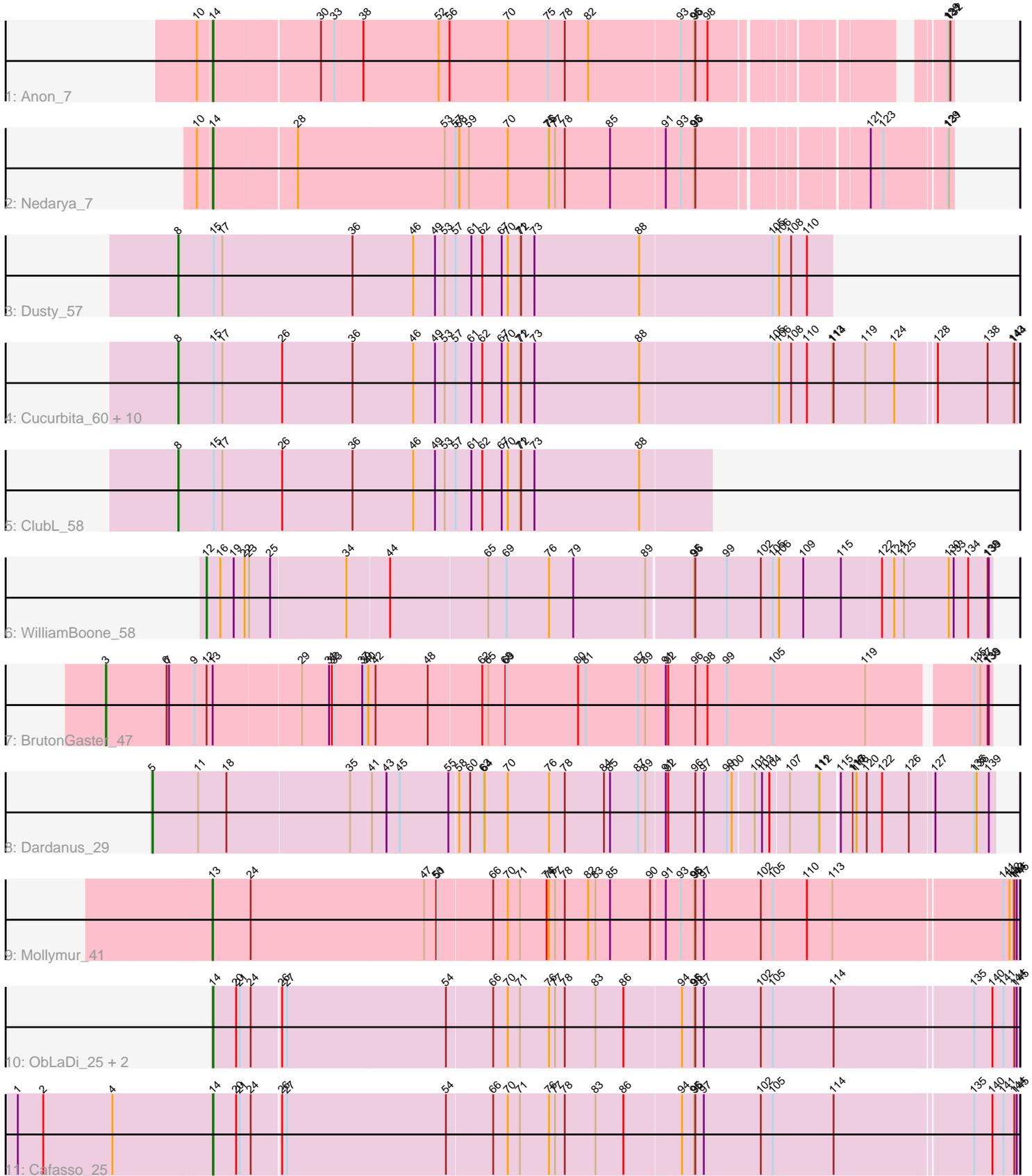


# Pham 284161



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 284161 Report

This analysis was run 02/23/26 on database version 636.

Pham number 284161 has 23 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Anon\_7
- Track 2 : Nedarya\_7
- Track 3 : Dusty\_57
- Track 4 : Cucurbita\_60, Toniann\_59, Aphelion\_58, Bachita\_60, Miskis\_56, Geeche\_57, Norvs\_59, Smoothie\_60, PhinkBoden\_58, Lozinak\_59, Engineer\_60
- Track 5 : ClubL\_58
- Track 6 : WilliamBoone\_58
- Track 7 : BrutonGaster\_47
- Track 8 : Dardanus\_29
- Track 9 : Mollymur\_41
- Track 10 : ObLaDi\_25, Aleemily\_24, ModicumRichard\_25
- Track 11 : Cafasso\_25

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

The start number called the most often in the published annotations is 8, it was called in 12 of the 21 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aphelion\_58, Bachita\_60, ClubL\_58, Cucurbita\_60, Dusty\_57, Engineer\_60, Geeche\_57, Lozinak\_59, Miskis\_56, Norvs\_59, PhinkBoden\_58, Smoothie\_60, Toniann\_59,

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

- 

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

- Aleemily\_24, Anon\_7, BrutonGaster\_47, Cafasso\_25, Dardanus\_29, ModicumRichard\_25, Mollymur\_41, Nedarya\_7, ObLaDi\_25, WilliamBoone\_58,

### **Summary by start number:**

Start 3:

- Found in 1 of 23 ( 4.3% ) of genes in pham

- Manual Annotations of this start: 1 of 21
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BrutonGaster\_47 (CQ2),

Start 5:

- Found in 1 of 23 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 1 of 21
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dardanus\_29 (CU3),

Start 8:

- Found in 13 of 23 ( 56.5% ) of genes in pham
- Manual Annotations of this start: 12 of 21
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aphelion\_58 (CQ1), Bachita\_60 (CQ1), ClubL\_58 (CQ1), Cucurbita\_60 (CQ1), Dusty\_57 (CQ1), Engineer\_60 (CQ1), Geeche\_57 (CQ1), Lozinak\_59 (CQ1), Miskis\_56 (CQ1), Norvs\_59 (CQ1), PhinkBoden\_58 (CQ1), Smoothie\_60 (CQ1), Toniann\_59 (CQ1),

Start 12:

- Found in 2 of 23 ( 8.7% ) of genes in pham
- Manual Annotations of this start: 1 of 21
- Called 50.0% of time when present
- Phage (with cluster) where this start called: WilliamBoone\_58 (CQ1),

Start 13:

- Found in 2 of 23 ( 8.7% ) of genes in pham
- Manual Annotations of this start: 1 of 21
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Mollymur\_41 (DL),

Start 14:

- Found in 6 of 23 ( 26.1% ) of genes in pham
- Manual Annotations of this start: 5 of 21
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aleemily\_24 (DZ), Anon\_7 (A15), Cafasso\_25 (DZ), ModicumRichard\_25 (DZ), Nedarya\_7 (A15), ObLaDi\_25 (DZ),

### **Summary by clusters:**

There are 6 clusters represented in this pham: A15, DL, CU3, DZ, CQ2, CQ1,

Info for manual annotations of cluster A15:

- Start number 14 was manually annotated 2 times for cluster A15.

Info for manual annotations of cluster CQ1:

- Start number 8 was manually annotated 12 times for cluster CQ1.
- Start number 12 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 3 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CU3:

- Start number 5 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster DL:

- Start number 13 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DZ:

- Start number 14 was manually annotated 3 times for cluster DZ.

### **Gene Information:**

Gene: Aleemily\_24 Start: 21422, Stop: 23347, Start Num: 14

Candidate Starts for Aleemily\_24:

(Start: 14 @21422 has 5 MA's), (20, 21473), (21, 21482), (24, 21509), (26, 21575), (27, 21587), (54, 21977), (66, 22088), (70, 22124), (71, 22154), (76, 22226), (77, 22241), (78, 22265), (83, 22337), (86, 22406), (94, 22538), (95, 22568), (96, 22571), (97, 22592), (102, 22730), (105, 22760), (114, 22910), (135, 23237), (140, 23282), (141, 23306), (144, 23333), (145, 23339),

Gene: Anon\_7 Start: 3320, Stop: 4939, Start Num: 14

Candidate Starts for Anon\_7:

(10, 3287), (Start: 14 @3320 has 5 MA's), (30, 3563), (33, 3596), (38, 3668), (52, 3851), (56, 3878), (70, 4022), (75, 4121), (78, 4163), (82, 4217), (93, 4433), (95, 4466), (96, 4469), (98, 4499), (129, 4925), (131, 4928), (132, 4931),

Gene: Aphelion\_58 Start: 37957, Stop: 39987, Start Num: 8

Candidate Starts for Aphelion\_58:

(Start: 8 @37957 has 12 MA's), (15, 38044), (17, 38065), (26, 38212), (36, 38386), (46, 38533), (49, 38587), (53, 38611), (57, 38638), (61, 38677), (62, 38704), (67, 38752), (70, 38767), (71, 38797), (72, 38800), (73, 38833), (88, 39088), (105, 39409), (106, 39424), (108, 39454), (110, 39493), (113, 39556), (114, 39559), (119, 39637), (124, 39703), (128, 39790), (138, 39913), (143, 39976), (144, 39979),

Gene: Bachita\_60 Start: 38390, Stop: 40420, Start Num: 8

Candidate Starts for Bachita\_60:

(Start: 8 @38390 has 12 MA's), (15, 38477), (17, 38498), (26, 38645), (36, 38819), (46, 38966), (49, 39020), (53, 39044), (57, 39071), (61, 39110), (62, 39137), (67, 39185), (70, 39200), (71, 39230), (72, 39233), (73, 39266), (88, 39521), (105, 39842), (106, 39857), (108, 39887), (110, 39926), (113, 39989), (114, 39992), (119, 40070), (124, 40136), (128, 40223), (138, 40346), (143, 40409), (144, 40412),

Gene: BrutonGaster\_47 Start: 34997, Stop: 37117, Start Num: 3

Candidate Starts for BrutonGaster\_47:

(Start: 3 @34997 has 1 MA's), (6, 35147), (7, 35153), (9, 35216), (Start: 12 @35246 has 1 MA's), (Start: 13 @35261 has 1 MA's), (29, 35468), (31, 35534), (32, 35540), (33, 35546), (37, 35615), (39, 35621), (40, 35630), (42, 35648), (48, 35774), (62, 35900), (65, 35915), (68, 35957), (69, 35960), (80, 36134), (81, 36152), (87, 36281), (89, 36299), (91, 36350), (92, 36356), (96, 36422), (98, 36452), (99, 36500), (105, 36614), (119, 36839), (135, 37073), (137, 37088), (138, 37106), (139, 37109),

Gene: Cafasso\_25 Start: 21996, Stop: 23921, Start Num: 14

Candidate Starts for Cafasso\_25:

(1, 21516), (2, 21579), (4, 21750), (Start: 14 @21996 has 5 MA's), (20, 22047), (21, 22056), (24, 22083), (26, 22149), (27, 22161), (54, 22551), (66, 22662), (70, 22698), (71, 22728), (76, 22800), (77,

22815), (78, 22839), (83, 22911), (86, 22980), (94, 23112), (95, 23142), (96, 23145), (97, 23166), (102, 23304), (105, 23334), (114, 23484), (135, 23811), (140, 23856), (141, 23880), (144, 23907), (145, 23913),

Gene: ClubL\_58 Start: 37879, Stop: 39180, Start Num: 8

Candidate Starts for ClubL\_58:

(Start: 8 @37879 has 12 MA's), (15, 37966), (17, 37987), (26, 38134), (36, 38308), (46, 38455), (49, 38509), (53, 38533), (57, 38560), (61, 38599), (62, 38626), (67, 38674), (70, 38689), (71, 38719), (72, 38722), (73, 38755), (88, 39010),

Gene: Cucurbita\_60 Start: 39249, Stop: 41279, Start Num: 8

Candidate Starts for Cucurbita\_60:

(Start: 8 @39249 has 12 MA's), (15, 39336), (17, 39357), (26, 39504), (36, 39678), (46, 39825), (49, 39879), (53, 39903), (57, 39930), (61, 39969), (62, 39996), (67, 40044), (70, 40059), (71, 40089), (72, 40092), (73, 40125), (88, 40380), (105, 40701), (106, 40716), (108, 40746), (110, 40785), (113, 40848), (114, 40851), (119, 40929), (124, 40995), (128, 41082), (138, 41205), (143, 41268), (144, 41271),

Gene: Dardanus\_29 Start: 20840, Stop: 22807, Start Num: 5

Candidate Starts for Dardanus\_29:

(Start: 5 @20840 has 1 MA's), (11, 20951), (18, 21017), (35, 21317), (41, 21368), (43, 21404), (45, 21434), (55, 21554), (58, 21575), (60, 21599), (63, 21629), (64, 21632), (70, 21689), (76, 21791), (78, 21830), (84, 21920), (85, 21935), (87, 22004), (89, 22022), (91, 22061), (92, 22067), (96, 22133), (97, 22154), (99, 22208), (100, 22220), (101, 22268), (103, 22286), (104, 22304), (107, 22346), (111, 22409), (112, 22412), (115, 22454), (116, 22478), (117, 22481), (118, 22487), (120, 22508), (122, 22544), (126, 22610), (127, 22664), (135, 22760), (136, 22766), (139, 22796),

Gene: Dusty\_57 Start: 37688, Stop: 39286, Start Num: 8

Candidate Starts for Dusty\_57:

(Start: 8 @37688 has 12 MA's), (15, 37775), (17, 37796), (36, 38117), (46, 38264), (49, 38318), (53, 38342), (57, 38369), (61, 38408), (62, 38435), (67, 38483), (70, 38498), (71, 38528), (72, 38531), (73, 38564), (88, 38819), (105, 39140), (106, 39155), (108, 39185), (110, 39224),

Gene: Engineer\_60 Start: 38363, Stop: 40393, Start Num: 8

Candidate Starts for Engineer\_60:

(Start: 8 @38363 has 12 MA's), (15, 38450), (17, 38471), (26, 38618), (36, 38792), (46, 38939), (49, 38993), (53, 39017), (57, 39044), (61, 39083), (62, 39110), (67, 39158), (70, 39173), (71, 39203), (72, 39206), (73, 39239), (88, 39494), (105, 39815), (106, 39830), (108, 39860), (110, 39899), (113, 39962), (114, 39965), (119, 40043), (124, 40109), (128, 40196), (138, 40319), (143, 40382), (144, 40385),

Gene: Geeche\_57 Start: 37779, Stop: 39809, Start Num: 8

Candidate Starts for Geeche\_57:

(Start: 8 @37779 has 12 MA's), (15, 37866), (17, 37887), (26, 38034), (36, 38208), (46, 38355), (49, 38409), (53, 38433), (57, 38460), (61, 38499), (62, 38526), (67, 38574), (70, 38589), (71, 38619), (72, 38622), (73, 38655), (88, 38910), (105, 39231), (106, 39246), (108, 39276), (110, 39315), (113, 39378), (114, 39381), (119, 39459), (124, 39525), (128, 39612), (138, 39735), (143, 39798), (144, 39801),

Gene: Lozinak\_59 Start: 38418, Stop: 40445, Start Num: 8

Candidate Starts for Lozinak\_59:

(Start: 8 @38418 has 12 MA's), (15, 38505), (17, 38526), (26, 38673), (36, 38847), (46, 38994), (49, 39048), (53, 39072), (57, 39099), (61, 39138), (62, 39165), (67, 39213), (70, 39228), (71, 39258), (72,

39261), (73, 39294), (88, 39549), (105, 39870), (106, 39885), (108, 39915), (110, 39954), (113, 40017), (114, 40020), (119, 40098), (124, 40164), (128, 40251), (138, 40374), (143, 40434), (144, 40437),

Gene: Miskis\_56 Start: 37723, Stop: 39753, Start Num: 8

Candidate Starts for Miskis\_56:

(Start: 8 @37723 has 12 MA's), (15, 37810), (17, 37831), (26, 37978), (36, 38152), (46, 38299), (49, 38353), (53, 38377), (57, 38404), (61, 38443), (62, 38470), (67, 38518), (70, 38533), (71, 38563), (72, 38566), (73, 38599), (88, 38854), (105, 39175), (106, 39190), (108, 39220), (110, 39259), (113, 39322), (114, 39325), (119, 39403), (124, 39469), (128, 39556), (138, 39679), (143, 39742), (144, 39745),

Gene: ModicumRichard\_25 Start: 21995, Stop: 23920, Start Num: 14

Candidate Starts for ModicumRichard\_25:

(Start: 14 @21995 has 5 MA's), (20, 22046), (21, 22055), (24, 22082), (26, 22148), (27, 22160), (54, 22550), (66, 22661), (70, 22697), (71, 22727), (76, 22799), (77, 22814), (78, 22838), (83, 22910), (86, 22979), (94, 23111), (95, 23141), (96, 23144), (97, 23165), (102, 23303), (105, 23333), (114, 23483), (135, 23810), (140, 23855), (141, 23879), (144, 23906), (145, 23912),

Gene: Mollymur\_41 Start: 36754, Stop: 38694, Start Num: 13

Candidate Starts for Mollymur\_41:

(Start: 13 @36754 has 1 MA's), (24, 36841), (47, 37267), (50, 37297), (51, 37300), (66, 37432), (70, 37468), (71, 37498), (74, 37564), (76, 37570), (77, 37585), (78, 37609), (82, 37663), (83, 37681), (85, 37717), (90, 37816), (91, 37843), (93, 37879), (95, 37912), (96, 37915), (97, 37936), (102, 38074), (105, 38104), (110, 38188), (113, 38251), (141, 38653), (142, 38668), (143, 38677), (144, 38680), (145, 38686),

Gene: Nedarya\_7 Start: 3383, Stop: 5050, Start Num: 14

Candidate Starts for Nedarya\_7:

(10, 3350), (Start: 14 @3383 has 5 MA's), (28, 3569), (53, 3929), (57, 3956), (58, 3965), (59, 3989), (70, 4085), (75, 4184), (76, 4187), (77, 4202), (78, 4226), (85, 4334), (91, 4460), (93, 4496), (95, 4529), (96, 4532), (121, 4865), (123, 4895), (129, 5036), (131, 5039),

Gene: Norvs\_59 Start: 37962, Stop: 39992, Start Num: 8

Candidate Starts for Norvs\_59:

(Start: 8 @37962 has 12 MA's), (15, 38049), (17, 38070), (26, 38217), (36, 38391), (46, 38538), (49, 38592), (53, 38616), (57, 38643), (61, 38682), (62, 38709), (67, 38757), (70, 38772), (71, 38802), (72, 38805), (73, 38838), (88, 39093), (105, 39414), (106, 39429), (108, 39459), (110, 39498), (113, 39561), (114, 39564), (119, 39642), (124, 39708), (128, 39795), (138, 39918), (143, 39981), (144, 39984),

Gene: ObLaDi\_25 Start: 21974, Stop: 23899, Start Num: 14

Candidate Starts for ObLaDi\_25:

(Start: 14 @21974 has 5 MA's), (20, 22025), (21, 22034), (24, 22061), (26, 22127), (27, 22139), (54, 22529), (66, 22640), (70, 22676), (71, 22706), (76, 22778), (77, 22793), (78, 22817), (83, 22889), (86, 22958), (94, 23090), (95, 23120), (96, 23123), (97, 23144), (102, 23282), (105, 23312), (114, 23462), (135, 23789), (140, 23834), (141, 23858), (144, 23885), (145, 23891),

Gene: PhinkBoden\_58 Start: 38343, Stop: 40373, Start Num: 8

Candidate Starts for PhinkBoden\_58:

(Start: 8 @38343 has 12 MA's), (15, 38430), (17, 38451), (26, 38598), (36, 38772), (46, 38919), (49, 38973), (53, 38997), (57, 39024), (61, 39063), (62, 39090), (67, 39138), (70, 39153), (71, 39183), (72, 39186), (73, 39219), (88, 39474), (105, 39795), (106, 39810), (108, 39840), (110, 39879), (113,

39942), (114, 39945), (119, 40023), (124, 40089), (128, 40176), (138, 40299), (143, 40362), (144, 40365),

Gene: Smoothie\_60 Start: 38418, Stop: 40445, Start Num: 8

Candidate Starts for Smoothie\_60:

(Start: 8 @38418 has 12 MA's), (15, 38505), (17, 38526), (26, 38673), (36, 38847), (46, 38994), (49, 39048), (53, 39072), (57, 39099), (61, 39138), (62, 39165), (67, 39213), (70, 39228), (71, 39258), (72, 39261), (73, 39294), (88, 39549), (105, 39870), (106, 39885), (108, 39915), (110, 39954), (113, 40017), (114, 40020), (119, 40098), (124, 40164), (128, 40251), (138, 40374), (143, 40434), (144, 40437),

Gene: Toniann\_59 Start: 37905, Stop: 39935, Start Num: 8

Candidate Starts for Toniann\_59:

(Start: 8 @37905 has 12 MA's), (15, 37992), (17, 38013), (26, 38160), (36, 38334), (46, 38481), (49, 38535), (53, 38559), (57, 38586), (61, 38625), (62, 38652), (67, 38700), (70, 38715), (71, 38745), (72, 38748), (73, 38781), (88, 39036), (105, 39357), (106, 39372), (108, 39402), (110, 39441), (113, 39504), (114, 39507), (119, 39585), (124, 39651), (128, 39738), (138, 39861), (143, 39924), (144, 39927),

Gene: WilliamBoone\_58 Start: 37251, Stop: 39119, Start Num: 12

Candidate Starts for WilliamBoone\_58:

(Start: 12 @37251 has 1 MA's), (16, 37281), (19, 37311), (22, 37338), (23, 37344), (25, 37395), (34, 37572), (44, 37668), (65, 37899), (69, 37944), (76, 38049), (79, 38106), (89, 38283), (95, 38391), (96, 38394), (99, 38469), (102, 38553), (105, 38583), (106, 38598), (109, 38658), (115, 38751), (122, 38847), (124, 38877), (125, 38901), (130, 39012), (133, 39024), (134, 39060), (138, 39108), (139, 39111),