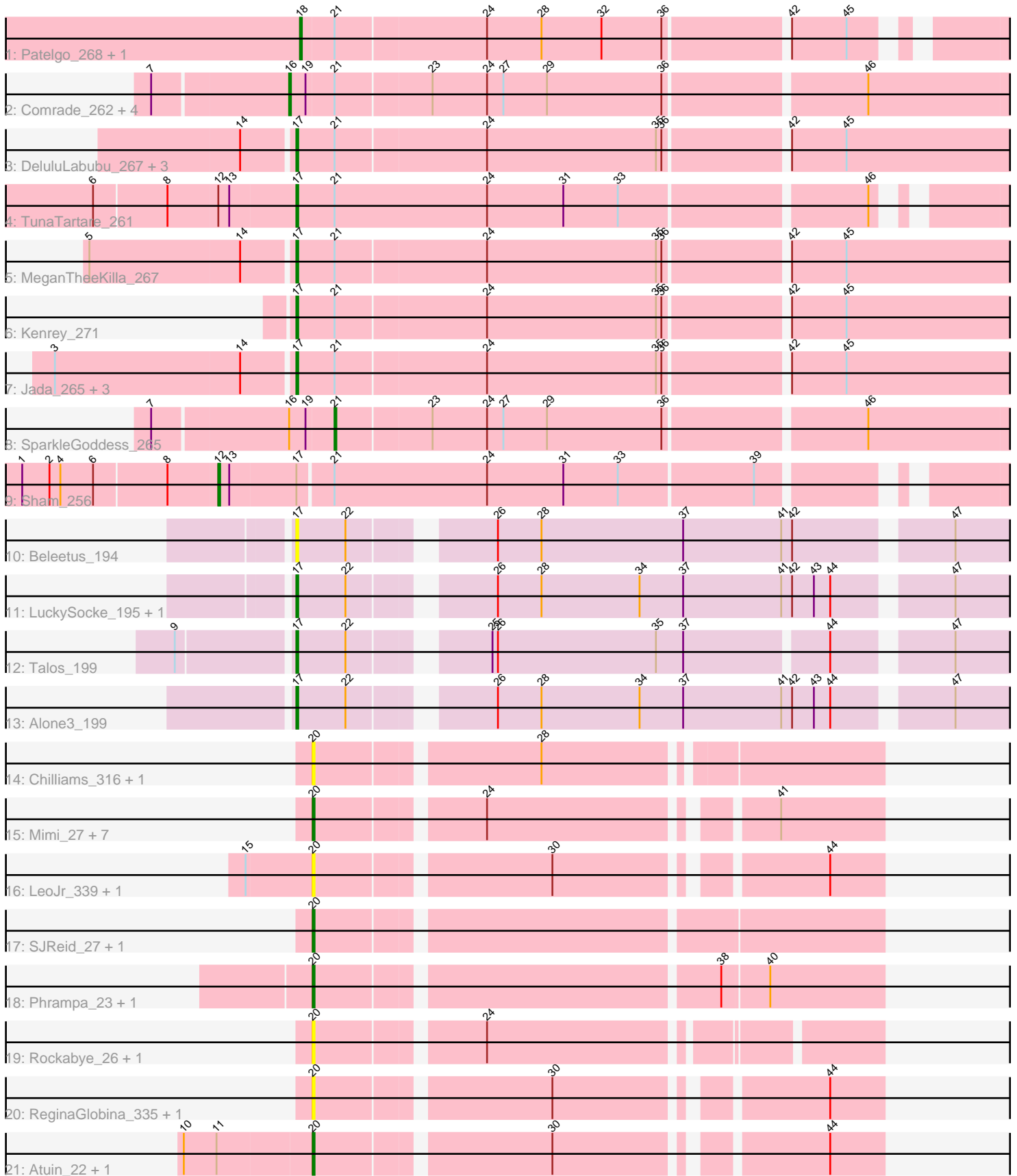


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 296678 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296678 has 47 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Patelgo\_268, Moab\_265
- Track 2 : Comrade\_262, Belfort\_267, Karp\_267, Stigma\_264, Westy\_268
- Track 3 : DeluluLabubu\_267, Gilson\_265, Maupel\_271, Francob\_268
- Track 4 : TunaTartare\_261
- Track 5 : MeganTheeKilla\_267
- Track 6 : Kenrey\_271
- Track 7 : Jada\_265, Forrest\_264, Emma1919\_266, Phredrick\_271
- Track 8 : SparkleGoddess\_265
- Track 9 : Sham\_256
- Track 10 : Beleetus\_194
- Track 11 : LuckySocke\_195, Fudan\_195
- Track 12 : Talos\_199
- Track 13 : Alone3\_199
- Track 14 : Chilliams\_316, Chilliams\_25
- Track 15 : Mimi\_27, Racecar\_317, FrostedClock\_29, Talia1610\_313, Racecar\_28, FrostedClock\_314, Talia1610\_27, Mimi\_312
- Track 16 : LeoJr\_339, LeoJr\_26
- Track 17 : SJReid\_27, SJReid\_336
- Track 18 : Phrampa\_23, Phrampa\_307
- Track 19 : Rockabye\_26, Rockabye\_325
- Track 20 : ReginaGlobina\_335, ReginaGlobina\_24
- Track 21 : Atuin\_22, Atuin\_322

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

The start number called the most often in the published annotations is 17, it was called in 13 of the 34 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alone3\_199, Beleetus\_194, DeluluLabubu\_267, Emma1919\_266, Forrest\_264, Francob\_268, Fudan\_195, Gilson\_265, Jada\_265, Kenrey\_271, LuckySocke\_195, Maupel\_271, MeganTheeKilla\_267, Phredrick\_271, Talos\_199, TunaTartare\_261,

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

- Sham\_256,

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

- Atuin\_22, Atuin\_322, Belfort\_267, Chilliams\_25, Chilliams\_316, Comrade\_262, FrostedClock\_29, FrostedClock\_314, Karp\_267, LeoJr\_26, LeoJr\_339, Mimi\_27, Mimi\_312, Moab\_265, Patelgo\_268, Phrampa\_23, Phrampa\_307, Racecar\_28, Racecar\_317, ReginaGlobina\_24, ReginaGlobina\_335, Rockabye\_26, Rockabye\_325, SJReid\_27, SJReid\_336, SparkleGoddess\_265, Stigma\_264, Talia1610\_27, Talia1610\_313, Westy\_268,

### Summary by start number:

Start 12:

- Found in 2 of 47 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 1 of 34
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Sham\_256 (BK1),

Start 16:

- Found in 6 of 47 ( 12.8% ) of genes in pham
- Manual Annotations of this start: 5 of 34
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Belfort\_267 (BK1), Comrade\_262 (BK1), Karp\_267 (BK1), Stigma\_264 (BK1), Westy\_268 (BK1),

Start 17:

- Found in 17 of 47 ( 36.2% ) of genes in pham
- Manual Annotations of this start: 13 of 34
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Alone3\_199 (BS), Beleetus\_194 (BS), DeluluLabubu\_267 (BK1), Emma1919\_266 (BK1), Forrest\_264 (BK1), Francob\_268 (BK1), Fudan\_195 (BS), Gilson\_265 (BK1), Jada\_265 (BK1), Kenrey\_271 (BK1), LuckySocke\_195 (BS), Maupel\_271 (BK1), MeganTheeKilla\_267 (BK1), Phredrick\_271 (BK1), Talos\_199 (BS), TunaTartare\_261 (BK1),

Start 18:

- Found in 2 of 47 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 2 of 34
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Moab\_265 (BK1), Patelgo\_268 (BK1),

Start 20:

- Found in 22 of 47 ( 46.8% ) of genes in pham
- Manual Annotations of this start: 12 of 34
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_22 (FC), Atuin\_322 (FC), Chilliams\_25 (FC), Chilliams\_316 (FC), FrostedClock\_29 (FC), FrostedClock\_314 (FC), LeoJr\_26 (FC), LeoJr\_339 (FC), Mimi\_27 (FC), Mimi\_312 (FC), Phrampa\_23 (FC), Phrampa\_307 (FC), Racecar\_28 (FC), Racecar\_317 (FC), ReginaGlobina\_24 (FC), ReginaGlobina\_335 (FC), Rockabye\_26 (FC), Rockabye\_325 (FC), SJReid\_27 (FC), SJReid\_336 (FC), Talia1610\_27 (FC), Talia1610\_313 (FC),

Start 21:

- Found in 20 of 47 ( 42.6% ) of genes in pham
- Manual Annotations of this start: 1 of 34
- Called 5.0% of time when present
- Phage (with cluster) where this start called: SparkleGoddess\_265 (BK1),

### **Summary by clusters:**

There are 3 clusters represented in this pham: FC, BK1, BS,

Info for manual annotations of cluster BK1:

- Start number 12 was manually annotated 1 time for cluster BK1.
- Start number 16 was manually annotated 5 times for cluster BK1.
- Start number 17 was manually annotated 10 times for cluster BK1.
- Start number 18 was manually annotated 2 times for cluster BK1.
- Start number 21 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster BS:

- Start number 17 was manually annotated 3 times for cluster BS.

Info for manual annotations of cluster FC:

- Start number 20 was manually annotated 12 times for cluster FC.

### **Gene Information:**

Gene: Alone3\_199 Start: 103287, Stop: 103649, Start Num: 17

Candidate Starts for Alone3\_199:

(Start: 17 @103287 has 13 MA's), (22, 103314), (26, 103380), (28, 103404), (34, 103458), (37, 103482), (41, 103536), (42, 103542), (43, 103554), (44, 103563), (47, 103620),

Gene: Atuin\_22 Start: 10912, Stop: 11193, Start Num: 20

Candidate Starts for Atuin\_22:

(10, 10843), (11, 10861), (Start: 20 @10912 has 12 MA's), (30, 11032), (44, 11164),

Gene: Atuin\_322 Start: 187800, Stop: 188081, Start Num: 20

Candidate Starts for Atuin\_322:

(10, 187731), (11, 187749), (Start: 20 @187800 has 12 MA's), (30, 187920), (44, 188052),

Gene: Beleetus\_194 Start: 101184, Stop: 101546, Start Num: 17

Candidate Starts for Beleetus\_194:

(Start: 17 @101184 has 13 MA's), (22, 101211), (26, 101277), (28, 101301), (37, 101379), (41, 101433), (42, 101439), (47, 101517),

Gene: Belfort\_267 Start: 127179, Stop: 127565, Start Num: 16

Candidate Starts for Belfort\_267:

(7, 127107), (Start: 16 @127179 has 5 MA's), (19, 127188), (Start: 21 @127203 has 1 MA's), (23, 127254), (24, 127284), (27, 127293), (29, 127317), (36, 127380), (46, 127485),

Gene: Chilliams\_316 Start: 184931, Stop: 185218, Start Num: 20

Candidate Starts for Chilliams\_316:

(Start: 20 @184931 has 12 MA's), (28, 185045),

Gene: Chilliams\_25 Start: 12197, Stop: 12484, Start Num: 20

Candidate Starts for Chilliams\_25:

(Start: 20 @12197 has 12 MA's), (28, 12311),

Gene: Comrade\_262 Start: 127318, Stop: 127704, Start Num: 16

Candidate Starts for Comrade\_262:

(7, 127246), (Start: 16 @127318 has 5 MA's), (19, 127327), (Start: 21 @127342 has 1 MA's), (23, 127393), (24, 127423), (27, 127432), (29, 127456), (36, 127519), (46, 127624),

Gene: DeluluLabubu\_267 Start: 126862, Stop: 127242, Start Num: 17

Candidate Starts for DeluluLabubu\_267:

(14, 126835), (Start: 17 @126862 has 13 MA's), (Start: 21 @126883 has 1 MA's), (24, 126964), (35, 127057), (36, 127060), (42, 127123), (45, 127153),

Gene: Emma1919\_266 Start: 126331, Stop: 126711, Start Num: 17

Candidate Starts for Emma1919\_266:

(3, 126205), (14, 126304), (Start: 17 @126331 has 13 MA's), (Start: 21 @126352 has 1 MA's), (24, 126433), (35, 126526), (36, 126529), (42, 126592), (45, 126622),

Gene: Forrest\_264 Start: 126768, Stop: 127148, Start Num: 17

Candidate Starts for Forrest\_264:

(3, 126642), (14, 126741), (Start: 17 @126768 has 13 MA's), (Start: 21 @126789 has 1 MA's), (24, 126870), (35, 126963), (36, 126966), (42, 127029), (45, 127059),

Gene: Francob\_268 Start: 127056, Stop: 127436, Start Num: 17

Candidate Starts for Francob\_268:

(14, 127029), (Start: 17 @127056 has 13 MA's), (Start: 21 @127077 has 1 MA's), (24, 127158), (35, 127251), (36, 127254), (42, 127317), (45, 127347),

Gene: FrostedClock\_29 Start: 12400, Stop: 12681, Start Num: 20

Candidate Starts for FrostedClock\_29:

(Start: 20 @12400 has 12 MA's), (24, 12484), (41, 12625),

Gene: FrostedClock\_314 Start: 186200, Stop: 186481, Start Num: 20

Candidate Starts for FrostedClock\_314:

(Start: 20 @186200 has 12 MA's), (24, 186284), (41, 186425),

Gene: Fudan\_195 Start: 101090, Stop: 101452, Start Num: 17

Candidate Starts for Fudan\_195:

(Start: 17 @101090 has 13 MA's), (22, 101117), (26, 101183), (28, 101207), (34, 101261), (37, 101285), (41, 101339), (42, 101345), (43, 101357), (44, 101366), (47, 101423),

Gene: Gilson\_265 Start: 126593, Stop: 126973, Start Num: 17

Candidate Starts for Gilson\_265:

(14, 126566), (Start: 17 @126593 has 13 MA's), (Start: 21 @126614 has 1 MA's), (24, 126695), (35, 126788), (36, 126791), (42, 126854), (45, 126884),

Gene: Jada\_265 Start: 126008, Stop: 126388, Start Num: 17

Candidate Starts for Jada\_265:

(3, 125882), (14, 125981), (Start: 17 @126008 has 13 MA's), (Start: 21 @126029 has 1 MA's), (24, 126110), (35, 126203), (36, 126206), (42, 126269), (45, 126299),

Gene: Karp\_267 Start: 128776, Stop: 129162, Start Num: 16

Candidate Starts for Karp\_267:

(7, 128704), (Start: 16 @128776 has 5 MA's), (19, 128785), (Start: 21 @128800 has 1 MA's), (23, 128851), (24, 128881), (27, 128890), (29, 128914), (36, 128977), (46, 129082),

Gene: Kenrey\_271 Start: 127809, Stop: 128189, Start Num: 17

Candidate Starts for Kenrey\_271:

(Start: 17 @127809 has 13 MA's), (Start: 21 @127830 has 1 MA's), (24, 127911), (35, 128004), (36, 128007), (42, 128070), (45, 128100),

Gene: LeoJr\_339 Start: 188518, Stop: 188799, Start Num: 20

Candidate Starts for LeoJr\_339:

(15, 188482), (Start: 20 @188518 has 12 MA's), (30, 188638), (44, 188770),

Gene: LeoJr\_26 Start: 11215, Stop: 11496, Start Num: 20

Candidate Starts for LeoJr\_26:

(15, 11179), (Start: 20 @11215 has 12 MA's), (30, 11335), (44, 11467),

Gene: LuckySocke\_195 Start: 101031, Stop: 101393, Start Num: 17

Candidate Starts for LuckySocke\_195:

(Start: 17 @101031 has 13 MA's), (22, 101058), (26, 101124), (28, 101148), (34, 101202), (37, 101226), (41, 101280), (42, 101286), (43, 101298), (44, 101307), (47, 101364),

Gene: Maupel\_271 Start: 125786, Stop: 126166, Start Num: 17

Candidate Starts for Maupel\_271:

(14, 125759), (Start: 17 @125786 has 13 MA's), (Start: 21 @125807 has 1 MA's), (24, 125888), (35, 125981), (36, 125984), (42, 126047), (45, 126077),

Gene: MeganTheeKilla\_267 Start: 126407, Stop: 126787, Start Num: 17

Candidate Starts for MeganTheeKilla\_267:

(5, 126299), (14, 126380), (Start: 17 @126407 has 13 MA's), (Start: 21 @126428 has 1 MA's), (24, 126509), (35, 126602), (36, 126605), (42, 126668), (45, 126698),

Gene: Mimi\_27 Start: 12295, Stop: 12576, Start Num: 20

Candidate Starts for Mimi\_27:

(Start: 20 @12295 has 12 MA's), (24, 12379), (41, 12520),

Gene: Mimi\_312 Start: 184955, Stop: 185236, Start Num: 20

Candidate Starts for Mimi\_312:

(Start: 20 @184955 has 12 MA's), (24, 185039), (41, 185180),

Gene: Moab\_265 Start: 127438, Stop: 127803, Start Num: 18

Candidate Starts for Moab\_265:

(Start: 18 @127438 has 2 MA's), (Start: 21 @127456 has 1 MA's), (24, 127537), (28, 127567), (32, 127600), (36, 127633), (42, 127696), (45, 127726),

Gene: Patelgo\_268 Start: 128371, Stop: 128736, Start Num: 18

Candidate Starts for Patelgo\_268:

(Start: 18 @128371 has 2 MA's), (Start: 21 @128389 has 1 MA's), (24, 128470), (28, 128500), (32, 128533), (36, 128566), (42, 128629), (45, 128659),

Gene: Phrampa\_23 Start: 10699, Stop: 10992, Start Num: 20

Candidate Starts for Phrampa\_23:

(Start: 20 @10699 has 12 MA's), (38, 10906), (40, 10930),

Gene: Phrampa\_307 Start: 187070, Stop: 187363, Start Num: 20

Candidate Starts for Phrampa\_307:

(Start: 20 @187070 has 12 MA's), (38, 187277), (40, 187301),

Gene: Phredrick\_271 Start: 127129, Stop: 127509, Start Num: 17

Candidate Starts for Phredrick\_271:

(3, 127003), (14, 127102), (Start: 17 @127129 has 13 MA's), (Start: 21 @127150 has 1 MA's), (24, 127231), (35, 127324), (36, 127327), (42, 127390), (45, 127420),

Gene: Racecar\_317 Start: 186595, Stop: 186876, Start Num: 20

Candidate Starts for Racecar\_317:

(Start: 20 @186595 has 12 MA's), (24, 186679), (41, 186820),

Gene: Racecar\_28 Start: 12886, Stop: 13167, Start Num: 20

Candidate Starts for Racecar\_28:

(Start: 20 @12886 has 12 MA's), (24, 12970), (41, 13111),

Gene: ReginaGlobina\_335 Start: 188818, Stop: 189099, Start Num: 20

Candidate Starts for ReginaGlobina\_335:

(Start: 20 @188818 has 12 MA's), (30, 188938), (44, 189070),

Gene: ReginaGlobina\_24 Start: 11371, Stop: 11652, Start Num: 20

Candidate Starts for ReginaGlobina\_24:

(Start: 20 @11371 has 12 MA's), (30, 11491), (44, 11623),

Gene: Rockabye\_26 Start: 11983, Stop: 12264, Start Num: 20

Candidate Starts for Rockabye\_26:

(Start: 20 @11983 has 12 MA's), (24, 12067),

Gene: Rockabye\_325 Start: 184596, Stop: 184877, Start Num: 20

Candidate Starts for Rockabye\_325:

(Start: 20 @184596 has 12 MA's), (24, 184680),

Gene: SJReid\_27 Start: 12400, Stop: 12693, Start Num: 20

Candidate Starts for SJReid\_27:

(Start: 20 @12400 has 12 MA's),

Gene: SJReid\_336 Start: 185239, Stop: 185532, Start Num: 20

Candidate Starts for SJReid\_336:

(Start: 20 @185239 has 12 MA's),

Gene: Sham\_256 Start: 127487, Stop: 127888, Start Num: 12

Candidate Starts for Sham\_256:

(1, 127382), (2, 127397), (4, 127403), (6, 127421), (8, 127460), (Start: 12 @127487 has 1 MA's), (13, 127493), (Start: 17 @127529 has 13 MA's), (Start: 21 @127547 has 1 MA's), (24, 127631), (31, 127673), (33, 127703), (39, 127775),

Gene: SparkleGoddess\_265 Start: 128069, Stop: 128431, Start Num: 21

Candidate Starts for SparkleGoddess\_265:

(7, 127973), (Start: 16 @128045 has 5 MA's), (19, 128054), (Start: 21 @128069 has 1 MA's), (23, 128120), (24, 128150), (27, 128159), (29, 128183), (36, 128246), (46, 128351),

Gene: Stigma\_264 Start: 127758, Stop: 128144, Start Num: 16

Candidate Starts for Stigma\_264:

(7, 127686), (Start: 16 @127758 has 5 MA's), (19, 127767), (Start: 21 @127782 has 1 MA's), (23, 127833), (24, 127863), (27, 127872), (29, 127896), (36, 127959), (46, 128064),

Gene: Talia1610\_313 Start: 186780, Stop: 187061, Start Num: 20

Candidate Starts for Talia1610\_313:

(Start: 20 @186780 has 12 MA's), (24, 186864), (41, 187005),

Gene: Talia1610\_27 Start: 12308, Stop: 12589, Start Num: 20

Candidate Starts for Talia1610\_27:

(Start: 20 @12308 has 12 MA's), (24, 12392), (41, 12533),

Gene: Talos\_199 Start: 101808, Stop: 102164, Start Num: 17

Candidate Starts for Talos\_199:

(9, 101748), (Start: 17 @101808 has 13 MA's), (22, 101835), (25, 101898), (26, 101901), (35, 101988), (37, 102003), (44, 102078), (47, 102135),

Gene: TunaTartare\_261 Start: 128151, Stop: 128513, Start Num: 17

Candidate Starts for TunaTartare\_261:

(6, 128043), (8, 128082), (Start: 12 @128109 has 1 MA's), (13, 128115), (Start: 17 @128151 has 13 MA's), (Start: 21 @128172 has 1 MA's), (24, 128256), (31, 128298), (33, 128328), (46, 128457),

Gene: Westy\_268 Start: 128582, Stop: 128968, Start Num: 16

Candidate Starts for Westy\_268:

(7, 128510), (Start: 16 @128582 has 5 MA's), (19, 128591), (Start: 21 @128606 has 1 MA's), (23, 128657), (24, 128687), (27, 128696), (29, 128720), (36, 128783), (46, 128888),