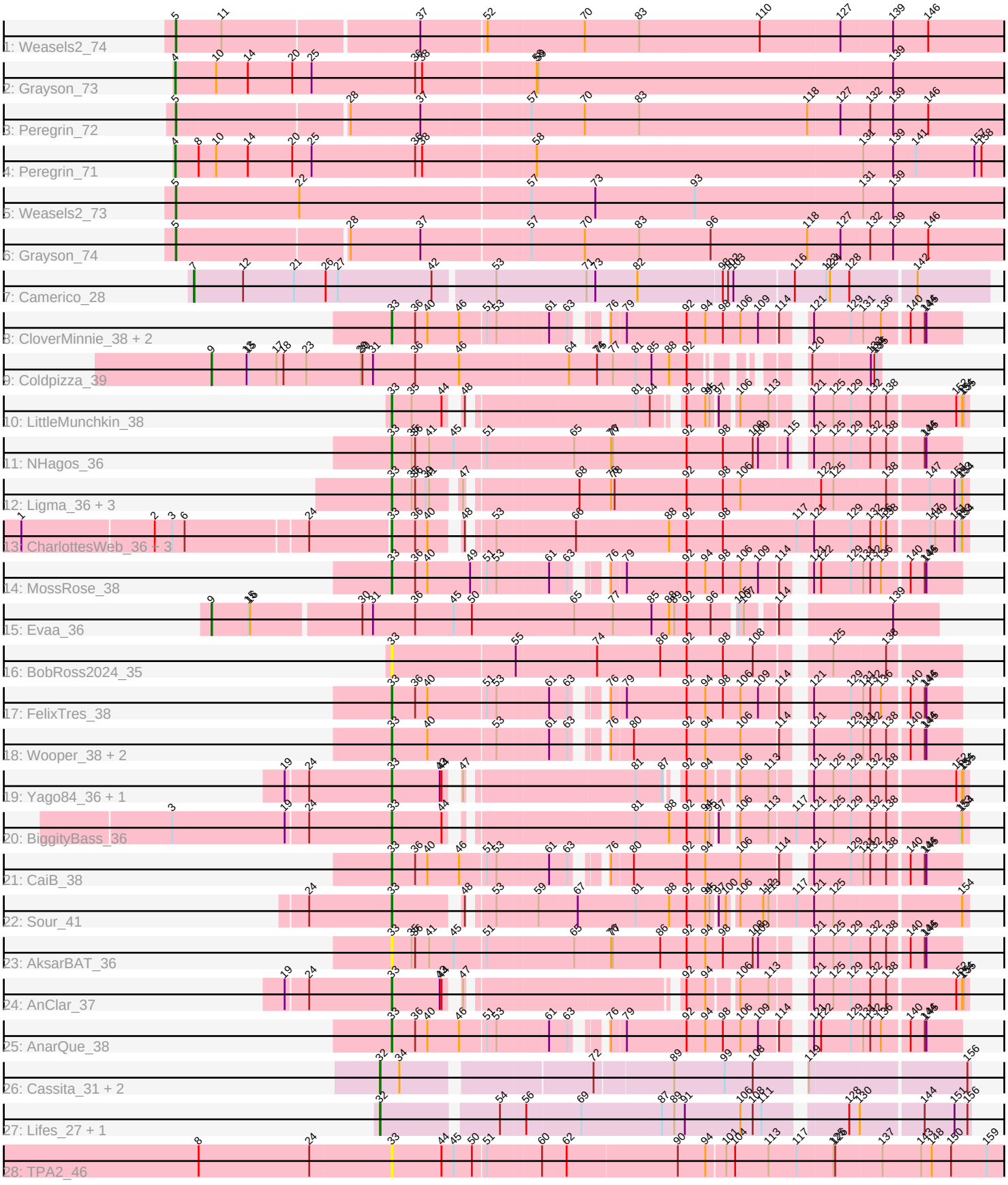
# Pham 347773


1: Weasels2_74
2: Grayson_73
3: Peregrin_72
4: Peregrin_71
5: Weasels2_73
6: Grayson_74
7: Camerico_28
8: CloverMinnie_38 + 2
9: Coldpizza_39
10: LittleMunchkin_38
11: NHagos_36
12: Ligma_36 + 3
13: CharlottesWeb_36 + 3
14: MossRose_38
15: Evaa_36
16: BobRoss2024_35
17: FelixTres_38
18: Wooper_38 + 2
19: Yago84_36 + 1
20: BiggityBass_36
21: CaiB_38
22: Sour_41
23: AksarBAT_36
24: AnClar_37
25: AnarQue_38
26: Cassita_31 + 2
27: Lifes_27 + 1
28: TPA2_46

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 347773 Report

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

Pham number 347773 has 42 members, 7 are drafts.

Phages represented in each track:
- Track 1 : Weasels2_74
- Track 2 : Grayson_73
- Track 3 : Peregrin_72
- Track 4 : Peregrin_71
- Track 5 : Weasels2_73
- Track 6 : Grayson_74
- Track 7 : Camerico_28
- Track 8 : CloverMinnie_38, Blackpen_38, MakoManhole_38
- Track 9 : Coldpizza_39
- Track 10 : LittleMunchkin_38
- Track 11 : NHagos_36
- Track 12 : Ligma_36, Fresco_36, Axumite_36, Shatter_36
- Track 13 : CharlottesWeb_36, JellyBelly_36, Mariokart_36, Coco2012_36
- Track 14 : MossRose_38
- Track 15 : Evaa_36
- Track 16 : BobRoss2024_35
- Track 17 : FelixTres_38
- Track 18 : Wooper_38, TraderJ_38, Yeshua_38
- Track 19 : Yago84_36, Sisko_36
- Track 20 : BiggityBass_36
- Track 21 : CaiB_38
- Track 22 : Sour_41
- Track 23 : AksarBAT_36
- Track 24 : AnClar_37
- Track 25 : AnarQue_38
- Track 26 : Cassita_31, WaterT_30, LeeroyJenkins_31
- Track 27 : Lifes_27, BarnCat_25
- Track 28 : TPA2_46

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

The start number called the most often in the published annotations is 33, it was called in 21 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AksarBAT_36, AnClar_37, AnarQue_38, Axumite_36, BiggityBass_36, Blackpen_38, BobRoss2024_35, CaiB_38, CharlottesWeb_36, CloverMinnie_38, Coco2012_36, FelixTres_38, Fresco_36, JellyBelly_36, Ligma_36, LittleMunchkin_38, MakoManhole_38, Mariokart_36, MossRose_38, NHagos_36, Shatter_36, Sisko_36, Sour_41, TPA2_46, TraderJ_38, Wooper_38, Yago84_36, Yeshua_38,

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

Genes that do not have the "Most Annotated" start:
• BarnCat_25, Camerico_28, Cassita_31, Coldpizza_39, Evaa_36, Grayson_73, Grayson_74, LeeroyJenkins_31, Lifes_27, Peregrin_71, Peregrin_72, WaterT_30, Weasels2_73, Weasels2_74,

**Summary by start number:**

Start 4:
• Found in 2 of 42 ( 4.8% ) of genes in pham
• Manual Annotations of this start: 2 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Grayson_73 (CB), Peregrin_71 (CB),

Start 5:
• Found in 4 of 42 ( 9.5% ) of genes in pham
• Manual Annotations of this start: 4 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Grayson_74 (CB), Peregrin_72 (CB), Weasels2_73 (CB), Weasels2_74 (CB),

Start 7:
• Found in 1 of 42 ( 2.4% ) of genes in pham
• Manual Annotations of this start: 1 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Camerico_28 (DF4),

Start 9:
• Found in 2 of 42 ( 4.8% ) of genes in pham
• Manual Annotations of this start: 2 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Coldpizza_39 (DR), Evaa_36 (DR),

Start 32:
• Found in 5 of 42 ( 11.9% ) of genes in pham
• Manual Annotations of this start: 5 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BarnCat_25 (GB), Cassita_31 (GB), LeeroyJenkins_31 (GB), Lifes_27 (GB), WaterT_30 (GB),

Start 33:
• Found in 28 of 42 ( 66.7% ) of genes in pham
• Manual Annotations of this start: 21 of 35

• Called 100.0% of time when present
• Phage (with cluster) where this start called: AksarBAT_36 (DR), AnClar_37 (DR), AnarQue_38 (DR), Axumite_36 (DR), BiggityBass_36 (DR), Blackpen_38 (DR), BobRoss2024_35 (DR), CaiB_38 (DR), CharlottesWeb_36 (DR), CloverMinnie_38 (DR), Coco2012_36 (DR), FelixTres_38 (DR), Fresco_36 (DR), JellyBelly_36 (DR), Ligma_36 (DR), LittleMunchkin_38 (DR), MakoManhole_38 (DR), Mariokart_36 (DR), MossRose_38 (DR), NHagos_36 (DR), Shatter_36 (DR), Sisko_36 (DR), Sour_41 (DR), TPA2_46 (singleton), TraderJ_38 (DR), Wooper_38 (DR), Yago84_36 (DR), Yeshua_38 (DR),

**Summary by clusters:**

There are 5 clusters represented in this pham: CB, singleton, DR, GB, DF4,

Info for manual annotations of cluster CB:
•Start number 4 was manually annotated 2 times for cluster CB.
•Start number 5 was manually annotated 4 times for cluster CB.

Info for manual annotations of cluster DF4:
•Start number 7 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster DR:
•Start number 9 was manually annotated 2 times for cluster DR.
•Start number 33 was manually annotated 21 times for cluster DR.

Info for manual annotations of cluster GB:
•Start number 32 was manually annotated 5 times for cluster GB.

***Gene Information:***

Gene: AksarBAT_36 Start: 31643, Stop: 32539, Start Num: 33
Candidate Starts for AksarBAT_36:
(Start: 33 @31643 has 21 MA's), (35, 31676), (36, 31682), (41, 31706), (45, 31748), (51, 31799), (65, 31940), (76, 32000), (77, 32003), (86, 32078), (92, 32123), (94, 32153), (98, 32183), (108, 32234), (109, 32243), (121, 32303), (125, 32333), (129, 32363), (132, 32393), (138, 32420), (140, 32453), (144, 32477), (145, 32480),

Gene: AnClar_37 Start: 33997, Stop: 34812, Start Num: 33
Candidate Starts for AnClar_37:
(19, 33820), (24, 33856), (Start: 33 @33997 has 21 MA's), (43, 34078), (44, 34081), (47, 34093), (92, 34408), (94, 34438), (106, 34477), (113, 34522), (121, 34564), (125, 34594), (129, 34624), (132, 34654), (138, 34681), (152, 34792), (154, 34801), (155, 34804),

Gene: AnarQue_38 Start: 33101, Stop: 33943, Start Num: 33
Candidate Starts for AnarQue_38:
(Start: 33 @33101 has 21 MA's), (36, 33140), (40, 33161), (46, 33215), (51, 33257), (53, 33272), (61, 33353), (63, 33380), (76, 33407), (79, 33428), (92, 33527), (94, 33557), (98, 33587), (106, 33617), (109, 33647), (114, 33677), (121, 33707), (122, 33716), (129, 33767), (131, 33785), (132, 33797), (136, 33815), (140, 33857), (144, 33881), (145, 33884),

Gene: Axumite_36 Start: 31148, Stop: 32053, Start Num: 33

Candidate Starts for Axumite_36:
(Start: 33 @31148 has 21 MA's), (35, 31181), (36, 31187), (39, 31205), (41, 31211), (47, 31250), (68, 31418), (76, 31472), (78, 31478), (92, 31595), (98, 31655), (106, 31685), (122, 31817), (125, 31838), (138, 31925), (147, 31988), (151, 32030), (153, 32039), (154, 32042),

Gene: BarnCat_25 Start: 12489, Stop: 13412, Start Num: 32
Candidate Starts for BarnCat_25:
(Start: 32 @12489 has 5 MA's), (54, 12669), (56, 12711), (69, 12801), (87, 12933), (89, 12954), (91, 12972), (106, 13065), (108, 13086), (111, 13101), (128, 13221), (130, 13239), (144, 13335), (151, 13386), (156, 13407),

Gene: BiggityBass_36 Start: 33404, Stop: 34276, Start Num: 33
Candidate Starts for BiggityBass_36:
(3, 33038), (19, 33227), (24, 33263), (Start: 33 @33404 has 21 MA's), (44, 33488), (81, 33758), (88, 33812), (92, 33842), (94, 33872), (95, 33878), (97, 33887), (106, 33911), (113, 33956), (117, 33998), (121, 34028), (125, 34058), (129, 34088), (132, 34118), (138, 34145), (153, 34262), (154, 34265),

Gene: Blackpen_38 Start: 32519, Stop: 33361, Start Num: 33
Candidate Starts for Blackpen_38:
(Start: 33 @32519 has 21 MA's), (36, 32558), (40, 32579), (46, 32633), (51, 32675), (53, 32690), (61, 32771), (63, 32798), (76, 32825), (79, 32846), (92, 32945), (94, 32975), (98, 33005), (106, 33035), (109, 33065), (114, 33095), (121, 33125), (129, 33185), (131, 33203), (136, 33233), (140, 33275), (144, 33299), (145, 33302),

Gene: BobRoss2024_35 Start: 31155, Stop: 32051, Start Num: 33
Candidate Starts for BobRoss2024_35:
(Start: 33 @31155 has 21 MA's), (55, 31356), (74, 31488), (86, 31590), (92, 31635), (98, 31695), (108, 31746), (125, 31845), (138, 31932),

Gene: CaiB_38 Start: 33087, Stop: 33929, Start Num: 33
Candidate Starts for CaiB_38:
(Start: 33 @33087 has 21 MA's), (36, 33126), (40, 33147), (46, 33201), (51, 33243), (53, 33258), (61, 33339), (63, 33366), (76, 33393), (80, 33426), (92, 33513), (94, 33543), (106, 33603), (114, 33663), (121, 33693), (129, 33753), (131, 33771), (132, 33783), (138, 33810), (140, 33843), (144, 33867), (145, 33870),

Gene: Camerico_28 Start: 33627, Stop: 34943, Start Num: 7
Candidate Starts for Camerico_28:
(Start: 7 @33627 has 1 MA's), (12, 33711), (21, 33798), (26, 33852), (27, 33873), (42, 34029), (53, 34125), (71, 34278), (73, 34293), (82, 34362), (98, 34503), (102, 34512), (103, 34521), (116, 34620), (123, 34674), (124, 34680), (128, 34713), (142, 34821),

Gene: Cassita_31 Start: 14880, Stop: 15788, Start Num: 32
Candidate Starts for Cassita_31:
(Start: 32 @14880 has 5 MA's), (34, 14913), (72, 15207), (89, 15330), (99, 15414), (108, 15462), (119, 15531), (156, 15783),

Gene: CharlottesWeb_36 Start: 31078, Stop: 31977, Start Num: 33
Candidate Starts for CharlottesWeb_36:
(1, 30472), (2, 30694), (3, 30724), (6, 30745), (24, 30943), (Start: 33 @31078 has 21 MA's), (36, 31117), (40, 31138), (48, 31177), (53, 31207), (66, 31336), (88, 31486), (92, 31516), (98, 31576), (117, 31699), (121, 31729), (129, 31789), (132, 31819), (136, 31837), (138, 31846), (147, 31912), (149, 31921), (151, 31954), (153, 31963), (154, 31966),

Gene: CloverMinnie_38 Start: 33027, Stop: 33869, Start Num: 33
Candidate Starts for CloverMinnie_38:
(Start: 33 @33027 has 21 MA's), (36, 33066), (40, 33087), (46, 33141), (51, 33183), (53, 33198), (61, 33279), (63, 33306), (76, 33333), (79, 33354), (92, 33453), (94, 33483), (98, 33513), (106, 33543), (109, 33573), (114, 33603), (121, 33633), (129, 33693), (131, 33711), (136, 33741), (140, 33783), (144, 33807), (145, 33810),

Gene: Coco2012_36 Start: 31075, Stop: 31974, Start Num: 33
Candidate Starts for Coco2012_36:
(1, 30469), (2, 30691), (3, 30721), (6, 30742), (24, 30940), (Start: 33 @31075 has 21 MA's), (36, 31114), (40, 31135), (48, 31174), (53, 31204), (66, 31333), (88, 31483), (92, 31513), (98, 31573), (117, 31696), (121, 31726), (129, 31786), (132, 31816), (136, 31834), (138, 31843), (147, 31909), (149, 31918), (151, 31951), (153, 31960), (154, 31963),

Gene: Coldpizza_39 Start: 35530, Stop: 36546, Start Num: 9
Candidate Starts for Coldpizza_39:
(Start: 9 @35530 has 2 MA's), (13, 35590), (15, 35593), (17, 35641), (18, 35653), (23, 35692), (29, 35785), (30, 35788), (31, 35806), (36, 35872), (46, 35944), (64, 36124), (74, 36172), (75, 36175), (77, 36199), (81, 36235), (85, 36262), (88, 36292), (92, 36322), (120, 36439), (133, 36529), (134, 36535), (135, 36538),

Gene: Evaa_36 Start: 31898, Stop: 33037, Start Num: 9
Candidate Starts for Evaa_36:
(Start: 9 @31898 has 2 MA's), (15, 31961), (16, 31964), (30, 32144), (31, 32162), (36, 32228), (45, 32291), (50, 32321), (65, 32489), (77, 32552), (85, 32615), (88, 32642), (89, 32651), (92, 32672), (96, 32711), (105, 32747), (107, 32756), (114, 32798), (139, 32960),

Gene: FelixTres_38 Start: 33090, Stop: 33932, Start Num: 33
Candidate Starts for FelixTres_38:
(Start: 33 @33090 has 21 MA's), (36, 33129), (40, 33150), (51, 33246), (53, 33261), (61, 33342), (63, 33369), (76, 33396), (79, 33417), (92, 33516), (94, 33546), (98, 33576), (106, 33606), (109, 33636), (114, 33666), (121, 33696), (129, 33756), (131, 33774), (132, 33786), (136, 33804), (140, 33846), (144, 33870), (145, 33873),

Gene: Fresco_36 Start: 31148, Stop: 32053, Start Num: 33
Candidate Starts for Fresco_36:
(Start: 33 @31148 has 21 MA's), (35, 31181), (36, 31187), (39, 31205), (41, 31211), (47, 31250), (68, 31418), (76, 31472), (78, 31478), (92, 31595), (98, 31655), (106, 31685), (122, 31817), (125, 31838), (138, 31925), (147, 31988), (151, 32030), (153, 32039), (154, 32042),

Gene: Grayson_73 Start: 33212, Stop: 34630, Start Num: 4
Candidate Starts for Grayson_73:
(Start: 4 @33212 has 2 MA's), (10, 33281), (14, 33335), (20, 33410), (25, 33443), (36, 33617), (38, 33629), (58, 33809), (59, 33812), (139, 34409),

Gene: Grayson_74 Start: 34649, Stop: 36040, Start Num: 5
Candidate Starts for Grayson_74:
(Start: 5 @34649 has 4 MA's), (28, 34928), (37, 35045), (57, 35219), (70, 35309), (83, 35402), (96, 35522), (118, 35687), (127, 35741), (132, 35789), (139, 35828), (146, 35888),

Gene: JellyBelly_36 Start: 31081, Stop: 31980, Start Num: 33
Candidate Starts for JellyBelly_36:

(1, 30475), (2, 30697), (3, 30727), (6, 30748), (24, 30946), (Start: 33 @31081 has 21 MA's), (36, 31120), (40, 31141), (48, 31180), (53, 31210), (66, 31339), (88, 31489), (92, 31519), (98, 31579), (117, 31702), (121, 31732), (129, 31792), (132, 31822), (136, 31840), (138, 31849), (147, 31915), (149, 31924), (151, 31957), (153, 31966), (154, 31969),

Gene: LeeroyJenkins_31 Start: 14811, Stop: 15719, Start Num: 32
Candidate Starts for LeeroyJenkins_31:
(Start: 32 @14811 has 5 MA's), (34, 14844), (72, 15138), (89, 15261), (99, 15345), (108, 15393), (119, 15462), (156, 15714),

Gene: Lifes_27 Start: 12520, Stop: 13443, Start Num: 32
Candidate Starts for Lifes_27:
(Start: 32 @12520 has 5 MA's), (54, 12700), (56, 12742), (69, 12832), (87, 12964), (89, 12985), (91, 13003), (106, 13096), (108, 13117), (111, 13132), (128, 13252), (130, 13270), (144, 13366), (151, 13417), (156, 13438),

Gene: Ligma_36 Start: 31148, Stop: 32053, Start Num: 33
Candidate Starts for Ligma_36:
(Start: 33 @31148 has 21 MA's), (35, 31181), (36, 31187), (39, 31205), (41, 31211), (47, 31250), (68, 31418), (76, 31472), (78, 31478), (92, 31595), (98, 31655), (106, 31685), (122, 31817), (125, 31838), (138, 31925), (147, 31988), (151, 32030), (153, 32039), (154, 32042),

Gene: LittleMunchkin_38 Start: 34566, Stop: 35381, Start Num: 33
Candidate Starts for LittleMunchkin_38:
(Start: 33 @34566 has 21 MA's), (35, 34599), (44, 34650), (48, 34665), (81, 34920), (84, 34944), (92, 34977), (94, 35007), (95, 35013), (97, 35022), (106, 35046), (113, 35091), (121, 35133), (125, 35163), (129, 35193), (132, 35223), (138, 35250), (152, 35361), (154, 35370), (155, 35373),

Gene: MakoManhole_38 Start: 33105, Stop: 33947, Start Num: 33
Candidate Starts for MakoManhole_38:
(Start: 33 @33105 has 21 MA's), (36, 33144), (40, 33165), (46, 33219), (51, 33261), (53, 33276), (61, 33357), (63, 33384), (76, 33411), (79, 33432), (92, 33531), (94, 33561), (98, 33591), (106, 33621), (109, 33651), (114, 33681), (121, 33711), (129, 33771), (131, 33789), (136, 33819), (140, 33861), (144, 33885), (145, 33888),

Gene: Mariokart_36 Start: 31077, Stop: 31976, Start Num: 33
Candidate Starts for Mariokart_36:
(1, 30471), (2, 30693), (3, 30723), (6, 30744), (24, 30942), (Start: 33 @31077 has 21 MA's), (36, 31116), (40, 31137), (48, 31176), (53, 31206), (66, 31335), (88, 31485), (92, 31515), (98, 31575), (117, 31698), (121, 31728), (129, 31788), (132, 31818), (136, 31836), (138, 31845), (147, 31911), (149, 31920), (151, 31953), (153, 31962), (154, 31965),

Gene: MossRose_38 Start: 33084, Stop: 33926, Start Num: 33
Candidate Starts for MossRose_38:
(Start: 33 @33084 has 21 MA's), (36, 33123), (40, 33144), (49, 33216), (51, 33240), (53, 33255), (61, 33336), (63, 33363), (76, 33390), (79, 33411), (92, 33510), (94, 33540), (98, 33570), (106, 33600), (109, 33630), (114, 33660), (121, 33690), (122, 33699), (129, 33750), (131, 33768), (132, 33780), (136, 33798), (140, 33840), (144, 33864), (145, 33867),

Gene: NHagos_36 Start: 31646, Stop: 32542, Start Num: 33
Candidate Starts for NHagos_36:
(Start: 33 @31646 has 21 MA's), (35, 31679), (36, 31685), (41, 31709), (45, 31751), (51, 31802), (65, 31943), (76, 32003), (77, 32006), (92, 32126), (98, 32186), (108, 32237), (109, 32246), (115, 32291),

(121, 32306), (125, 32336), (129, 32366), (132, 32396), (138, 32423), (144, 32480), (145, 32483),

Gene: Peregrin_72 Start: 33431, Stop: 34822, Start Num: 5
Candidate Starts for Peregrin_72:
(Start: 5 @33431 has 4 MA's), (28, 33710), (37, 33827), (57, 34001), (70, 34091), (83, 34184), (118, 34469), (127, 34523), (132, 34571), (139, 34610), (146, 34670),

Gene: Peregrin_71 Start: 31994, Stop: 33412, Start Num: 4
Candidate Starts for Peregrin_71:
(Start: 4 @31994 has 2 MA's), (8, 32033), (10, 32063), (14, 32117), (20, 32192), (25, 32225), (36, 32399), (38, 32411), (58, 32591), (131, 33140), (139, 33191), (141, 33230), (157, 33329), (158, 33341),

Gene: Shatter_36 Start: 31148, Stop: 32053, Start Num: 33
Candidate Starts for Shatter_36:
(Start: 33 @31148 has 21 MA's), (35, 31181), (36, 31187), (39, 31205), (41, 31211), (47, 31250), (68, 31418), (76, 31472), (78, 31478), (92, 31595), (98, 31655), (106, 31685), (122, 31817), (125, 31838), (138, 31925), (147, 31988), (151, 32030), (153, 32039), (154, 32042),

Gene: Sisko_36 Start: 32004, Stop: 32819, Start Num: 33
Candidate Starts for Sisko_36:
(19, 31827), (24, 31863), (Start: 33 @32004 has 21 MA's), (43, 32085), (44, 32088), (47, 32100), (81, 32358), (87, 32400), (92, 32415), (94, 32445), (106, 32484), (113, 32529), (121, 32571), (125, 32601), (129, 32631), (132, 32661), (138, 32688), (152, 32799), (154, 32808), (155, 32811),

Gene: Sour_41 Start: 35889, Stop: 36761, Start Num: 33
Candidate Starts for Sour_41:
(24, 35748), (Start: 33 @35889 has 21 MA's), (48, 35988), (53, 36018), (59, 36084), (67, 36147), (81, 36243), (88, 36297), (92, 36327), (94, 36357), (95, 36363), (97, 36372), (100, 36384), (106, 36396), (112, 36432), (113, 36441), (117, 36483), (121, 36513), (125, 36543), (154, 36750),

Gene: TPA2_46 Start: 35834, Stop: 36925, Start Num: 33
Candidate Starts for TPA2_46:
(8, 35516), (24, 35705), (Start: 33 @35834 has 21 MA's), (44, 35918), (45, 35939), (50, 35969), (51, 35990), (60, 36077), (62, 36119), (90, 36299), (94, 36344), (101, 36374), (104, 36389), (113, 36446), (117, 36491), (125, 36551), (126, 36554), (137, 36632), (143, 36698), (148, 36716), (150, 36749), (159, 36809),

Gene: TraderJ_38 Start: 33087, Stop: 33929, Start Num: 33
Candidate Starts for TraderJ_38:
(Start: 33 @33087 has 21 MA's), (40, 33147), (53, 33258), (61, 33339), (63, 33366), (76, 33393), (80, 33426), (92, 33513), (94, 33543), (106, 33603), (114, 33663), (121, 33693), (129, 33753), (131, 33771), (132, 33783), (138, 33810), (140, 33843), (144, 33867), (145, 33870),

Gene: WaterT_30 Start: 14624, Stop: 15532, Start Num: 32
Candidate Starts for WaterT_30:
(Start: 32 @14624 has 5 MA's), (34, 14657), (72, 14951), (89, 15074), (99, 15158), (108, 15206), (119, 15275), (156, 15527),

Gene: Weasels2_74 Start: 34258, Stop: 35649, Start Num: 5
Candidate Starts for Weasels2_74:
(Start: 5 @34258 has 4 MA's), (11, 34333), (37, 34654), (52, 34759), (70, 34918), (83, 35011), (110, 35215), (127, 35350), (139, 35437), (146, 35497),

Gene: Weasels2_73 Start: 32821, Stop: 34239, Start Num: 5
Candidate Starts for Weasels2_73:
(Start: 5 @32821 has 4 MA's), (22, 33031), (57, 33409), (73, 33517), (93, 33685), (131, 33967), (139, 34018),

Gene: Wooper_38 Start: 33093, Stop: 33935, Start Num: 33
Candidate Starts for Wooper_38:
(Start: 33 @33093 has 21 MA's), (40, 33153), (53, 33264), (61, 33345), (63, 33372), (76, 33399), (80, 33432), (92, 33519), (94, 33549), (106, 33609), (114, 33669), (121, 33699), (129, 33759), (131, 33777), (132, 33789), (138, 33816), (140, 33849), (144, 33873), (145, 33876),

Gene: Yago84_36 Start: 32078, Stop: 32893, Start Num: 33
Candidate Starts for Yago84_36:
(19, 31901), (24, 31937), (Start: 33 @32078 has 21 MA's), (43, 32159), (44, 32162), (47, 32174), (81, 32432), (87, 32474), (92, 32489), (94, 32519), (106, 32558), (113, 32603), (121, 32645), (125, 32675), (129, 32705), (132, 32735), (138, 32762), (152, 32873), (154, 32882), (155, 32885),

Gene: Yeshua_38 Start: 33070, Stop: 33912, Start Num: 33
Candidate Starts for Yeshua_38:
(Start: 33 @33070 has 21 MA's), (40, 33130), (53, 33241), (61, 33322), (63, 33349), (76, 33376), (80, 33409), (92, 33496), (94, 33526), (106, 33586), (114, 33646), (121, 33676), (129, 33736), (131, 33754), (132, 33766), (138, 33793), (140, 33826), (144, 33850), (145, 33853),