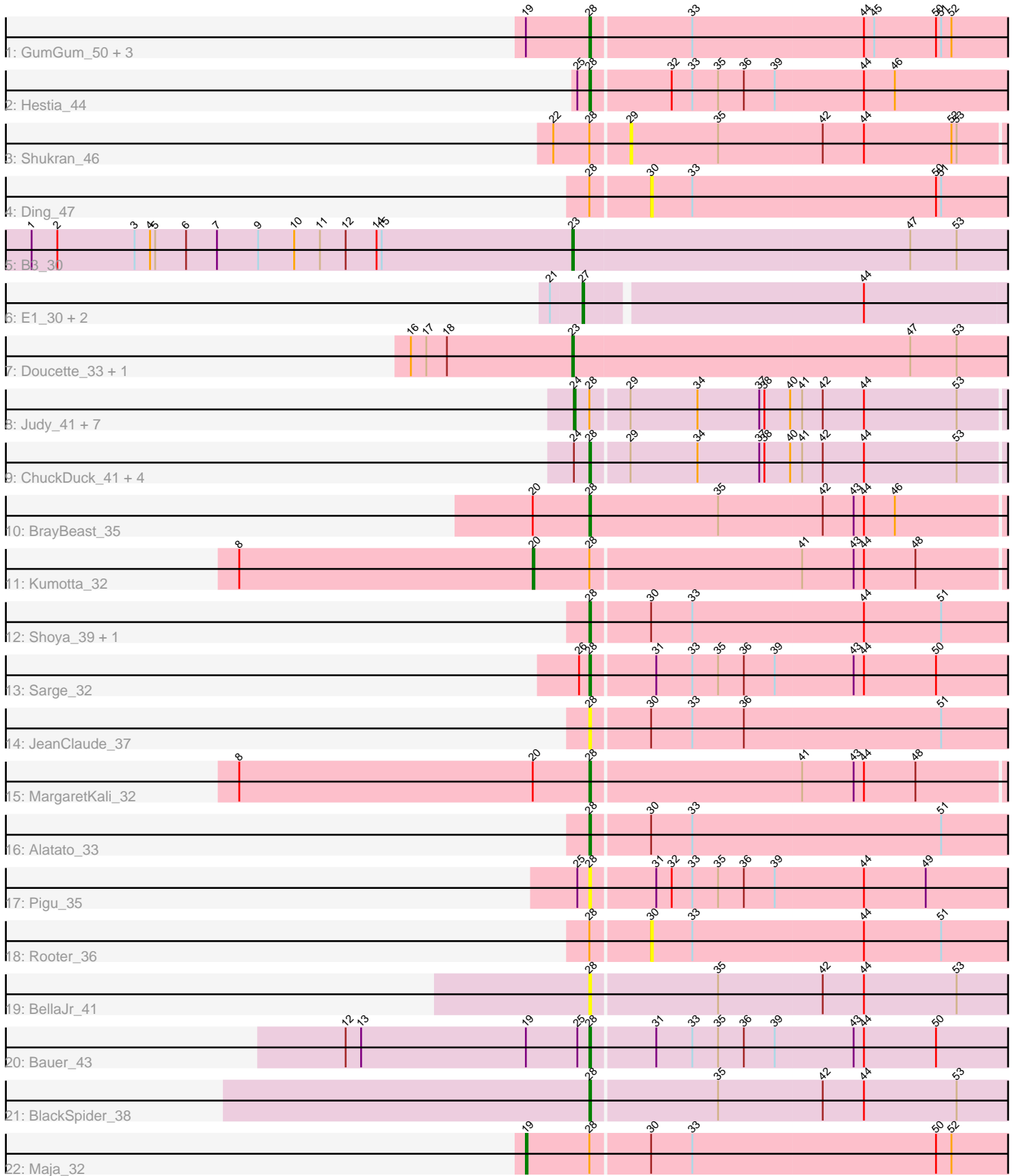


Pham 300192



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 300192 Report

This analysis was run 06/08/26 on database version 649.

Pham number 300192 has 40 members, 13 are drafts.

Phages represented in each track:

- Track 1 : GumGum\_50, Zucker\_42, CosmicBrownie\_47, Nyilah\_50
- Track 2 : Hestia\_44
- Track 3 : Shukran\_46
- Track 4 : Ding\_47
- Track 5 : B3\_30
- Track 6 : E1\_30, E6\_30, Anatole\_30
- Track 7 : Doucette\_33, B22\_31
- Track 8 : Judy\_41, FosterFrank\_42, Bridgette\_40, NidoQ\_35, Peas\_37, Eileen\_36, LittleRon\_38, LilyBell\_40
- Track 9 : ChuckDuck\_41, Constance\_40, RootBeer\_31, KayMoney\_40, GlobiWarming\_40
- Track 10 : BrayBeast\_35
- Track 11 : Kumotta\_32
- Track 12 : Shoya\_39, Gibbzilla\_41
- Track 13 : Sarge\_32
- Track 14 : JeanClaude\_37
- Track 15 : MargaretKali\_32
- Track 16 : Alatato\_33
- Track 17 : Pigu\_35
- Track 18 : Rooter\_36
- Track 19 : BellaJr\_41
- Track 20 : Bauer\_43
- Track 21 : BlackSpider\_38
- Track 22 : Maja\_32

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

The start number called the most often in the published annotations is 28, it was called in 14 of the 27 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alatato\_33, Bauer\_43, BellaJr\_41, BlackSpider\_38, BrayBeast\_35, ChuckDuck\_41, Constance\_40, CosmicBrownie\_47, Gibbzilla\_41, GlobiWarming\_40, GumGum\_50, Hestia\_44, JeanClaude\_37, KayMoney\_40, MargaretKali\_32, Nyilah\_50, Pigu\_35,

RootBeer\_31, Sarge\_32, Shoya\_39, Zucker\_42,

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

- Bridgette\_40, Ding\_47, Eileen\_36, FosterFrank\_42, Judy\_41, Kumotta\_32, LilyBell\_40, LittleRon\_38, Maja\_32, NidoQ\_35, Peas\_37, Rooter\_36, Shukran\_46,

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

- Anatole\_30, B22\_31, B3\_30, Doucette\_33, E1\_30, E6\_30,

### Summary by start number:

Start 19:

- Found in 6 of 40 ( 15.0% ) of genes in pham
- Manual Annotations of this start: 1 of 27
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Maja\_32 (FO),

Start 20:

- Found in 3 of 40 ( 7.5% ) of genes in pham
- Manual Annotations of this start: 1 of 27
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Kumotta\_32 (FB),

Start 23:

- Found in 3 of 40 ( 7.5% ) of genes in pham
- Manual Annotations of this start: 3 of 27
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B22\_31 (BW), B3\_30 (BV), Doucette\_33 (BW),

Start 24:

- Found in 13 of 40 ( 32.5% ) of genes in pham
- Manual Annotations of this start: 5 of 27
- Called 61.5% of time when present
- Phage (with cluster) where this start called: Bridgette\_40 (FA), Eileen\_36 (FA), FosterFrank\_42 (FA), Judy\_41 (FA), LilyBell\_40 (FA), LittleRon\_38 (FA), NidoQ\_35 (FA), Peas\_37 (FA),

Start 27:

- Found in 3 of 40 ( 7.5% ) of genes in pham
- Manual Annotations of this start: 3 of 27
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anatole\_30 (BV), E1\_30 (BV), E6\_30 (BW),

Start 28:

- Found in 34 of 40 ( 85.0% ) of genes in pham
- Manual Annotations of this start: 14 of 27
- Called 61.8% of time when present
- Phage (with cluster) where this start called: Alatato\_33 (FB), Bauer\_43 (FN), BellaJr\_41 (FN), BlackSpider\_38 (FN), BrayBeast\_35 (FB), ChuckDuck\_41 (FA), Constance\_40 (FA), CosmicBrownie\_47 (AY), Gibbzilla\_41 (FB), GlobiWarming\_40 (FA), GumGum\_50 (AY), Hestia\_44 (AY), JeanClaude\_37 (FB), KayMoney\_40 (FA),

MargaretKali\_32 (FB), Nyilah\_50 (AY), Pigu\_35 (FB), RootBeer\_31 (FA), Sarge\_32 (FB), Shoya\_39 (FB), Zucker\_42 (FN),

Start 29:

- Found in 14 of 40 ( 35.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Shukran\_46 (AY),

Start 30:

- Found in 7 of 40 ( 17.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Ding\_47 (AY), Rooter\_36 (FB),

### **Summary by clusters:**

There are 7 clusters represented in this pham: BV, FA, FB, BW, AY, FN, FO,

Info for manual annotations of cluster AY:

- Start number 28 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BV:

- Start number 23 was manually annotated 1 time for cluster BV.
- Start number 27 was manually annotated 2 times for cluster BV.

Info for manual annotations of cluster BW:

- Start number 23 was manually annotated 2 times for cluster BW.
- Start number 27 was manually annotated 1 time for cluster BW.

Info for manual annotations of cluster FA:

- Start number 24 was manually annotated 5 times for cluster FA.
- Start number 28 was manually annotated 5 times for cluster FA.

Info for manual annotations of cluster FB:

- Start number 20 was manually annotated 1 time for cluster FB.
- Start number 28 was manually annotated 5 times for cluster FB.

Info for manual annotations of cluster FN:

- Start number 28 was manually annotated 3 times for cluster FN.

Info for manual annotations of cluster FO:

- Start number 19 was manually annotated 1 time for cluster FO.

### **Gene Information:**

Gene: Alatato\_33 Start: 25274, Stop: 25020, Start Num: 28

Candidate Starts for Alatato\_33:

(Start: 28 @25274 has 14 MA's), (30, 25241), (33, 25217), (51, 25073),

Gene: Anatole\_30 Start: 23336, Stop: 23091, Start Num: 27

Candidate Starts for Anatole\_30:

(21, 23354), (Start: 27 @23336 has 3 MA's), (44, 23180),

Gene: B22\_31 Start: 23303, Stop: 23049, Start Num: 23

Candidate Starts for B22\_31:

(16, 23396), (17, 23387), (18, 23375), (Start: 23 @23303 has 3 MA's), (47, 23108), (53, 23081),

Gene: B3\_30 Start: 23432, Stop: 23178, Start Num: 23

Candidate Starts for B3\_30:

(1, 23747), (2, 23732), (3, 23687), (4, 23678), (5, 23675), (6, 23657), (7, 23639), (9, 23615), (10, 23594), (11, 23579), (12, 23564), (14, 23546), (15, 23543), (Start: 23 @23432 has 3 MA's), (47, 23237), (53, 23210),

Gene: Bauer\_43 Start: 29569, Stop: 29315, Start Num: 28

Candidate Starts for Bauer\_43:

(12, 29710), (13, 29701), (Start: 19 @29605 has 1 MA's), (25, 29575), (Start: 28 @29569 has 14 MA's), (31, 29533), (33, 29512), (35, 29497), (36, 29482), (39, 29464), (43, 29419), (44, 29413), (50, 29371),

Gene: BellaJr\_41 Start: 30090, Stop: 29830, Start Num: 28

Candidate Starts for BellaJr\_41:

(Start: 28 @30090 has 14 MA's), (35, 30018), (42, 29958), (44, 29934), (53, 29880),

Gene: BlackSpider\_38 Start: 28682, Stop: 28422, Start Num: 28

Candidate Starts for BlackSpider\_38:

(Start: 28 @28682 has 14 MA's), (35, 28610), (42, 28550), (44, 28526), (53, 28472),

Gene: BrayBeast\_35 Start: 26036, Stop: 25785, Start Num: 28

Candidate Starts for BrayBeast\_35:

(Start: 20 @26069 has 1 MA's), (Start: 28 @26036 has 14 MA's), (35, 25961), (42, 25901), (43, 25883), (44, 25877), (46, 25859),

Gene: Bridgette\_40 Start: 28778, Stop: 28521, Start Num: 24

Candidate Starts for Bridgette\_40:

(Start: 24 @28778 has 5 MA's), (Start: 28 @28769 has 14 MA's), (29, 28748), (34, 28709), (37, 28673), (38, 28670), (40, 28655), (41, 28649), (42, 28637), (44, 28613), (53, 28559),

Gene: ChuckDuck\_41 Start: 28592, Stop: 28344, Start Num: 28

Candidate Starts for ChuckDuck\_41:

(Start: 24 @28601 has 5 MA's), (Start: 28 @28592 has 14 MA's), (29, 28571), (34, 28532), (37, 28496), (38, 28493), (40, 28478), (41, 28472), (42, 28460), (44, 28436), (53, 28382),

Gene: Constance\_40 Start: 28921, Stop: 28673, Start Num: 28

Candidate Starts for Constance\_40:

(Start: 24 @28930 has 5 MA's), (Start: 28 @28921 has 14 MA's), (29, 28900), (34, 28861), (37, 28825), (38, 28822), (40, 28807), (41, 28801), (42, 28789), (44, 28765), (53, 28711),

Gene: CosmicBrownie\_47 Start: 30617, Stop: 30363, Start Num: 28

Candidate Starts for CosmicBrownie\_47:

(Start: 19 @30653 has 1 MA's), (Start: 28 @30617 has 14 MA's), (33, 30560), (44, 30461), (45, 30455), (50, 30419), (51, 30416), (52, 30410),

Gene: Ding\_47 Start: 30530, Stop: 30309, Start Num: 30

Candidate Starts for Ding\_47:

(Start: 28 @30563 has 14 MA's), (30, 30530), (33, 30506), (50, 30365), (51, 30362),

Gene: Doucette\_33 Start: 24717, Stop: 24463, Start Num: 23

Candidate Starts for Doucette\_33:

(16, 24810), (17, 24801), (18, 24789), (Start: 23 @24717 has 3 MA's), (47, 24522), (53, 24495),

Gene: E1\_30 Start: 23336, Stop: 23091, Start Num: 27

Candidate Starts for E1\_30:

(21, 23354), (Start: 27 @23336 has 3 MA's), (44, 23180),

Gene: E6\_30 Start: 23058, Stop: 22813, Start Num: 27

Candidate Starts for E6\_30:

(21, 23076), (Start: 27 @23058 has 3 MA's), (44, 22902),

Gene: Eileen\_36 Start: 27008, Stop: 26751, Start Num: 24

Candidate Starts for Eileen\_36:

(Start: 24 @27008 has 5 MA's), (Start: 28 @26999 has 14 MA's), (29, 26978), (34, 26939), (37, 26903), (38, 26900), (40, 26885), (41, 26879), (42, 26867), (44, 26843), (53, 26789),

Gene: FosterFrank\_42 Start: 28660, Stop: 28403, Start Num: 24

Candidate Starts for FosterFrank\_42:

(Start: 24 @28660 has 5 MA's), (Start: 28 @28651 has 14 MA's), (29, 28630), (34, 28591), (37, 28555), (38, 28552), (40, 28537), (41, 28531), (42, 28519), (44, 28495), (53, 28441),

Gene: Gibbzilla\_41 Start: 26546, Stop: 26292, Start Num: 28

Candidate Starts for Gibbzilla\_41:

(Start: 28 @26546 has 14 MA's), (30, 26513), (33, 26489), (44, 26390), (51, 26345),

Gene: GlobiWarming\_40 Start: 28175, Stop: 27927, Start Num: 28

Candidate Starts for GlobiWarming\_40:

(Start: 24 @28184 has 5 MA's), (Start: 28 @28175 has 14 MA's), (29, 28154), (34, 28115), (37, 28079), (38, 28076), (40, 28061), (41, 28055), (42, 28043), (44, 28019), (53, 27965),

Gene: GumGum\_50 Start: 31036, Stop: 30782, Start Num: 28

Candidate Starts for GumGum\_50:

(Start: 19 @31072 has 1 MA's), (Start: 28 @31036 has 14 MA's), (33, 30979), (44, 30880), (45, 30874), (50, 30838), (51, 30835), (52, 30829),

Gene: Hestia\_44 Start: 29360, Stop: 29106, Start Num: 28

Candidate Starts for Hestia\_44:

(25, 29366), (Start: 28 @29360 has 14 MA's), (32, 29315), (33, 29303), (35, 29288), (36, 29273), (39, 29255), (44, 29204), (46, 29186),

Gene: JeanClaude\_37 Start: 25039, Stop: 24785, Start Num: 28

Candidate Starts for JeanClaude\_37:

(Start: 28 @25039 has 14 MA's), (30, 25006), (33, 24982), (36, 24952), (51, 24838),

Gene: Judy\_41 Start: 29096, Stop: 28839, Start Num: 24

Candidate Starts for Judy\_41:

(Start: 24 @29096 has 5 MA's), (Start: 28 @29087 has 14 MA's), (29, 29066), (34, 29027), (37, 28991), (38, 28988), (40, 28973), (41, 28967), (42, 28955), (44, 28931), (53, 28877),

Gene: KayMoney\_40 Start: 28264, Stop: 28016, Start Num: 28

Candidate Starts for KayMoney\_40:

(Start: 24 @28273 has 5 MA's), (Start: 28 @28264 has 14 MA's), (29, 28243), (34, 28204), (37, 28168), (38, 28165), (40, 28150), (41, 28144), (42, 28132), (44, 28108), (53, 28054),

Gene: Kumotta\_32 Start: 26058, Stop: 25768, Start Num: 20

Candidate Starts for Kumotta\_32:

(8, 26229), (Start: 20 @26058 has 1 MA's), (Start: 28 @26025 has 14 MA's), (41, 25905), (43, 25875), (44, 25869), (48, 25839),

Gene: LilyBell\_40 Start: 28502, Stop: 28245, Start Num: 24

Candidate Starts for LilyBell\_40:

(Start: 24 @28502 has 5 MA's), (Start: 28 @28493 has 14 MA's), (29, 28472), (34, 28433), (37, 28397), (38, 28394), (40, 28379), (41, 28373), (42, 28361), (44, 28337), (53, 28283),

Gene: LittleRon\_38 Start: 27882, Stop: 27625, Start Num: 24

Candidate Starts for LittleRon\_38:

(Start: 24 @27882 has 5 MA's), (Start: 28 @27873 has 14 MA's), (29, 27852), (34, 27813), (37, 27777), (38, 27774), (40, 27759), (41, 27753), (42, 27741), (44, 27717), (53, 27663),

Gene: Maja\_32 Start: 26527, Stop: 26237, Start Num: 19

Candidate Starts for Maja\_32:

(Start: 19 @26527 has 1 MA's), (Start: 28 @26491 has 14 MA's), (30, 26458), (33, 26434), (50, 26293), (52, 26284),

Gene: MargaretKali\_32 Start: 25660, Stop: 25403, Start Num: 28

Candidate Starts for MargaretKali\_32:

(8, 25864), (Start: 20 @25693 has 1 MA's), (Start: 28 @25660 has 14 MA's), (41, 25540), (43, 25510), (44, 25504), (48, 25474),

Gene: NidoQ\_35 Start: 27607, Stop: 27350, Start Num: 24

Candidate Starts for NidoQ\_35:

(Start: 24 @27607 has 5 MA's), (Start: 28 @27598 has 14 MA's), (29, 27577), (34, 27538), (37, 27502), (38, 27499), (40, 27484), (41, 27478), (42, 27466), (44, 27442), (53, 27388),

Gene: Nyilah\_50 Start: 30252, Stop: 29998, Start Num: 28

Candidate Starts for Nyilah\_50:

(Start: 19 @30288 has 1 MA's), (Start: 28 @30252 has 14 MA's), (33, 30195), (44, 30096), (45, 30090), (50, 30054), (51, 30051), (52, 30045),

Gene: Peas\_37 Start: 29155, Stop: 28898, Start Num: 24

Candidate Starts for Peas\_37:

(Start: 24 @29155 has 5 MA's), (Start: 28 @29146 has 14 MA's), (29, 29125), (34, 29086), (37, 29050), (38, 29047), (40, 29032), (41, 29026), (42, 29014), (44, 28990), (53, 28936),

Gene: Pigu\_35 Start: 25236, Stop: 24982, Start Num: 28

Candidate Starts for Pigu\_35:

(25, 25242), (Start: 28 @25236 has 14 MA's), (31, 25200), (32, 25191), (33, 25179), (35, 25164), (36, 25149), (39, 25131), (44, 25080), (49, 25044),

Gene: RootBeer\_31 Start: 25049, Stop: 24801, Start Num: 28

Candidate Starts for RootBeer\_31:

(Start: 24 @25058 has 5 MA's), (Start: 28 @25049 has 14 MA's), (29, 25028), (34, 24989), (37, 24953), (38, 24950), (40, 24935), (41, 24929), (42, 24917), (44, 24893), (53, 24839),

Gene: Rooter\_36 Start: 25498, Stop: 25277, Start Num: 30

Candidate Starts for Rooter\_36:

(Start: 28 @25531 has 14 MA's), (30, 25498), (33, 25474), (44, 25375), (51, 25330),

Gene: Sarge\_32 Start: 23905, Stop: 23651, Start Num: 28

Candidate Starts for Sarge\_32:

(26, 23911), (Start: 28 @23905 has 14 MA's), (31, 23869), (33, 23848), (35, 23833), (36, 23818), (39, 23800), (43, 23755), (44, 23749), (50, 23707),

Gene: Shoya\_39 Start: 26307, Stop: 26053, Start Num: 28

Candidate Starts for Shoya\_39:

(Start: 28 @26307 has 14 MA's), (30, 26274), (33, 26250), (44, 26151), (51, 26106),

Gene: Shukran\_46 Start: 30035, Stop: 29808, Start Num: 29

Candidate Starts for Shukran\_46:

(22, 30077), (Start: 28 @30056 has 14 MA's), (29, 30035), (35, 29984), (42, 29924), (44, 29900), (52, 29849), (53, 29846),

Gene: Zucker\_42 Start: 30051, Stop: 29797, Start Num: 28

Candidate Starts for Zucker\_42:

(Start: 19 @30087 has 1 MA's), (Start: 28 @30051 has 14 MA's), (33, 29994), (44, 29895), (45, 29889), (50, 29853), (51, 29850), (52, 29844),