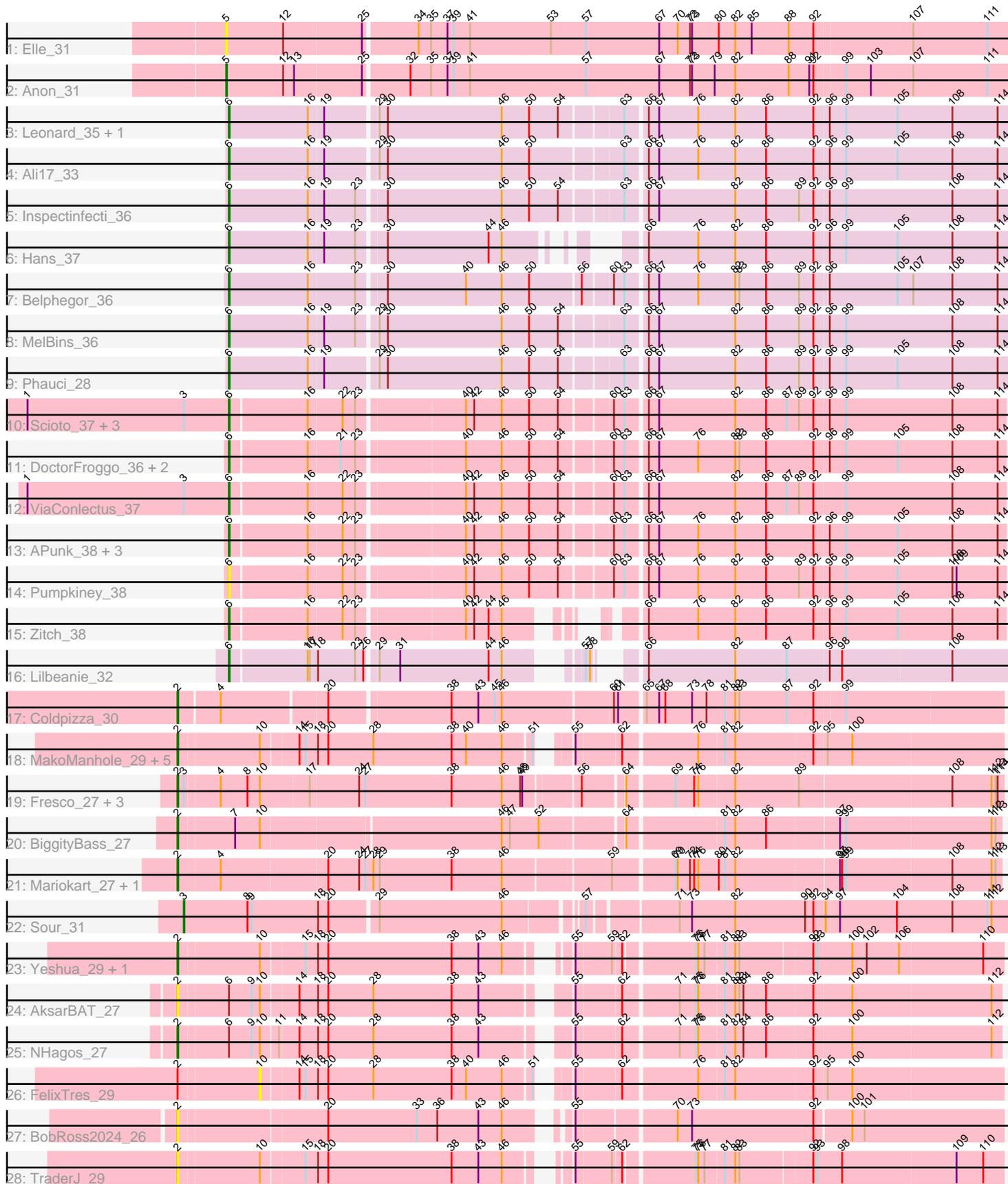


Pham 283922



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 283922 Report

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

Pham number 283922 has 47 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Elle_31
- Track 2 : Anon_31
- Track 3 : Leonard_35, Phinally_35
- Track 4 : Ali17_33
- Track 5 : Inspectinfecti_36
- Track 6 : Hans_37
- Track 7 : Belphegor_36
- Track 8 : MelBins_36
- Track 9 : Phauci_28
- Track 10 : Scioto_37, Sampson_37, Natkenzie_37, Abblin_37
- Track 11 : DoctorFroggo_36, Delrey21_36, Verity_36
- Track 12 : ViaConlectus_37
- Track 13 : APunk_38, BigHunkinEater_39, Zipp_36, Tardus_38
- Track 14 : Pumpkiney_38
- Track 15 : Zitch_38
- Track 16 : Lilbeanie_32
- Track 17 : Coldpizza_30
- Track 18 : MakoManhole_29, CloverMinnie_29, AnarQue_29, MossRose_29, Blackpen_29, CaiB_29
- Track 19 : Fresco_27, Axumite_27, Shatter_27, Ligma_27
- Track 20 : BiggityBass_27
- Track 21 : Mariokart_27, CharlottesWeb_27
- Track 22 : Sour_31
- Track 23 : Yeshua_29, Wooper_29
- Track 24 : AksarBAT_27
- Track 25 : NHagos_27
- Track 26 : FelixTres_29
- Track 27 : BobRoss2024_26
- Track 28 : TraderJ_29

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

The start number called the most often in the published annotations is 6, it was called in 18 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- APunk_38, Abblin_37, Ali17_33, Belphegor_36, BigHunkinEater_39, Delrey21_36, DoctorFroggo_36, Hans_37, Inspectinfecti_36, Leonard_35, Lilbeanie_32, MelBins_36, Natkenzie_37, Phauci_28, Phinally_35, Pumpkiney_38, Sampson_37, Scioto_37, Tardus_38, Verity_36, ViaConlectus_37, Zipp_36, Zitch_38,

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

- AksarBAT_27, NHagos_27,

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

- AnarQue_29, Anon_31, Axumite_27, BiggityBass_27, Blackpen_29, BobRoss2024_26, CaiB_29, CharlottesWeb_27, CloverMinnie_29, Coldpizza_30, Elle_31, FelixTres_29, Fresco_27, Ligma_27, MakoManhole_29, Mariokart_27, MossRose_29, Shatter_27, Sour_31, TraderJ_29, Wooper_29, Yeshua_29,

Summary by start number:

Start 2:

- Found in 21 of 47 (44.7%) of genes in pham
- Manual Annotations of this start: 15 of 35
- Called 95.2% of time when present
- Phage (with cluster) where this start called: AksarBAT_27 (DR), AnarQue_29 (DR), Axumite_27 (DR), BiggityBass_27 (DR), Blackpen_29 (DR), BobRoss2024_26 (DR), CaiB_29 (DR), CharlottesWeb_27 (DR), CloverMinnie_29 (DR), Coldpizza_30 (DR), Fresco_27 (DR), Ligma_27 (DR), MakoManhole_29 (DR), Mariokart_27 (DR), MossRose_29 (DR), NHagos_27 (DR), Shatter_27 (DR), TraderJ_29 (DR), Wooper_29 (DR), Yeshua_29 (DR),

Start 3:

- Found in 10 of 47 (21.3%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Sour_31 (DR),

Start 5:

- Found in 2 of 47 (4.3%) 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: Anon_31 (A15), Elle_31 (A15),

Start 6:

- Found in 25 of 47 (53.2%) of genes in pham
- Manual Annotations of this start: 18 of 35
- Called 92.0% of time when present
- Phage (with cluster) where this start called: APunk_38 (DE4), Abblin_37 (DE4), Ali17_33 (DE2), Belphegor_36 (DE2), BigHunkinEater_39 (DE4), Delrey21_36 (DE4), DoctorFroggo_36 (DE4), Hans_37 (DE2), Inspectinfecti_36 (DE2), Leonard_35 (DE2), Lilbeanie_32 (DE5), MelBins_36 (DE2), Natkenzie_37 (DE4), Phauci_28 (DE2), Phinally_35 (DE2), Pumpkiney_38 (DE4), Sampson_37 (DE4), Scioto_37 (DE4), Tardus_38 (DE4), Verity_36 (DE4), ViaConlectus_37 (DE4), Zipp_36 (DE4), Zitch_38 (DE4),

Start 10:

- Found in 17 of 47 (36.2%) of genes in pham
- No Manual Annotations of this start.
- Called 5.9% of time when present
- Phage (with cluster) where this start called: FelixTres_29 (DR),

Summary by clusters:

There are 5 clusters represented in this pham: A15, DR, DE2, DE4, DE5,

Info for manual annotations of cluster A15:

- Start number 5 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster DE2:

- Start number 6 was manually annotated 8 times for cluster DE2.

Info for manual annotations of cluster DE4:

- Start number 6 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 6 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DR:

- Start number 2 was manually annotated 15 times for cluster DR.
- Start number 3 was manually annotated 1 time for cluster DR.

Gene Information:

Gene: APunk_38 Start: 32541, Stop: 33617, Start Num: 6

Candidate Starts for APunk_38:

(Start: 6 @32541 has 18 MA's), (16, 32649), (22, 32697), (23, 32715), (40, 32862), (42, 32874), (46, 32913), (50, 32952), (54, 32994), (60, 33060), (63, 33075), (66, 33102), (67, 33117), (76, 33174), (82, 33228), (86, 33273), (92, 33342), (96, 33363), (99, 33387), (105, 33462), (108, 33540), (114, 33606),

Gene: Abblin_37 Start: 33084, Stop: 34160, Start Num: 6

Candidate Starts for Abblin_37:

(1, 32790), (Start: 3 @33018 has 1 MA's), (Start: 6 @33084 has 18 MA's), (16, 33192), (22, 33240), (23, 33258), (40, 33405), (42, 33417), (46, 33456), (50, 33495), (54, 33537), (60, 33603), (63, 33618), (66, 33645), (67, 33660), (82, 33771), (86, 33816), (87, 33846), (89, 33864), (92, 33885), (96, 33906), (99, 33930), (108, 34083), (114, 34149),

Gene: AksarBAT_27 Start: 26586, Stop: 27698, Start Num: 2

Candidate Starts for AksarBAT_27:

(Start: 2 @26586 has 15 MA's), (Start: 6 @26655 has 18 MA's), (9, 26688), (10, 26700), (14, 26751), (18, 26775), (20, 26790), (28, 26856), (38, 26970), (43, 27009), (55, 27108), (62, 27168), (71, 27243), (75, 27267), (76, 27270), (81, 27306), (82, 27321), (83, 27327), (84, 27333), (86, 27366), (92, 27432), (100, 27486), (112, 27684),

Gene: Ali17_33 Start: 30788, Stop: 31876, Start Num: 6

Candidate Starts for Ali17_33:

(Start: 6 @30788 has 18 MA's), (16, 30902), (19, 30923), (29, 30992), (30, 31004), (46, 31169), (50, 31208), (63, 31331), (66, 31358), (67, 31373), (76, 31430), (82, 31484), (86, 31529), (92, 31598), (96, 31619), (99, 31643), (105, 31718), (108, 31796), (114, 31862),

Gene: AnarQue_29 Start: 28071, Stop: 29183, Start Num: 2

Candidate Starts for AnarQue_29:

(Start: 2 @28071 has 15 MA's), (10, 28185), (14, 28236), (15, 28245), (18, 28260), (20, 28275), (28, 28341), (38, 28455), (40, 28476), (46, 28527), (51, 28566), (55, 28590), (62, 28650), (76, 28752), (81, 28788), (82, 28803), (92, 28914), (95, 28932), (100, 28968),

Gene: Anon_31 Start: 22310, Stop: 23416, Start Num: 5

Candidate Starts for Anon_31:

(Start: 5 @22310 has 1 MA's), (12, 22391), (13, 22406), (25, 22499), (32, 22559), (35, 22589), (37, 22613), (39, 22622), (41, 22646), (57, 22814), (67, 22919), (72, 22964), (73, 22967), (79, 23000), (82, 23030), (88, 23108), (91, 23138), (92, 23144), (99, 23186), (103, 23222), (107, 23279), (111, 23387),

Gene: Axumite_27 Start: 26078, Stop: 27217, Start Num: 2

Candidate Starts for Axumite_27:

(Start: 2 @26078 has 15 MA's), (Start: 3 @26087 has 1 MA's), (4, 26135), (8, 26174), (10, 26192), (17, 26261), (24, 26330), (27, 26339), (38, 26465), (46, 26537), (48, 26564), (49, 26567), (56, 26639), (64, 26693), (69, 26756), (74, 26783), (76, 26789), (82, 26840), (89, 26930), (108, 27143), (112, 27200), (113, 27206), (114, 27209),

Gene: Belphegor_36 Start: 32996, Stop: 34081, Start Num: 6

Candidate Starts for Belphegor_36:

(Start: 6 @32996 has 18 MA's), (16, 33110), (23, 33176), (30, 33212), (40, 33326), (46, 33377), (50, 33416), (56, 33485), (60, 33524), (63, 33539), (66, 33566), (67, 33581), (76, 33638), (82, 33692), (83, 33698), (86, 33737), (89, 33785), (92, 33806), (96, 33824), (105, 33923), (107, 33944), (108, 34001), (114, 34067),

Gene: BigHunkinEater_39 Start: 32322, Stop: 33398, Start Num: 6

Candidate Starts for BigHunkinEater_39:

(Start: 6 @32322 has 18 MA's), (16, 32430), (22, 32478), (23, 32496), (40, 32643), (42, 32655), (46, 32694), (50, 32733), (54, 32775), (60, 32841), (63, 32856), (66, 32883), (67, 32898), (76, 32955), (82, 33009), (86, 33054), (92, 33123), (96, 33144), (99, 33168), (105, 33243), (108, 33321), (114, 33387),

Gene: BiggityBass_27 Start: 28347, Stop: 29480, Start Num: 2

Candidate Starts for BiggityBass_27:

(Start: 2 @28347 has 15 MA's), (7, 28425), (10, 28461), (46, 28797), (47, 28809), (52, 28851), (64, 28959), (81, 29091), (82, 29106), (86, 29151), (97, 29250), (99, 29259), (112, 29466), (113, 29472),

Gene: Blackpen_29 Start: 27489, Stop: 28601, Start Num: 2

Candidate Starts for Blackpen_29:

(Start: 2 @27489 has 15 MA's), (10, 27603), (14, 27654), (15, 27663), (18, 27678), (20, 27693), (28, 27759), (38, 27873), (40, 27894), (46, 27945), (51, 27984), (55, 28008), (62, 28068), (76, 28170), (81, 28206), (82, 28221), (92, 28332), (95, 28350), (100, 28386),

Gene: BobRoss2024_26 Start: 26114, Stop: 27235, Start Num: 2

Candidate Starts for BobRoss2024_26:

(Start: 2 @26114 has 15 MA's), (20, 26321), (33, 26450), (36, 26480), (43, 26540), (46, 26573), (55, 26636), (70, 26768), (73, 26789), (92, 26966), (100, 27017), (101, 27035),

Gene: CaiB_29 Start: 28057, Stop: 29169, Start Num: 2

Candidate Starts for CaiB_29:

(Start: 2 @28057 has 15 MA's), (10, 28171), (14, 28222), (15, 28231), (18, 28246), (20, 28261), (28, 28327), (38, 28441), (40, 28462), (46, 28513), (51, 28552), (55, 28576), (62, 28636), (76, 28738), (81, 28774), (82, 28789), (92, 28900), (95, 28918), (100, 28954),

Gene: CharlottesWeb_27 Start: 26001, Stop: 27152, Start Num: 2

Candidate Starts for CharlottesWeb_27:

(Start: 2 @26001 has 15 MA's), (4, 26061), (20, 26211), (24, 26256), (27, 26265), (28, 26277), (29, 26286), (38, 26391), (46, 26463), (59, 26610), (69, 26694), (70, 26697), (72, 26715), (74, 26721), (76, 26727), (80, 26754), (81, 26763), (82, 26778), (97, 26922), (98, 26925), (99, 26931), (108, 27081), (112, 27138), (113, 27144),

Gene: CloverMinnie_29 Start: 27997, Stop: 29109, Start Num: 2

Candidate Starts for CloverMinnie_29:

(Start: 2 @27997 has 15 MA's), (10, 28111), (14, 28162), (15, 28171), (18, 28186), (20, 28201), (28, 28267), (38, 28381), (40, 28402), (46, 28453), (51, 28492), (55, 28516), (62, 28576), (76, 28678), (81, 28714), (82, 28729), (92, 28840), (95, 28858), (100, 28894),

Gene: Coldpizza_30 Start: 30502, Stop: 31638, Start Num: 2

Candidate Starts for Coldpizza_30:

(Start: 2 @30502 has 15 MA's), (4, 30559), (20, 30706), (38, 30868), (43, 30907), (45, 30931), (46, 30940), (60, 31090), (61, 31096), (65, 31129), (67, 31147), (68, 31156), (73, 31195), (78, 31216), (81, 31243), (82, 31258), (83, 31264), (87, 31333), (92, 31372), (99, 31414),

Gene: Delrey21_36 Start: 33271, Stop: 34347, Start Num: 6

Candidate Starts for Delrey21_36:

(Start: 6 @33271 has 18 MA's), (16, 33379), (21, 33424), (23, 33445), (40, 33592), (46, 33643), (50, 33682), (54, 33724), (60, 33790), (63, 33805), (66, 33832), (67, 33847), (76, 33904), (82, 33958), (83, 33964), (86, 34003), (92, 34072), (96, 34093), (99, 34117), (105, 34192), (108, 34270), (114, 34336),

Gene: DoctorFroggo_36 Start: 33271, Stop: 34347, Start Num: 6

Candidate Starts for DoctorFroggo_36:

(Start: 6 @33271 has 18 MA's), (16, 33379), (21, 33424), (23, 33445), (40, 33592), (46, 33643), (50, 33682), (54, 33724), (60, 33790), (63, 33805), (66, 33832), (67, 33847), (76, 33904), (82, 33958), (83, 33964), (86, 34003), (92, 34072), (96, 34093), (99, 34117), (105, 34192), (108, 34270), (114, 34336),

Gene: Elle_31 Start: 21644, Stop: 22750, Start Num: 5

Candidate Starts for Elle_31:

(Start: 5 @21644 has 1 MA's), (12, 21725), (25, 21833), (34, 21905), (35, 21923), (37, 21947), (39, 21956), (41, 21980), (53, 22097), (57, 22148), (67, 22253), (70, 22280), (72, 22298), (73, 22301), (80, 22340), (82, 22364), (85, 22388), (88, 22442), (92, 22478), (107, 22613), (111, 22721),

Gene: FelixTres_29 Start: 28174, Stop: 29172, Start Num: 10

Candidate Starts for FelixTres_29:

(Start: 2 @28060 has 15 MA's), (10, 28174), (14, 28225), (15, 28234), (18, 28249), (20, 28264), (28, 28330), (38, 28444), (40, 28465), (46, 28516), (51, 28555), (55, 28579), (62, 28639), (76, 28741), (81, 28777), (82, 28792), (92, 28903), (95, 28921), (100, 28957),

Gene: Fresco_27 Start: 26078, Stop: 27217, Start Num: 2

Candidate Starts for Fresco_27:

(Start: 2 @26078 has 15 MA's), (Start: 3 @26087 has 1 MA's), (4, 26135), (8, 26174), (10, 26192), (17, 26261), (24, 26330), (27, 26339), (38, 26465), (46, 26537), (48, 26564), (49, 26567), (56, 26639), (64, 26693), (69, 26756), (74, 26783), (76, 26789), (82, 26840), (89, 26930), (108, 27143), (112, 27200),

(113, 27206), (114, 27209),

Gene: Hans_37 Start: 31512, Stop: 32516, Start Num: 6

Candidate Starts for Hans_37:

(Start: 6 @31512 has 18 MA's), (16, 31626), (19, 31647), (23, 31692), (30, 31728), (44, 31875), (46, 31893), (66, 31998), (76, 32070), (82, 32124), (86, 32169), (92, 32238), (96, 32259), (99, 32283), (105, 32358), (108, 32436), (114, 32502),

Gene: Inspectinfecti_36 Start: 31874, Stop: 32962, Start Num: 6

Candidate Starts for Inspectinfecti_36:

(Start: 6 @31874 has 18 MA's), (16, 31988), (19, 32009), (23, 32054), (30, 32090), (46, 32255), (50, 32294), (54, 32336), (63, 32417), (66, 32444), (67, 32459), (82, 32570), (86, 32615), (89, 32663), (92, 32684), (96, 32705), (99, 32729), (108, 32882), (114, 32948),

Gene: Leonard_35 Start: 31510, Stop: 32598, Start Num: 6

Candidate Starts for Leonard_35:

(Start: 6 @31510 has 18 MA's), (16, 31624), (19, 31645), (29, 31714), (30, 31726), (46, 31891), (50, 31930), (54, 31972), (63, 32053), (66, 32080), (67, 32095), (76, 32152), (82, 32206), (86, 32251), (92, 32320), (96, 32341), (99, 32365), (105, 32440), (108, 32518), (114, 32584),

Gene: Ligma_27 Start: 26078, Stop: 27217, Start Num: 2

Candidate Starts for Ligma_27:

(Start: 2 @26078 has 15 MA's), (Start: 3 @26087 has 1 MA's), (4, 26135), (8, 26174), (10, 26192), (17, 26261), (24, 26330), (27, 26339), (38, 26465), (46, 26537), (48, 26564), (49, 26567), (56, 26639), (64, 26693), (69, 26756), (74, 26783), (76, 26789), (82, 26840), (89, 26930), (108, 27143), (112, 27200), (113, 27206), (114, 27209),

Gene: Lilbeanie_32 Start: 26757, Stop: 27755, Start Num: 6

Candidate Starts for Lilbeanie_32:

(Start: 6 @26757 has 18 MA's), (16, 26865), (17, 26868), (18, 26877), (23, 26931), (26, 26943), (29, 26955), (31, 26985), (44, 27114), (46, 27132), (57, 27198), (58, 27204), (66, 27234), (82, 27360), (87, 27435), (96, 27495), (98, 27513), (108, 27669),

Gene: MakoManhole_29 Start: 28075, Stop: 29187, Start Num: 2

Candidate Starts for MakoManhole_29:

(Start: 2 @28075 has 15 MA's), (10, 28189), (14, 28240), (15, 28249), (18, 28264), (20, 28279), (28, 28345), (38, 28459), (40, 28480), (46, 28531), (51, 28570), (55, 28594), (62, 28654), (76, 28756), (81, 28792), (82, 28807), (92, 28918), (95, 28936), (100, 28972),

Gene: Mariokart_27 Start: 26000, Stop: 27151, Start Num: 2

Candidate Starts for Mariokart_27:

(Start: 2 @26000 has 15 MA's), (4, 26060), (20, 26210), (24, 26255), (27, 26264), (28, 26276), (29, 26285), (38, 26390), (46, 26462), (59, 26609), (69, 26693), (70, 26696), (72, 26714), (74, 26720), (76, 26726), (80, 26753), (81, 26762), (82, 26777), (97, 26921), (98, 26924), (99, 26930), (108, 27080), (112, 27137), (113, 27143),

Gene: MelBins_36 Start: 31659, Stop: 32747, Start Num: 6

Candidate Starts for MelBins_36:

(Start: 6 @31659 has 18 MA's), (16, 31773), (19, 31794), (23, 31839), (29, 31863), (30, 31875), (46, 32040), (50, 32079), (54, 32121), (63, 32202), (66, 32229), (67, 32244), (82, 32355), (86, 32400), (89, 32448), (92, 32469), (96, 32490), (99, 32514), (108, 32667), (114, 32733),

Gene: MossRose_29 Start: 28054, Stop: 29166, Start Num: 2

Candidate Starts for MossRose_29:

(Start: 2 @28054 has 15 MA's), (10, 28168), (14, 28219), (15, 28228), (18, 28243), (20, 28258), (28, 28324), (38, 28438), (40, 28459), (46, 28510), (51, 28549), (55, 28573), (62, 28633), (76, 28735), (81, 28771), (82, 28786), (92, 28897), (95, 28915), (100, 28951),

Gene: NHagos_27 Start: 26589, Stop: 27701, Start Num: 2

Candidate Starts for NHagos_27:

(Start: 2 @26589 has 15 MA's), (Start: 6 @26658 has 18 MA's), (9, 26691), (10, 26703), (11, 26727), (14, 26754), (18, 26778), (20, 26793), (28, 26859), (38, 26973), (43, 27012), (55, 27111), (62, 27171), (71, 27246), (75, 27270), (76, 27273), (81, 27309), (82, 27324), (84, 27336), (86, 27369), (92, 27435), (100, 27489), (112, 27687),

Gene: Natkenzie_37 Start: 33084, Stop: 34160, Start Num: 6

Candidate Starts for Natkenzie_37:

(1, 32790), (Start: 3 @33018 has 1 MA's), (Start: 6 @33084 has 18 MA's), (16, 33192), (22, 33240), (23, 33258), (40, 33405), (42, 33417), (46, 33456), (50, 33495), (54, 33537), (60, 33603), (63, 33618), (66, 33645), (67, 33660), (82, 33771), (86, 33816), (87, 33846), (89, 33864), (92, 33885), (96, 33906), (99, 33930), (108, 34083), (114, 34149),

Gene: Phauci_28 Start: 28099, Stop: 29187, Start Num: 6

Candidate Starts for Phauci_28:

(Start: 6 @28099 has 18 MA's), (16, 28213), (19, 28234), (29, 28303), (30, 28315), (46, 28480), (50, 28519), (54, 28561), (63, 28642), (66, 28669), (67, 28684), (82, 28795), (86, 28840), (89, 28888), (92, 28909), (96, 28930), (99, 28954), (105, 29029), (108, 29107), (114, 29173),

Gene: Phinally_35 Start: 31507, Stop: 32595, Start Num: 6

Candidate Starts for Phinally_35:

(Start: 6 @31507 has 18 MA's), (16, 31621), (19, 31642), (29, 31711), (30, 31723), (46, 31888), (50, 31927), (54, 31969), (63, 32050), (66, 32077), (67, 32092), (76, 32149), (82, 32203), (86, 32248), (92, 32317), (96, 32338), (99, 32362), (105, 32437), (108, 32515), (114, 32581),

Gene: Pumpkiney_38 Start: 30407, Stop: 31483, Start Num: 6

Candidate Starts for Pumpkiney_38:

(Start: 6 @30407 has 18 MA's), (16, 30515), (22, 30563), (23, 30581), (40, 30728), (42, 30740), (46, 30779), (50, 30818), (54, 30860), (60, 30926), (63, 30941), (66, 30968), (67, 30983), (76, 31040), (82, 31094), (86, 31139), (89, 31187), (92, 31208), (96, 31229), (99, 31253), (105, 31328), (108, 31406), (109, 31412), (114, 31472),

Gene: Sampson_37 Start: 33029, Stop: 34105, Start Num: 6

Candidate Starts for Sampson_37:

(1, 32735), (Start: 3 @32963 has 1 MA's), (Start: 6 @33029 has 18 MA's), (16, 33137), (22, 33185), (23, 33203), (40, 33350), (42, 33362), (46, 33401), (50, 33440), (54, 33482), (60, 33548), (63, 33563), (66, 33590), (67, 33605), (82, 33716), (86, 33761), (87, 33791), (89, 33809), (92, 33830), (96, 33851), (99, 33875), (108, 34028), (114, 34094),

Gene: Scioto_37 Start: 33084, Stop: 34160, Start Num: 6

Candidate Starts for Scioto_37:

(1, 32790), (Start: 3 @33018 has 1 MA's), (Start: 6 @33084 has 18 MA's), (16, 33192), (22, 33240), (23, 33258), (40, 33405), (42, 33417), (46, 33456), (50, 33495), (54, 33537), (60, 33603), (63, 33618), (66, 33645), (67, 33660), (82, 33771), (86, 33816), (87, 33846), (89, 33864), (92, 33885), (96, 33906), (99, 33930), (108, 34083), (114, 34149),

Gene: Shatter_27 Start: 26078, Stop: 27217, Start Num: 2

Candidate Starts for Shatter_27:

(Start: 2 @26078 has 15 MA's), (Start: 3 @26087 has 1 MA's), (4, 26135), (8, 26174), (10, 26192), (17, 26261), (24, 26330), (27, 26339), (38, 26465), (46, 26537), (48, 26564), (49, 26567), (56, 26639), (64, 26693), (69, 26756), (74, 26783), (76, 26789), (82, 26840), (89, 26930), (108, 27143), (112, 27200), (113, 27206), (114, 27209),

Gene: Sour_31 Start: 30307, Stop: 31437, Start Num: 3

Candidate Starts for Sour_31:

(Start: 3 @30307 has 1 MA's), (8, 30400), (9, 30406), (18, 30496), (20, 30511), (29, 30577), (46, 30754), (57, 30850), (71, 30967), (73, 30985), (82, 31048), (90, 31150), (92, 31162), (94, 31177), (97, 31195), (104, 31276), (108, 31354), (111, 31405), (112, 31411),

Gene: Tardus_38 Start: 32448, Stop: 33524, Start Num: 6

Candidate Starts for Tardus_38:

(Start: 6 @32448 has 18 MA's), (16, 32556), (22, 32604), (23, 32622), (40, 32769), (42, 32781), (46, 32820), (50, 32859), (54, 32901), (60, 32967), (63, 32982), (66, 33009), (67, 33024), (76, 33081), (82, 33135), (86, 33180), (92, 33249), (96, 33270), (99, 33294), (105, 33369), (108, 33447), (114, 33513),

Gene: TraderJ_29 Start: 28060, Stop: 29157, Start Num: 2

Candidate Starts for TraderJ_29:

(Start: 2 @28060 has 15 MA's), (10, 28174), (15, 28234), (18, 28249), (20, 28264), (38, 28444), (43, 28483), (46, 28516), (55, 28573), (59, 28621), (62, 28633), (75, 28726), (76, 28729), (77, 28738), (81, 28765), (82, 28780), (83, 28786), (92, 28885), (93, 28891), (98, 28927), (109, 29089), (110, 29128),

Gene: Verity_36 Start: 33271, Stop: 34347, Start Num: 6

Candidate Starts for Verity_36:

(Start: 6 @33271 has 18 MA's), (16, 33379), (21, 33424), (23, 33445), (40, 33592), (46, 33643), (50, 33682), (54, 33724), (60, 33790), (63, 33805), (66, 33832), (67, 33847), (76, 33904), (82, 33958), (83, 33964), (86, 34003), (92, 34072), (96, 34093), (99, 34117), (105, 34192), (108, 34270), (114, 34336),

Gene: ViaConlectus_37 Start: 31720, Stop: 32796, Start Num: 6

Candidate Starts for ViaConlectus_37:

(1, 31426), (Start: 3 @31654 has 1 MA's), (Start: 6 @31720 has 18 MA's), (16, 31828), (22, 31876), (23, 31894), (40, 32041), (42, 32053), (46, 32092), (50, 32131), (54, 32173), (60, 32239), (63, 32254), (66, 32281), (67, 32296), (82, 32407), (86, 32452), (87, 32482), (89, 32500), (92, 32521), (99, 32566), (108, 32719), (114, 32785),

Gene: Wooper_29 Start: 28066, Stop: 29163, Start Num: 2

Candidate Starts for Wooper_29:

(Start: 2 @28066 has 15 MA's), (10, 28180), (15, 28240), (18, 28255), (20, 28270), (38, 28450), (43, 28489), (46, 28522), (55, 28579), (59, 28627), (62, 28639), (75, 28732), (76, 28735), (77, 28744), (81, 28771), (82, 28786), (83, 28792), (92, 28891), (93, 28897), (100, 28948), (102, 28969), (106, 29014), (110, 29134),

Gene: Yeshua_29 Start: 28043, Stop: 29140, Start Num: 2

Candidate Starts for Yeshua_29:

(Start: 2 @28043 has 15 MA's), (10, 28157), (15, 28217), (18, 28232), (20, 28247), (38, 28427), (43, 28466), (46, 28499), (55, 28556), (59, 28604), (62, 28616), (75, 28709), (76, 28712), (77, 28721), (81, 28748), (82, 28763), (83, 28769), (92, 28868), (93, 28874), (100, 28925), (102, 28946), (106, 28991), (110, 29111),

Gene: Zipp_36 Start: 33174, Stop: 34250, Start Num: 6

Candidate Starts for Zipp_36:

(Start: 6 @33174 has 18 MA's), (16, 33282), (22, 33330), (23, 33348), (40, 33495), (42, 33507), (46, 33546), (50, 33585), (54, 33627), (60, 33693), (63, 33708), (66, 33735), (67, 33750), (76, 33807), (82, 33861), (86, 33906), (92, 33975), (96, 33996), (99, 34020), (105, 34095), (108, 34173), (114, 34239),

Gene: Zitch_38 Start: 31061, Stop: 32053, Start Num: 6

Candidate Starts for Zitch_38:

(Start: 6 @31061 has 18 MA's), (16, 31169), (22, 31217), (23, 31235), (40, 31382), (42, 31394), (44, 31415), (46, 31433), (66, 31538), (76, 31610), (82, 31664), (86, 31709), (92, 31778), (96, 31799), (99, 31823), (105, 31898), (108, 31976), (114, 32042),