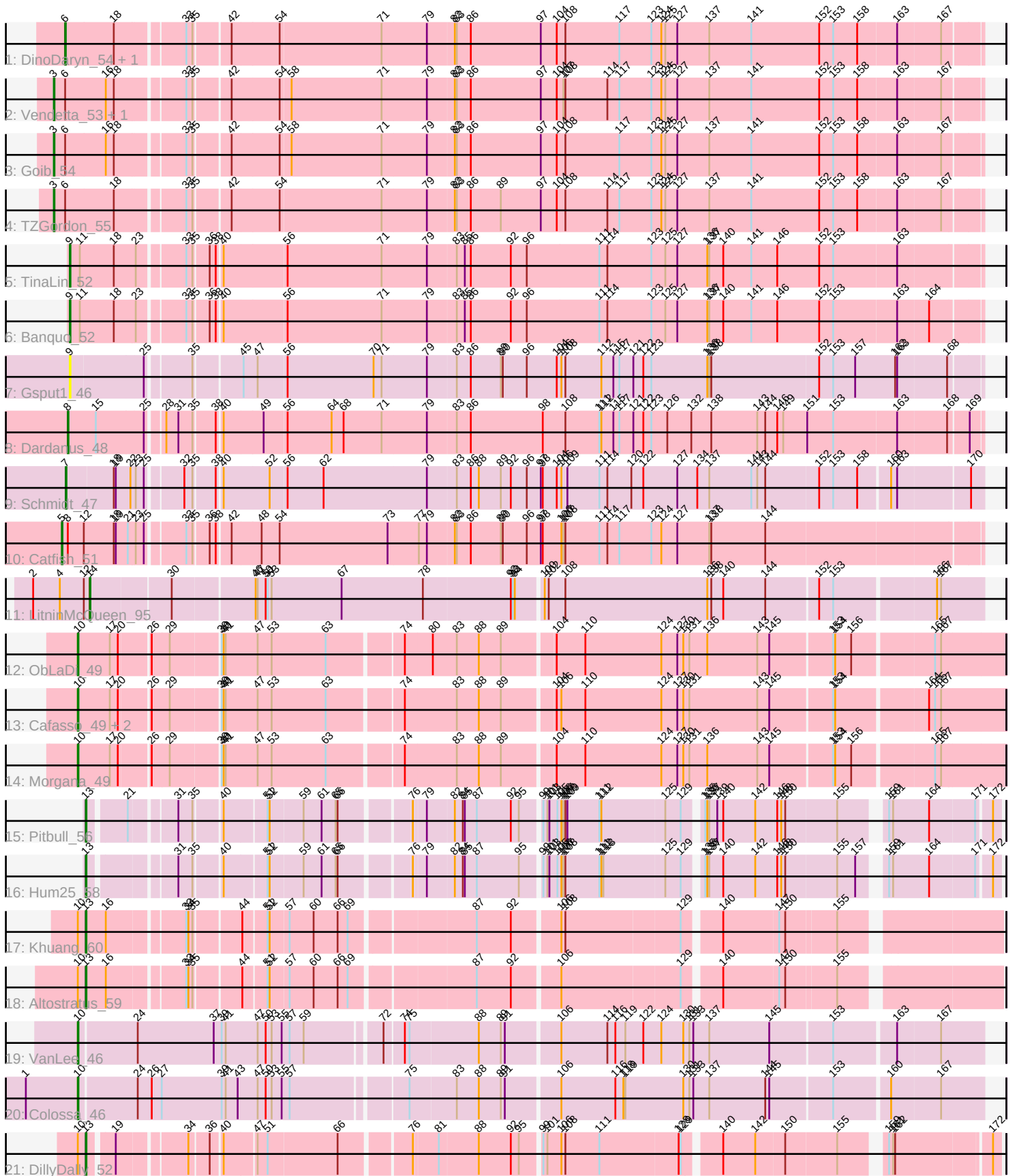


# Pham 313854



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 313854 Report

This analysis was run 09/05/26 on database version 662.

Pham number 313854 has 25 members, 1 are drafts.

Phages represented in each track:

- Track 1 : DinoDaryn\_54, Huffy\_54
- Track 2 : Vendetta\_53, Splinter\_53
- Track 3 : Goib\_54
- Track 4 : TZGordon\_55
- Track 5 : TinaLin\_52
- Track 6 : Banquo\_52
- Track 7 : Gsput1\_46
- Track 8 : Dardanus\_48
- Track 9 : Schmidt\_47
- Track 10 : Catfish\_51
- Track 11 : LitninMcQueen\_95
- Track 12 : ObLaDi\_49
- Track 13 : Cafasso\_49, ModicumRichard\_49, Aleemily\_48
- Track 14 : Morgana\_49
- Track 15 : Pitbull\_56
- Track 16 : Hum25\_58
- Track 17 : Khuang\_60
- Track 18 : Altostratus\_59
- Track 19 : VanLee\_46
- Track 20 : Colossa\_46
- Track 21 : DillyDally\_52

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

The start number called the most often in the published annotations is 10, it was called in 7 of the 24 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aleemily\_48, Cafasso\_49, Colossa\_46, ModicumRichard\_49, Morgana\_49, ObLaDi\_49, VanLee\_46,

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

- Altostratus\_59, DillyDally\_52, Khuang\_60,

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

• Banquo\_52, Catfish\_51, Dardanus\_48, DinoDaryn\_54, Goib\_54, Gsput1\_46, Huffy\_54, Hum25\_58, LitninMcQueen\_95, Pitbull\_56, Schmidt\_47, Splinter\_53, TZGordon\_55, TinaLin\_52, Vendetta\_53,

### Summary by start number:

Start 3:

- Found in 4 of 25 ( 16.0% ) of genes in pham
- Manual Annotations of this start: 4 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Goib\_54 (CU1), Splinter\_53 (CU1), TZGordon\_55 (CU1), Vendetta\_53 (CU1),

Start 5:

- Found in 1 of 25 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Catfish\_51 (CU5),

Start 6:

- Found in 6 of 25 ( 24.0% ) of genes in pham
- Manual Annotations of this start: 2 of 24
- Called 33.3% of time when present
- Phage (with cluster) where this start called: DinoDaryn\_54 (CU1), Huffy\_54 (CU1),

Start 7:

- Found in 1 of 25 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schmidt\_47 (CU4),

Start 8:

- Found in 2 of 25 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Dardanus\_48 (CU3),

Start 9:

- Found in 3 of 25 ( 12.0% ) of genes in pham
- Manual Annotations of this start: 2 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo\_52 (CU1), Gsput1\_46 (CU2), TinaLin\_52 (CU1),

Start 10:

- Found in 10 of 25 ( 40.0% ) of genes in pham
- Manual Annotations of this start: 7 of 24
- Called 70.0% of time when present
- Phage (with cluster) where this start called: Aleemily\_48 (DZ), Cafasso\_49 (DZ), Colossa\_46 (KA), ModicumRichard\_49 (DZ), Morgana\_49 (DZ), ObLaDi\_49 (DZ), VanLee\_46 (KA),

Start 13:

- Found in 5 of 25 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 5 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altostratus\_59 (FS), DillyDally\_52 (singleton), Hum25\_58 (FQ1), Khuang\_60 (FS), Pitbull\_56 (FQ1),

Start 14:

- Found in 1 of 25 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 1 of 24
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LitninMcQueen\_95 (DN1),

**Summary by clusters:**

There are 11 clusters represented in this pham: KA, FS, CU3, CU2, CU1, CU5, CU4, DN1, DZ, singleton, FQ1,

Info for manual annotations of cluster CU1:

- Start number 3 was manually annotated 4 times for cluster CU1.
- Start number 6 was manually annotated 2 times for cluster CU1.
- Start number 9 was manually annotated 2 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 8 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 7 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 5 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster DN1:

- Start number 14 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DZ:

- Start number 10 was manually annotated 5 times for cluster DZ.

Info for manual annotations of cluster FQ1:

- Start number 13 was manually annotated 2 times for cluster FQ1.

Info for manual annotations of cluster FS:

- Start number 13 was manually annotated 2 times for cluster FS.

Info for manual annotations of cluster KA:

- Start number 10 was manually annotated 2 times for cluster KA.

**Gene Information:**

Gene: Aleemily\_48 Start: 36948, Stop: 38267, Start Num: 10

Candidate Starts for Aleemily\_48:

(Start: 10 @36948 has 7 MA's), (17, 36996), (20, 37008), (26, 37050), (29, 37074), (39, 37143), (40, 37146), (41, 37149), (47, 37197), (53, 37218), (63, 37299), (74, 37404), (83, 37479), (88, 37512), (89, 37545), (104, 37617), (106, 37623), (110, 37659), (124, 37773), (127, 37797), (130, 37806), (131, 37815), (143, 37917), (145, 37935), (153, 38025), (154, 38028), (164, 38157), (165, 38166), (167, 38175),

Gene: Altostratus\_59 Start: 34297, Stop: 35538, Start Num: 13

Candidate Starts for Altostratus\_59:

(Start: 10 @34285 has 7 MA's), (Start: 13 @34297 has 5 MA's), (16, 34327), (33, 34432), (34, 34435), (35, 34441), (44, 34504), (51, 34537), (52, 34540), (57, 34567), (60, 34603), (66, 34639), (69, 34654), (87, 34825), (92, 34876), (106, 34939), (129, 35110), (140, 35158), (147, 35239), (150, 35248), (155, 35320),

Gene: Banquo\_52 Start: 33740, Stop: 35056, Start Num: 9

Candidate Starts for Banquo\_52:

(Start: 9 @33740 has 2 MA's), (11, 33755), (18, 33806), (23, 33836), (33, 33899), (35, 33908), (36, 33929), (38, 33938), (40, 33944), (56, 34034), (71, 34175), (79, 34241), (83, 34283), (85, 34295), (86, 34304), (92, 34364), (96, 34388), (111, 34496), (114, 34508), (123, 34574), (125, 34595), (127, 34613), (136, 34658), (137, 34661), (140, 34682), (141, 34724), (146, 34763), (152, 34826), (153, 34847), (163, 34940), (164, 34985),

Gene: Cafasso\_49 Start: 37522, Stop: 38841, Start Num: 10

Candidate Starts for Cafasso\_49:

(Start: 10 @37522 has 7 MA's), (17, 37570), (20, 37582), (26, 37624), (29, 37648), (39, 37717), (40, 37720), (41, 37723), (47, 37771), (53, 37792), (63, 37873), (74, 37978), (83, 38053), (88, 38086), (89, 38119), (104, 38191), (106, 38197), (110, 38233), (124, 38347), (127, 38371), (130, 38380), (131, 38389), (143, 38491), (145, 38509), (153, 38599), (154, 38602), (164, 38731), (165, 38740), (167, 38749),

Gene: Catfish\_51 Start: 35142, Stop: 36470, Start Num: 5

Candidate Starts for Catfish\_51:

(Start: 5 @35142 has 1 MA's), (Start: 8 @35151 has 1 MA's), (12, 35175), (18, 35220), (19, 35223), (21, 35241), (23, 35250), (25, 35262), (33, 35313), (35, 35322), (36, 35343), (38, 35352), (42, 35370), (48, 35412), (54, 35439), (73, 35601), (77, 35646), (79, 35658), (82, 35697), (83, 35700), (86, 35721), (89, 35766), (90, 35769), (96, 35805), (97, 35826), (98, 35829), (106, 35856), (107, 35859), (108, 35862), (111, 35913), (114, 35925), (117, 35943), (123, 35991), (124, 36006), (127, 36030), (137, 36078), (138, 36081), (144, 36162),

Gene: Colossa\_46 Start: 34604, Stop: 35902, Start Num: 10

Candidate Starts for Colossa\_46:

(1, 34526), (Start: 10 @34604 has 7 MA's), (24, 34688), (26, 34709), (27, 34724), (39, 34814), (41, 34820), (43, 34838), (47, 34868), (50, 34880), (53, 34889), (55, 34904), (57, 34916), (75, 35075), (83, 35141), (88, 35174), (89, 35207), (91, 35213), (106, 35288), (116, 35369), (118, 35381), (119, 35384), (130, 35471), (131, 35480), (133, 35486), (137, 35510), (144, 35594), (145, 35600), (153, 35690), (160, 35768), (167, 35840),

Gene: Dardanus\_48 Start: 32399, Stop: 33715, Start Num: 8

Candidate Starts for Dardanus\_48:

(Start: 8 @32399 has 1 MA's), (15, 32441), (25, 32510), (28, 32531), (31, 32549), (35, 32570), (38, 32600), (40, 32606), (49, 32663), (56, 32696), (64, 32762), (68, 32780), (71, 32837), (79, 32903), (83, 32945), (86, 32966), (98, 33074), (108, 33107), (111, 33158), (112, 33161), (115, 33179), (117, 33188), (121, 33209), (122, 33224), (123, 33236), (126, 33260), (132, 33296), (138, 33326), (143,

33395), (144, 33407), (146, 33425), (149, 33434), (151, 33467), (153, 33506), (163, 33599), (168, 33671), (169, 33698),

Gene: DillyDally\_52 Start: 33855, Stop: 35078, Start Num: 13

Candidate Starts for DillyDally\_52:

(Start: 10 @33843 has 7 MA's), (Start: 13 @33855 has 5 MA's), (19, 33888), (34, 33981), (36, 34008), (40, 34023), (47, 34068), (51, 34083), (66, 34185), (76, 34281), (81, 34314), (88, 34371), (92, 34419), (95, 34431), (99, 34458), (101, 34464), (106, 34485), (108, 34491), (111, 34542), (128, 34656), (129, 34659), (140, 34707), (142, 34755), (150, 34797), (155, 34872), (159, 34926), (161, 34932), (162, 34935), (172, 35067),

Gene: DinoDaryn\_54 Start: 34269, Stop: 35591, Start Num: 6

Candidate Starts for DinoDaryn\_54:

(Start: 6 @34269 has 2 MA's), (18, 34341), (33, 34434), (35, 34443), (42, 34491), (54, 34560), (71, 34710), (79, 34776), (82, 34815), (83, 34818), (86, 34839), (97, 34944), (104, 34968), (108, 34980), (117, 35061), (123, 35109), (124, 35124), (125, 35130), (127, 35148), (137, 35196), (141, 35259), (152, 35361), (153, 35382), (158, 35418), (163, 35475), (167, 35538),

Gene: Goib\_54 Start: 34792, Stop: 36129, Start Num: 3

Candidate Starts for Goib\_54:

(Start: 3 @34792 has 4 MA's), (Start: 6 @34807 has 2 MA's), (16, 34867), (18, 34879), (33, 34972), (35, 34981), (42, 35029), (54, 35098), (58, 35113), (71, 35248), (79, 35314), (82, 35353), (83, 35356), (86, 35377), (97, 35482), (104, 35506), (108, 35518), (117, 35599), (123, 35647), (124, 35662), (125, 35668), (127, 35686), (137, 35734), (141, 35797), (152, 35899), (153, 35920), (158, 35956), (163, 36013), (167, 36076),

Gene: Gsput1\_46 Start: 33194, Stop: 34504, Start Num: 9

Candidate Starts for Gsput1\_46:

(Start: 9 @33194 has 2 MA's), (25, 33299), (35, 33359), (45, 33422), (47, 33440), (56, 33482), (70, 33611), (71, 33623), (79, 33689), (83, 33731), (86, 33752), (89, 33797), (90, 33800), (96, 33836), (104, 33881), (106, 33887), (108, 33893), (112, 33947), (115, 33965), (117, 33974), (121, 33995), (122, 34010), (123, 34022), (136, 34106), (137, 34109), (138, 34112), (152, 34271), (153, 34292), (157, 34325), (162, 34385), (163, 34388), (168, 34460),

Gene: Huffy\_54 Start: 34269, Stop: 35591, Start Num: 6

Candidate Starts for Huffy\_54:

(Start: 6 @34269 has 2 MA's), (18, 34341), (33, 34434), (35, 34443), (42, 34491), (54, 34560), (71, 34710), (79, 34776), (82, 34815), (83, 34818), (86, 34839), (97, 34944), (104, 34968), (108, 34980), (117, 35061), (123, 35109), (124, 35124), (125, 35130), (127, 35148), (137, 35196), (141, 35259), (152, 35361), (153, 35382), (158, 35418), (163, 35475), (167, 35538),

Gene: Hum25\_58 Start: 33333, Stop: 34556, Start Num: 13

Candidate Starts for Hum25\_58:

(Start: 13 @33333 has 5 MA's), (31, 33444), (35, 33465), (40, 33501), (51, 33561), (52, 33564), (59, 33612), (61, 33639), (65, 33660), (66, 33663), (76, 33756), (79, 33771), (82, 33810), (84, 33822), (85, 33825), (87, 33843), (95, 33906), (99, 33933), (101, 33939), (103, 33942), (105, 33954), (106, 33960), (107, 33963), (108, 33966), (111, 34017), (112, 34020), (113, 34023), (125, 34113), (129, 34134), (135, 34155), (136, 34158), (137, 34161), (140, 34182), (142, 34230), (146, 34260), (148, 34266), (150, 34272), (155, 34347), (157, 34374), (159, 34401), (161, 34407), (164, 34461), (171, 34527), (172, 34545),

Gene: Khuang\_60 Start: 34884, Stop: 36125, Start Num: 13

Candidate Starts for Khuang\_60:

(Start: 10 @34872 has 7 MA's), (Start: 13 @34884 has 5 MA's), (16, 34914), (33, 35019), (34, 35022), (35, 35028), (44, 35091), (51, 35124), (52, 35127), (57, 35154), (60, 35190), (66, 35226), (69, 35241), (87, 35412), (92, 35463), (106, 35526), (108, 35532), (129, 35697), (140, 35745), (147, 35826), (150, 35835), (155, 35907),

Gene: LitninMcQueen\_95 Start: 50145, Stop: 51434, Start Num: 14

Candidate Starts for LitninMcQueen\_95:

(2, 50061), (4, 50100), (12, 50136), (Start: 14 @50145 has 1 MA's), (30, 50259), (46, 50376), (47, 50379), (50, 50391), (51, 50394), (53, 50400), (67, 50505), (78, 50625), (92, 50754), (93, 50757), (94, 50760), (100, 50796), (102, 50802), (108, 50826), (136, 51039), (138, 51045), (140, 51063), (144, 51126), (152, 51201), (153, 51222), (166, 51366), (167, 51372),

Gene: ModicumRichard\_49 Start: 37521, Stop: 38840, Start Num: 10

Candidate Starts for ModicumRichard\_49:

(Start: 10 @37521 has 7 MA's), (17, 37569), (20, 37581), (26, 37623), (29, 37647), (39, 37716), (40, 37719), (41, 37722), (47, 37770), (53, 37791), (63, 37872), (74, 37977), (83, 38052), (88, 38085), (89, 38118), (104, 38190), (106, 38196), (110, 38232), (124, 38346), (127, 38370), (130, 38379), (131, 38388), (143, 38490), (145, 38508), (153, 38598), (154, 38601), (164, 38730), (165, 38739), (167, 38748),

Gene: Morgana\_49 Start: 37475, Stop: 38794, Start Num: 10

Candidate Starts for Morgana\_49:

(Start: 10 @37475 has 7 MA's), (17, 37523), (20, 37535), (26, 37577), (29, 37601), (39, 37670), (40, 37673), (41, 37676), (47, 37724), (53, 37745), (63, 37826), (74, 37931), (83, 38006), (88, 38039), (89, 38072), (104, 38144), (110, 38186), (124, 38300), (127, 38324), (130, 38333), (131, 38342), (136, 38369), (143, 38444), (145, 38462), (153, 38552), (154, 38555), (156, 38579), (165, 38693), (167, 38702),

Gene: ObLaDi\_49 Start: 37512, Stop: 38831, Start Num: 10

Candidate Starts for ObLaDi\_49:

(Start: 10 @37512 has 7 MA's), (17, 37560), (20, 37572), (26, 37614), (29, 37638), (39, 37707), (40, 37710), (41, 37713), (47, 37761), (53, 37782), (63, 37863), (74, 37968), (80, 38007), (83, 38043), (88, 38076), (89, 38109), (104, 38181), (110, 38223), (124, 38337), (127, 38361), (130, 38370), (131, 38379), (136, 38406), (143, 38481), (145, 38499), (153, 38589), (154, 38592), (156, 38616), (165, 38730), (167, 38739),

Gene: Pitbull\_56 Start: 31929, Stop: 33152, Start Num: 13

Candidate Starts for Pitbull\_56:

(Start: 13 @31929 has 5 MA's), (21, 31980), (31, 32040), (35, 32061), (40, 32097), (51, 32157), (52, 32160), (59, 32208), (61, 32235), (65, 32256), (66, 32259), (76, 32352), (79, 32367), (82, 32406), (84, 32418), (85, 32421), (87, 32439), (92, 32490), (95, 32502), (99, 32529), (101, 32535), (103, 32538), (105, 32550), (106, 32556), (107, 32559), (108, 32562), (109, 32565), (111, 32613), (112, 32616), (125, 32709), (129, 32730), (135, 32751), (136, 32754), (137, 32757), (139, 32769), (140, 32778), (142, 32826), (146, 32856), (148, 32862), (150, 32868), (155, 32943), (159, 32997), (161, 33003), (164, 33057), (171, 33123), (172, 33141),

Gene: Schmidt\_47 Start: 31454, Stop: 32767, Start Num: 7

Candidate Starts for Schmidt\_47:

(Start: 7 @31454 has 1 MA's), (18, 31523), (19, 31526), (22, 31547), (23, 31553), (25, 31565), (32, 31613), (35, 31625), (38, 31655), (40, 31661), (52, 31727), (56, 31751), (62, 31805), (79, 31958), (83, 32000), (86, 32021), (88, 32033), (89, 32066), (92, 32081), (96, 32105), (97, 32126), (98, 32129), (104, 32150), (106, 32156), (109, 32165), (111, 32213), (114, 32225), (120, 32261), (122, 32279), (127, 32330), (134, 32360), (137, 32378), (141, 32441), (143, 32450), (144, 32462), (152, 32540), (153,

32561), (158, 32597), (160, 32639), (163, 32648), (170, 32750),

Gene: Splinter\_53 Start: 34815, Stop: 36152, Start Num: 3

Candidate Starts for Splinter\_53:

(Start: 3 @34815 has 4 MA's), (Start: 6 @34830 has 2 MA's), (16, 34890), (18, 34902), (33, 34995), (35, 35004), (42, 35052), (54, 35121), (58, 35136), (71, 35271), (79, 35337), (82, 35376), (83, 35379), (86, 35400), (97, 35505), (104, 35529), (107, 35538), (108, 35541), (114, 35604), (117, 35622), (123, 35670), (124, 35685), (125, 35691), (127, 35709), (137, 35757), (141, 35820), (152, 35922), (153, 35943), (158, 35979), (163, 36036), (167, 36099),

Gene: TZGordon\_55 Start: 34161, Stop: 35498, Start Num: 3

Candidate Starts for TZGordon\_55:

(Start: 3 @34161 has 4 MA's), (Start: 6 @34176 has 2 MA's), (18, 34248), (33, 34341), (35, 34350), (42, 34398), (54, 34467), (71, 34617), (79, 34683), (82, 34722), (83, 34725), (86, 34746), (89, 34791), (97, 34851), (104, 34875), (108, 34887), (114, 34950), (117, 34968), (123, 35016), (124, 35031), (125, 35037), (127, 35055), (137, 35103), (141, 35166), (152, 35268), (153, 35289), (158, 35325), (163, 35382), (167, 35445),

Gene: TinaLin\_52 Start: 33634, Stop: 34950, Start Num: 9

Candidate Starts for TinaLin\_52:

(Start: 9 @33634 has 2 MA's), (11, 33649), (18, 33700), (23, 33730), (33, 33793), (35, 33802), (36, 33823), (38, 33832), (40, 33838), (56, 33928), (71, 34069), (79, 34135), (83, 34177), (85, 34189), (86, 34198), (92, 34258), (96, 34282), (111, 34390), (114, 34402), (123, 34468), (125, 34489), (127, 34507), (136, 34552), (137, 34555), (140, 34576), (141, 34618), (146, 34657), (152, 34720), (153, 34741), (163, 34834),

Gene: VanLee\_46 Start: 34753, Stop: 36051, Start Num: 10

Candidate Starts for VanLee\_46:

(Start: 10 @34753 has 7 MA's), (24, 34837), (37, 34951), (39, 34963), (41, 34969), (47, 35017), (50, 35029), (53, 35038), (55, 35053), (57, 35065), (59, 35086), (72, 35191), (74, 35218), (75, 35224), (88, 35323), (89, 35356), (91, 35362), (106, 35437), (114, 35506), (116, 35518), (119, 35533), (122, 35560), (124, 35587), (130, 35620), (131, 35629), (133, 35635), (137, 35659), (145, 35749), (153, 35839), (163, 35926), (167, 35989),

Gene: Vendetta\_53 Start: 34815, Stop: 36152, Start Num: 3

Candidate Starts for Vendetta\_53:

(Start: 3 @34815 has 4 MA's), (Start: 6 @34830 has 2 MA's), (16, 34890), (18, 34902), (33, 34995), (35, 35004), (42, 35052), (54, 35121), (58, 35136), (71, 35271), (79, 35337), (82, 35376), (83, 35379), (86, 35400), (97, 35505), (104, 35529), (107, 35538), (108, 35541), (114, 35604), (117, 35622), (123, 35670), (124, 35685), (125, 35691), (127, 35709), (137, 35757), (141, 35820), (152, 35922), (153, 35943), (158, 35979), (163, 36036), (167, 36099),