149, 38904), (159,

38943), (166, 39069), (190, 39219), (193, 39240), (196, 39273), (197, 39276), (199, 39294), (200, 39318), (202, 39330), (205, 39351), (214, 39486), (216, 39507), (217, 39528), (218, 39570), (219, 39573), (222, 39681), (223, 39705), (224, 39714), (226, 39768), (227, 39777), (229, 39840), (231, 39870), (232, 39879), (234, 39978), (235, 39984), (237, 40014), (238, 40053), (240, 40140),

Gene: Emotion\_15 Start: 9044, Stop: 11284, Start Num: 7

Candidate Starts for Emotion\_15:

(Start: 7 @9044 has 4 MA's), (10, 9131), (16, 9233), (19, 9299), (22, 9404), (26, 9515), (28, 9521), (32, 9659), (34, 9704), (37, 9806), (38, 9824), (47, 9938), (66, 10034), (76, 10121), (79, 10160), (84, 10184), (88, 10208), (90, 10217), (94, 10235), (98, 10262), (105, 10313), (106, 10325), (111, 10382), (117, 10436), (122, 10478), (141, 10607), (147, 10664), (162, 10796), (163, 10799), (179, 10916), (191, 11012), (192, 11018), (195, 11048),

Gene: JasmineDragon\_16 Start: 8971, Stop: 11214, Start Num: 7

Candidate Starts for JasmineDragon\_16:

(Start: 7 @8971 has 4 MA's), (10, 9058), (16, 9160), (19, 9226), (22, 9331), (26, 9442), (28, 9448), (31, 9544), (32, 9586), (37, 9733), (38, 9751), (47, 9868), (52, 9895), (61, 9928), (66, 9964), (72, 10012), (76, 10051), (79, 10090), (88, 10138), (90, 10147), (92, 10156), (94, 10165), (100, 10207), (105, 10243), (106, 10255), (109, 10300), (110, 10306), (113, 10330), (117, 10366), (119, 10384), (122, 10408), (124, 10417), (126, 10429), (130, 10450), (131, 10453), (136, 10483), (163, 10729), (179, 10846), (191, 10942), (192, 10948), (195, 10978),

Gene: Laroye\_67 Start: 36530, Stop: 39547, Start Num: 2

Candidate Starts for Laroye\_67:

(Start: 2 @36530 has 7 MA's), (4, 36551), (5, 36581), (Start: 7 @36584 has 4 MA's), (11, 36689), (15, 36773), (17, 36782), (19, 36842), (25, 37052), (26, 37058), (27, 37061), (28, 37064), (30, 37151), (32, 37202), (33, 37244), (34, 37247), (36, 37331), (37, 37349), (45, 37499), (59, 37592), (60, 37601), (73, 37691), (82, 37787), (85, 37805), (87, 37817), (91, 37835), (92, 37838), (95, 37850), (97, 37871), (99, 37883), (105, 37934), (115, 38027), (126, 38114), (133, 38150), (135, 38162), (137, 38171), (139, 38201), (140, 38216), (142, 38225), (149, 38294), (159, 38333), (166, 38459), (183, 38534), (190, 38609), (193, 38630), (196, 38663), (197, 38666), (200, 38708), (202, 38720), (205, 38741), (210, 38795), (216, 38897), (218, 38960), (222, 39071), (224, 39104), (226, 39158), (227, 39167), (231, 39260), (232, 39269), (234, 39368), (235, 39374), (237, 39404), (238, 39443), (240, 39530),

Gene: LiSara\_64 Start: 36692, Stop: 39709, Start Num: 2

Candidate Starts for LiSara\_64:

(Start: 2 @36692 has 7 MA's), (4, 36713), (5, 36743), (Start: 7 @36746 has 4 MA's), (11, 36851), (15, 36935), (17, 36944), (19, 37004), (25, 37214), (26, 37220), (27, 37223), (28, 37226), (30, 37313), (32, 37364), (33, 37406), (34, 37409), (36, 37493), (37, 37511), (45, 37661), (59, 37754), (60, 37763), (73, 37853), (82, 37949), (87, 37979), (91, 37997), (92, 38000), (95, 38012), (97, 38033), (99, 38045), (105, 38096), (115, 38189), (126, 38276), (133, 38312), (135, 38324), (137, 38333), (139, 38363), (140, 38378), (142, 38387), (149, 38456), (159, 38495), (166, 38621), (183, 38696), (190, 38771), (193, 38792), (196, 38825), (197, 38828), (200, 38870), (202, 38882), (205, 38903), (210, 38957), (216, 39059), (218, 39122), (222, 39233), (224, 39266), (226, 39320), (227, 39329), (230, 39398), (231, 39422), (232, 39431), (234, 39530), (235, 39536), (237, 39566), (238, 39605), (240, 39692),

Gene: Liebe\_15 Start: 9206, Stop: 11569, Start Num: 6

Candidate Starts for Liebe\_15:

(Start: 6 @9206 has 3 MA's), (16, 9395), (19, 9461), (20, 9536), (23, 9602), (26, 9677), (27, 9680), (28, 9683), (30, 9770), (31, 9779), (32, 9821), (37, 9968), (38, 9986), (40, 10061), (44, 10094), (46, 10127), (63, 10268), (77, 10391), (78, 10400), (84, 10439), (86, 10457), (90, 10472), (100, 10532), (101, 10538), (102, 10544), (103, 10556), (104, 10559), (108, 10613), (109, 10625), (111, 10637), (112, 10652), (121, 10724), (124, 10742), (125, 10751), (129, 10766), (131, 10778), (134, 10796), (136,

10808), (160, 11030), (179, 11171), (180, 11174), (184, 11207), (187, 11222), (188, 11228), (191, 11267), (198, 11324), (201, 11366), (207, 11414),

Gene: MaGuCo\_15 Start: 9140, Stop: 11503, Start Num: 6

Candidate Starts for MaGuCo\_15:

(Start: 6 @9140 has 3 MA's), (16, 9329), (19, 9395), (20, 9470), (26, 9611), (27, 9614), (28, 9617), (30, 9704), (31, 9713), (32, 9755), (34, 9800), (37, 9902), (38, 9920), (44, 10028), (46, 10061), (63, 10202), (75, 10304), (77, 10325), (78, 10334), (84, 10373), (86, 10391), (89, 10403), (90, 10406), (100, 10466), (101, 10472), (102, 10478), (103, 10490), (104, 10493), (106, 10514), (108, 10547), (109, 10559), (111, 10571), (112, 10586), (121, 10658), (123, 10670), (124, 10676), (125, 10685), (129, 10700), (131, 10712), (134, 10730), (136, 10742), (160, 10964), (179, 11105), (180, 11108), (184, 11141), (188, 11162), (191, 11201), (198, 11258), (201, 11300), (207, 11348),

Gene: Maureen\_15 Start: 9206, Stop: 11569, Start Num: 6

Candidate Starts for Maureen\_15:

(Start: 6 @9206 has 3 MA's), (16, 9395), (19, 9461), (20, 9536), (23, 9602), (26, 9677), (27, 9680), (28, 9683), (30, 9770), (31, 9779), (32, 9821), (37, 9968), (38, 9986), (40, 10061), (44, 10094), (46, 10127), (63, 10268), (77, 10391), (78, 10400), (84, 10439), (86, 10457), (90, 10472), (100, 10532), (101, 10538), (102, 10544), (103, 10556), (104, 10559), (108, 10613), (109, 10625), (111, 10637), (112, 10652), (121, 10724), (124, 10742), (125, 10751), (129, 10766), (131, 10778), (134, 10796), (136, 10808), (160, 11030), (179, 11171), (180, 11174), (184, 11207), (187, 11222), (188, 11228), (191, 11267), (198, 11324), (201, 11366), (207, 11414),

Gene: MiniMommy\_15 Start: 8972, Stop: 11215, Start Num: 7

Candidate Starts for MiniMommy\_15:

(Start: 7 @8972 has 4 MA's), (10, 9059), (16, 9161), (19, 9227), (22, 9332), (26, 9443), (28, 9449), (31, 9545), (32, 9587), (37, 9734), (38, 9752), (47, 9869), (52, 9896), (61, 9929), (66, 9965), (72, 10013), (76, 10052), (79, 10091), (84, 10115), (88, 10139), (90, 10148), (92, 10157), (94, 10166), (100, 10208), (105, 10244), (106, 10256), (109, 10301), (110, 10307), (113, 10331), (117, 10367), (119, 10385), (122, 10409), (124, 10418), (126, 10430), (130, 10451), (131, 10454), (136, 10484), (163, 10730), (179, 10847), (191, 10943), (192, 10949), (195, 10979),

Gene: Salgado\_67 Start: 36346, Stop: 39363, Start Num: 2

Candidate Starts for Salgado\_67:

(Start: 2 @36346 has 7 MA's), (4, 36367), (5, 36397), (Start: 7 @36400 has 4 MA's), (11, 36505), (15, 36589), (17, 36598), (19, 36658), (25, 36868), (26, 36874), (27, 36877), (28, 36880), (30, 36967), (32, 37018), (33, 37060), (34, 37063), (36, 37147), (37, 37165), (45, 37315), (50, 37354), (59, 37408), (60, 37417), (73, 37507), (82, 37603), (87, 37633), (91, 37651), (92, 37654), (95, 37666), (97, 37687), (99, 37699), (105, 37750), (115, 37843), (126, 37930), (133, 37966), (135, 37978), (137, 37987), (139, 38017), (140, 38032), (142, 38041), (149, 38110), (159, 38149), (166, 38275), (183, 38350), (190, 38425), (193, 38446), (196, 38479), (197, 38482), (200, 38524), (202, 38536), (205, 38557), (210, 38611), (216, 38713), (218, 38776), (222, 38887), (224, 38920), (226, 38974), (227, 38983), (231, 39076), (232, 39085), (234, 39184), (235, 39190), (237, 39220), (238, 39259), (240, 39346),

Gene: ShakeltOph\_16 Start: 8971, Stop: 11214, Start Num: 7

Candidate Starts for ShakeltOph\_16:

(Start: 7 @8971 has 4 MA's), (10, 9058), (16, 9160), (19, 9226), (22, 9331), (26, 9442), (28, 9448), (31, 9544), (32, 9586), (37, 9733), (38, 9751), (47, 9868), (52, 9895), (61, 9928), (66, 9964), (72, 10012), (76, 10051), (79, 10090), (88, 10138), (90, 10147), (92, 10156), (94, 10165), (100, 10207), (105, 10243), (106, 10255), (109, 10300), (110, 10306), (113, 10330), (117, 10366), (119, 10384), (122, 10408), (124, 10417), (126, 10429), (130, 10450), (131, 10453), (136, 10483), (163, 10729), (179, 10846), (191, 10942), (192, 10948), (195, 10978),

Gene: Shrooms\_65 Start: 34492, Stop: 37881, Start Num: 2

Candidate Starts for Shrooms\_65:

(1, 34486), (Start: 2 @34492 has 7 MA's), (3, 34510), (4, 34513), (5, 34543), (Start: 7 @34546 has 4 MA's), (9, 34621), (14, 34723), (15, 34735), (19, 34804), (26, 35020), (27, 35023), (28, 35026), (30, 35113), (32, 35164), (34, 35209), (35, 35236), (37, 35311), (38, 35329), (39, 35362), (43, 35431), (48, 35491), (49, 35494), (53, 35560), (54, 35566), (55, 35587), (56, 35602), (60, 35644), (67, 35698), (70, 35722), (71, 35728), (73, 35743), (74, 35752), (81, 35833), (86, 35866), (95, 35902), (99, 35935), (105, 35986), (107, 36016), (114, 36076), (115, 36079), (126, 36166), (129, 36178), (130, 36187), (137, 36223), (138, 36235), (139, 36253), (143, 36280), (147, 36331), (150, 36364), (151, 36409), (152, 36427), (153, 36433), (154, 36445), (155, 36463), (156, 36472), (159, 36517), (161, 36586), (164, 36631), (167, 36649), (168, 36673), (169, 36676), (170, 36685), (171, 36697), (172, 36709), (174, 36751), (175, 36817), (185, 36907), (189, 36940), (190, 36958), (196, 37012), (197, 37015), (201, 37066), (202, 37069), (205, 37090), (206, 37102), (208, 37126), (209, 37135), (212, 37156), (216, 37246), (217, 37267), (218, 37309), (220, 37327), (221, 37399), (222, 37420), (223, 37444), (224, 37453), (225, 37474), (226, 37507), (231, 37609), (233, 37654), (236, 37720), (238, 37777),

Gene: Snek\_16 Start: 9838, Stop: 12117, Start Num: 7

Candidate Starts for Snek\_16:

(Start: 7 @9838 has 4 MA's), (18, 10042), (19, 10093), (21, 10195), (24, 10261), (26, 10309), (28, 10315), (30, 10402), (31, 10411), (32, 10453), (34, 10498), (37, 10600), (38, 10618), (47, 10747), (51, 10762), (58, 10804), (62, 10825), (65, 10840), (77, 10951), (88, 11023), (90, 11032), (92, 11041), (95, 11053), (101, 11098), (102, 11104), (104, 11119), (106, 11140), (109, 11185), (118, 11263), (131, 11338), (134, 11356), (157, 11503), (163, 11614), (173, 11677), (176, 11698), (178, 11725), (181, 11740), (192, 11830), (195, 11860), (203, 11926), (213, 12052), (215, 12091),

Gene: Sue2\_16 Start: 10752, Stop: 13142, Start Num: 7

Candidate Starts for Sue2\_16:

(Start: 7 @10752 has 4 MA's), (8, 10785), (12, 10905), (16, 10941), (19, 11007), (21, 11109), (26, 11223), (28, 11229), (30, 11316), (31, 11325), (32, 11367), (37, 11514), (57, 11790), (68, 11874), (80, 11985), (93, 12063), (94, 12069), (96, 12078), (99, 12105), (109, 12204), (121, 12303), (123, 12315), (128, 12342), (131, 12357), (132, 12366), (134, 12375), (139, 12420), (148, 12507), (159, 12552), (165, 12675), (177, 12732), (179, 12750), (180, 12753), (187, 12801), (194, 12864), (198, 12903), (213, 13077),

Gene: Tweety19\_16 Start: 9837, Stop: 12116, Start Num: 7

Candidate Starts for Tweety19\_16:

(Start: 7 @9837 has 4 MA's), (18, 10041), (19, 10092), (21, 10194), (24, 10260), (26, 10308), (28, 10314), (30, 10401), (31, 10410), (32, 10452), (34, 10497), (37, 10599), (38, 10617), (47, 10746), (51, 10761), (58, 10803), (62, 10824), (65, 10839), (77, 10950), (88, 11022), (90, 11031), (92, 11040), (95, 11052), (101, 11097), (102, 11103), (104, 11118), (106, 11139), (109, 11184), (118, 11262), (131, 11337), (134, 11355), (157, 11502), (163, 11613), (173, 11676), (176, 11697), (178, 11724), (181, 11739), (192, 11829), (195, 11859), (203, 11925), (213, 12051), (215, 12090),

Gene: VroomVroom\_15 Start: 8983, Stop: 11226, Start Num: 7

Candidate Starts for VroomVroom\_15:

(Start: 7 @8983 has 4 MA's), (10, 9070), (13, 9151), (16, 9172), (19, 9238), (22, 9343), (26, 9454), (28, 9460), (31, 9556), (32, 9598), (37, 9745), (47, 9880), (52, 9907), (61, 9940), (72, 10024), (76, 10063), (79, 10102), (84, 10126), (88, 10150), (90, 10159), (94, 10177), (98, 10204), (100, 10219), (105, 10255), (106, 10267), (109, 10312), (110, 10318), (117, 10378), (119, 10396), (122, 10420), (130, 10462), (131, 10465), (136, 10495), (146, 10603), (179, 10858), (182, 10870), (191, 10954), (192, 10960), (195, 10990),

Gene: Waltz\_64 Start: 34787, Stop: 37879, Start Num: 2

Candidate Starts for Waltz\_64:

(1, 34781), (Start: 2 @34787 has 7 MA's), (3, 34805), (4, 34808), (5, 34838), (9, 34916), (14, 35018), (15, 35030), (19, 35099), (26, 35315), (27, 35318), (28, 35321), (30, 35408), (32, 35459), (34, 35504), (35, 35531), (37, 35606), (38, 35624), (39, 35657), (41, 35702), (42, 35720), (48, 35786), (49, 35789), (51, 35828), (54, 35861), (55, 35882), (56, 35897), (60, 35939), (64, 35969), (67, 35993), (70, 36017), (71, 36023), (73, 36038), (74, 36047), (83, 36140), (86, 36161), (95, 36197), (99, 36230), (105, 36281), (107, 36311), (115, 36374), (120, 36422), (122, 36443), (126, 36461), (129, 36473), (130, 36482), (133, 36497), (137, 36518), (140, 36563), (142, 36572), (145, 36590), (149, 36641), (158, 36671), (159, 36680), (161, 36749), (166, 36806), (189, 36938), (190, 36956), (196, 37010), (197, 37013), (201, 37064), (202, 37067), (209, 37133), (211, 37145), (216, 37244), (217, 37265), (218, 37307), (221, 37397), (222, 37418), (223, 37442), (224, 37451), (225, 37472), (226, 37505), (227, 37514), (231, 37607), (233, 37652), (236, 37718), (238, 37775), (239, 37841),

Gene: Wheelbite\_63 Start: 36504, Stop: 39521, Start Num: 2

Candidate Starts for Wheelbite\_63:

(Start: 2 @36504 has 7 MA's), (4, 36525), (5, 36555), (Start: 7 @36558 has 4 MA's), (11, 36663), (17, 36756), (19, 36816), (25, 37026), (26, 37032), (27, 37035), (28, 37038), (30, 37125), (32, 37176), (33, 37218), (34, 37221), (36, 37305), (37, 37323), (45, 37473), (59, 37566), (73, 37665), (82, 37761), (91, 37809), (92, 37812), (95, 37824), (97, 37845), (99, 37857), (105, 37908), (115, 38001), (116, 38016), (133, 38124), (135, 38136), (137, 38145), (139, 38175), (142, 38199), (144, 38214), (149, 38268), (159, 38307), (166, 38433), (186, 38538), (193, 38604), (197, 38640), (199, 38658), (200, 38682), (202, 38694), (204, 38703), (205, 38715), (210, 38769), (214, 38850), (216, 38871), (217, 38892), (218, 38934), (219, 38937), (222, 39045), (224, 39078), (225, 39099), (227, 39141), (228, 39147), (229, 39204), (231, 39234), (232, 39243), (234, 39342), (235, 39348), (238, 39417), (240, 39504),