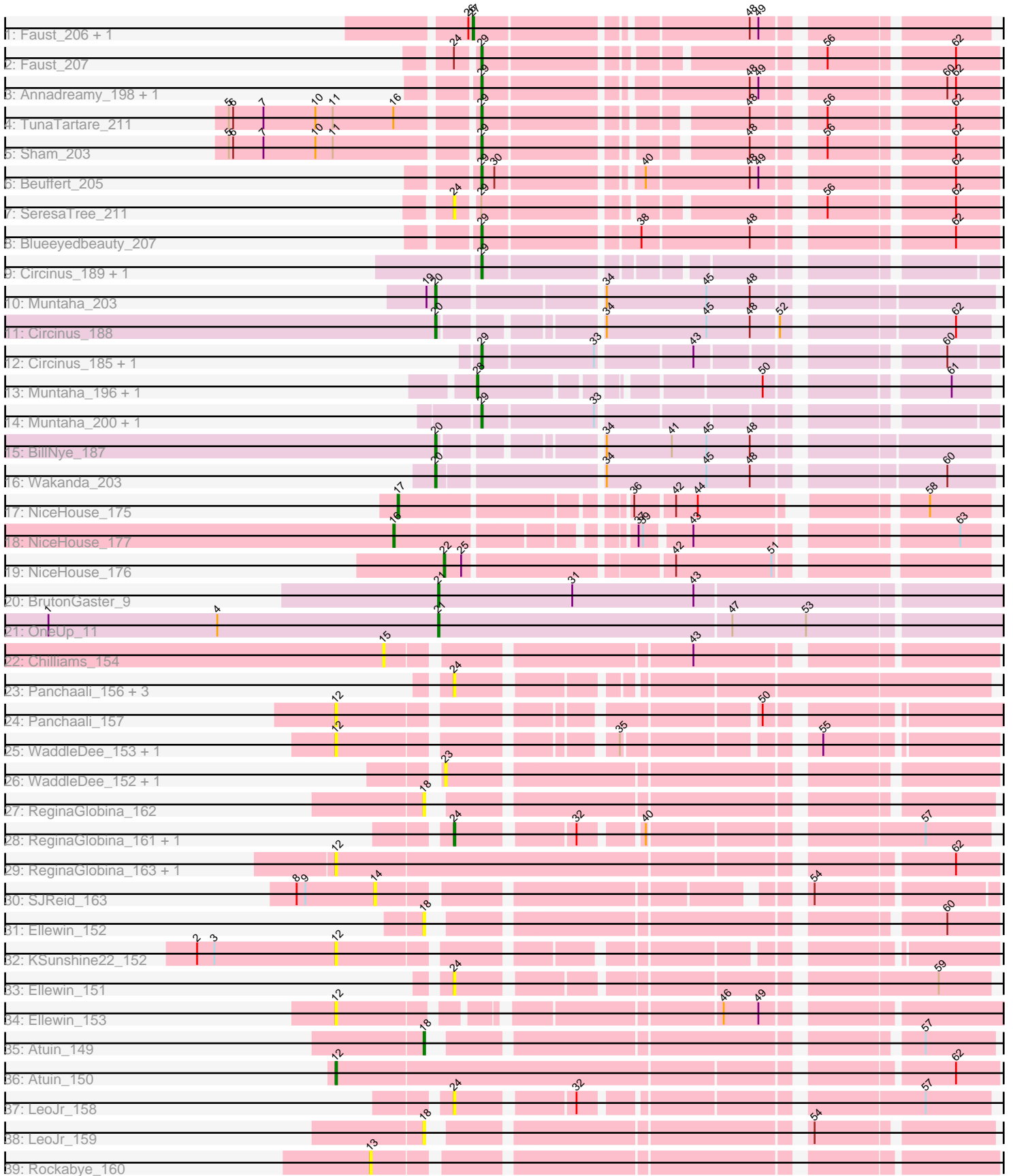


Pham 216238



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 216238 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216238 has 52 members, 24 are drafts.

Phages represented in each track:

- Track 1 : Faust\_206, SeresaTree\_210
- Track 2 : Faust\_207
- Track 3 : Annadreamy\_198, Limpid\_205
- Track 4 : TunaTartare\_211
- Track 5 : Sham\_203
- Track 6 : Beuffert\_205
- Track 7 : SeresaTree\_211
- Track 8 : Blueeyedbeauty\_207
- Track 9 : Circinus\_189, BillNye\_188
- Track 10 : Muntaha\_203
- Track 11 : Circinus\_188
- Track 12 : Circinus\_185, BillNye\_184
- Track 13 : Muntaha\_196, Wakanda\_196
- Track 14 : Muntaha\_200, Wakanda\_200
- Track 15 : BillNye\_187
- Track 16 : Wakanda\_203
- Track 17 : NiceHouse\_175
- Track 18 : NiceHouse\_177
- Track 19 : NiceHouse\_176
- Track 20 : BrutonGaster\_9
- Track 21 : OneUp\_11
- Track 22 : Chilliams\_154
- Track 23 : Panchaali\_156, WaddleDee\_151, KSunshine22\_151, DunneganBoMo\_152
- Track 24 : Panchaali\_157
- Track 25 : WaddleDee\_153, DunneganBoMo\_154
- Track 26 : WaddleDee\_152, DunneganBoMo\_153
- Track 27 : ReginaGlobina\_162
- Track 28 : ReginaGlobina\_161, Atuin\_148
- Track 29 : ReginaGlobina\_163, LeoJr\_160
- Track 30 : SJReid\_163
- Track 31 : Ellewin\_152
- Track 32 : KSunshine22\_152
- Track 33 : Ellewin\_151
- Track 34 : Ellewin\_153
- Track 35 : Atuin\_149
- Track 36 : Atuin\_150

- Track 37 : LeoJr\_158
- Track 38 : LeoJr\_159
- Track 39 : Rockabye\_160

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

The start number called the most often in the published annotations is 29, it was called in 13 of the 28 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Annadreamy\_198, Beuffert\_205, BillNye\_184, BillNye\_188, Blueeyedbeauty\_207, Circinus\_185, Circinus\_189, Faust\_207, Limpid\_205, Muntaha\_200, Sham\_203, TunaTartare\_211, Wakanda\_200,

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

- SeresaTree\_211,

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

- Atuin\_148, Atuin\_149, Atuin\_150, BillNye\_187, BrutonGaster\_9, Chilliams\_154, Circinus\_188, DunneganBoMo\_152, DunneganBoMo\_153, DunneganBoMo\_154, Ellewin\_151, Ellewin\_152, Ellewin\_153, Faust\_206, KSunshine22\_151, KSunshine22\_152, LeoJr\_158, LeoJr\_159, LeoJr\_160, Muntaha\_196, Muntaha\_203, NiceHouse\_175, NiceHouse\_176, NiceHouse\_177, OneUp\_11, Panchaali\_156, Panchaali\_157, ReginaGlobina\_161, ReginaGlobina\_162, ReginaGlobina\_163, Rockabye\_160, SJReid\_163, SeresaTree\_210, WaddleDee\_151, WaddleDee\_152, WaddleDee\_153, Wakanda\_196, Wakanda\_203,

**Summary by start number:**

Start 12:

- Found in 8 of 52 ( 15.4% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_150 (FC), DunneganBoMo\_154 (FC), Ellewin\_153 (FC), KSunshine22\_152 (FC), LeoJr\_160 (FC), Panchaali\_157 (FC), ReginaGlobina\_163 (FC), WaddleDee\_153 (FC),

Start 13:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rockabye\_160 (FC),

Start 14:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SJReid\_163 (FC),

Start 15:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chilliams\_154 (FC),

Start 16:

- Found in 2 of 52 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 50.0% of time when present
- Phage (with cluster) where this start called: NiceHouse\_177 (CE),

Start 17:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NiceHouse\_175 (CE),

Start 18:

- Found in 4 of 52 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_149 (FC), Ellewin\_152 (FC), LeoJr\_159 (FC), ReginaGlobina\_162 (FC),

Start 20:

- Found in 4 of 52 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 4 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BillNye\_187 (BK2), Circinus\_188 (BK2), Muntaha\_203 (BK2), Wakanda\_203 (BK2),

Start 21:

- Found in 2 of 52 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BrutonGaster\_9 (CQ2), OneUp\_11 (CQ2),

Start 22:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NiceHouse\_176 (CE),

Start 23:

- Found in 2 of 52 ( 3.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DunneganBoMo\_153 (FC), WaddleDee\_152 (FC),

Start 24:

- Found in 10 of 52 ( 19.2% ) of genes in pham

- Manual Annotations of this start: 1 of 28
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Atuin\_148 (FC), DunneganBoMo\_152 (FC), Ellewin\_151 (FC), KSunshine22\_151 (FC), LeoJr\_158 (FC), Panchaali\_156 (FC), ReginaGlobina\_161 (FC), SeresaTree\_211 (BK1), WaddleDee\_151 (FC),

Start 27:

- Found in 2 of 52 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Faust\_206 (BK1), SeresaTree\_210 (BK1),

Start 28:

- Found in 2 of 52 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Muntaha\_196 (BK2), Wakanda\_196 (BK2),

Start 29:

- Found in 14 of 52 ( 26.9% ) of genes in pham
- Manual Annotations of this start: 13 of 28
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Annadreamy\_198 (BK1), Beuffert\_205 (BK1), BillNye\_184 (BK2), BillNye\_188 (BK2), Blueeyedbeauty\_207 (BK1), Circinus\_185 (BK2), Circinus\_189 (BK2), Faust\_207 (BK1), Limpid\_205 (BK1), Muntaha\_200 (BK2), Sham\_203 (BK1), TunaTartare\_211 (BK1), Wakanda\_200 (BK2),

### **Summary by clusters:**

There are 5 clusters represented in this pham: CQ2, FC, CE, BK1, BK2,

Info for manual annotations of cluster BK1:

- Start number 27 was manually annotated 1 time for cluster BK1.
- Start number 29 was manually annotated 7 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 20 was manually annotated 4 times for cluster BK2.
- Start number 28 was manually annotated 2 times for cluster BK2.
- Start number 29 was manually annotated 6 times for cluster BK2.

Info for manual annotations of cluster CE:

- Start number 16 was manually annotated 1 time for cluster CE.
- Start number 17 was manually annotated 1 time for cluster CE.
- Start number 22 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster CQ2:

- Start number 21 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster FC:

- Start number 12 was manually annotated 1 time for cluster FC.

- Start number 18 was manually annotated 1 time for cluster FC.
- Start number 24 was manually annotated 1 time for cluster FC.

### **Gene Information:**

Gene: Annadreamy\_198 Start: 100559, Stop: 100870, Start Num: 29

Candidate Starts for Annadreamy\_198:

(Start: 29 @100559 has 13 MA's), (48, 100724), (49, 100730), (60, 100835), (62, 100841),

Gene: Atuin\_148 Start: 104321, Stop: 104644, Start Num: 24

Candidate Starts for Atuin\_148:

(Start: 24 @104321 has 1 MA's), (32, 104393), (40, 104429), (57, 104600),

Gene: Atuin\_149 Start: 104650, Stop: 104988, Start Num: 18

Candidate Starts for Atuin\_149:

(Start: 18 @104650 has 1 MA's), (57, 104941),

Gene: Atuin\_150 Start: 104992, Stop: 105420, Start Num: 12

Candidate Starts for Atuin\_150:

(Start: 12 @104992 has 1 MA's), (62, 105391),

Gene: Beuffert\_205 Start: 104551, Stop: 104862, Start Num: 29

Candidate Starts for Beuffert\_205:

(Start: 29 @104551 has 13 MA's), (30, 104560), (40, 104647), (48, 104716), (49, 104722), (62, 104833),

Gene: BillNye\_184 Start: 100624, Stop: 100935, Start Num: 29

Candidate Starts for BillNye\_184:

(Start: 29 @100624 has 13 MA's), (33, 100699), (43, 100759), (60, 100903),

Gene: BillNye\_187 Start: 101461, Stop: 101799, Start Num: 20

Candidate Starts for BillNye\_187:

(Start: 20 @101461 has 4 MA's), (34, 101554), (41, 101599), (45, 101623), (48, 101653),

Gene: BillNye\_188 Start: 101849, Stop: 102151, Start Num: 29

Candidate Starts for BillNye\_188:

(Start: 29 @101849 has 13 MA's),

Gene: Blueeyedbeauty\_207 Start: 104279, Stop: 104596, Start Num: 29

Candidate Starts for Blueeyedbeauty\_207:

(Start: 29 @104279 has 13 MA's), (38, 104378), (48, 104450), (62, 104567),

Gene: BrutonGaster\_9 Start: 2765, Stop: 3145, Start Num: 21

Candidate Starts for BrutonGaster\_9:

(Start: 21 @2765 has 2 MA's), (31, 2858), (43, 2942),

Gene: Chilliams\_154 Start: 95980, Stop: 96354, Start Num: 15

Candidate Starts for Chilliams\_154:

(15, 95980), (43, 96166),

Gene: Circinus\_189 Start: 101656, Stop: 101958, Start Num: 29

Candidate Starts for Circinus\_189:  
(Start: 29 @101656 has 13 MA's),

Gene: Circinus\_188 Start: 101268, Stop: 101606, Start Num: 20  
Candidate Starts for Circinus\_188:  
(Start: 20 @101268 has 4 MA's), (34, 101361), (45, 101430), (48, 101460), (52, 101478), (62, 101583),

Gene: Circinus\_185 Start: 100431, Stop: 100742, Start Num: 29  
Candidate Starts for Circinus\_185:  
(Start: 29 @100431 has 13 MA's), (33, 100506), (43, 100566), (60, 100710),

Gene: DunneganBoMo\_153 Start: 101601, Stop: 101942, Start Num: 23  
Candidate Starts for DunneganBoMo\_153:  
(23, 101601),

Gene: DunneganBoMo\_154 Start: 101944, Stop: 102327, Start Num: 12  
Candidate Starts for DunneganBoMo\_154:  
(Start: 12 @101944 has 1 MA's), (35, 102106), (55, 102217),

Gene: DunneganBoMo\_152 Start: 101261, Stop: 101590, Start Num: 24  
Candidate Starts for DunneganBoMo\_152:  
(Start: 24 @101261 has 1 MA's),

Gene: Ellewin\_152 Start: 101696, Stop: 102037, Start Num: 18  
Candidate Starts for Ellewin\_152:  
(Start: 18 @101696 has 1 MA's), (60, 102002),

Gene: Ellewin\_151 Start: 101365, Stop: 101691, Start Num: 24  
Candidate Starts for Ellewin\_151:  
(Start: 24 @101365 has 1 MA's), (59, 101656),

Gene: Ellewin\_153 Start: 102039, Stop: 102437, Start Num: 12  
Candidate Starts for Ellewin\_153:  
(Start: 12 @102039 has 1 MA's), (46, 102267), (49, 102291),

Gene: Faust\_206 Start: 105463, Stop: 105774, Start Num: 27  
Candidate Starts for Faust\_206:  
(26, 105460), (Start: 27 @105463 has 1 MA's), (48, 105634), (49, 105640),

Gene: Faust\_207 Start: 105783, Stop: 106088, Start Num: 29  
Candidate Starts for Faust\_207:  
(Start: 24 @105771 has 1 MA's), (Start: 29 @105783 has 13 MA's), (56, 105981), (62, 106059),

Gene: KSunshine22\_151 Start: 102661, Stop: 102990, Start Num: 24  
Candidate Starts for KSunshine22\_151:  
(Start: 24 @102661 has 1 MA's),

Gene: KSunshine22\_152 Start: 103001, Stop: 103387, Start Num: 12  
Candidate Starts for KSunshine22\_152:  
(2, 102905), (3, 102917), (Start: 12 @103001 has 1 MA's),

Gene: LeoJr\_158 Start: 104920, Stop: 105243, Start Num: 24  
Candidate Starts for LeoJr\_158:

(Start: 24 @104920 has 1 MA's), (32, 104992), (57, 105199),

Gene: LeoJr\_160 Start: 105590, Stop: 106018, Start Num: 12

Candidate Starts for LeoJr\_160:

(Start: 12 @105590 has 1 MA's), (62, 105989),

Gene: LeoJr\_159 Start: 105249, Stop: 105587, Start Num: 18

Candidate Starts for LeoJr\_159:

(Start: 18 @105249 has 1 MA's), (54, 105474),

Gene: Limpid\_205 Start: 105872, Stop: 106183, Start Num: 29

Candidate Starts for Limpid\_205:

(Start: 29 @105872 has 13 MA's), (48, 106037), (49, 106043), (60, 106148), (62, 106154),

Gene: Muntaha\_203 Start: 101500, Stop: 101853, Start Num: 20

Candidate Starts for Muntaha\_203:

(19, 101494), (Start: 20 @101500 has 4 MA's), (34, 101605), (45, 101674), (48, 101704),

Gene: Muntaha\_196 Start: 99557, Stop: 99856, Start Num: 28

Candidate Starts for Muntaha\_196:

(Start: 28 @99557 has 2 MA's), (50, 99725), (61, 99830),

Gene: Muntaha\_200 Start: 100611, Stop: 100922, Start Num: 29

Candidate Starts for Muntaha\_200:

(Start: 29 @100611 has 13 MA's), (33, 100686),

Gene: NiceHouse\_175 Start: 99827, Stop: 100174, Start Num: 17

Candidate Starts for NiceHouse\_175:

(Start: 17 @99827 has 1 MA's), (36, 99965), (42, 99989), (44, 100004), (58, 100133),

Gene: NiceHouse\_177 Start: 100519, Stop: 100866, Start Num: 16

Candidate Starts for NiceHouse\_177:

(Start: 16 @100519 has 1 MA's), (37, 100657), (39, 100660), (43, 100687), (63, 100846),

Gene: NiceHouse\_176 Start: 100180, Stop: 100518, Start Num: 22

Candidate Starts for NiceHouse\_176:

(Start: 22 @100180 has 1 MA's), (25, 100192), (42, 100324), (51, 100390),

Gene: OneUp\_11 Start: 3220, Stop: 3600, Start Num: 21

Candidate Starts for OneUp\_11:

(1, 2950), (4, 3067), (Start: 21 @3220 has 2 MA's), (47, 3421), (53, 3472),

Gene: Panchaali\_156 Start: 101776, Stop: 102108, Start Num: 24

Candidate Starts for Panchaali\_156:

(Start: 24 @101776 has 1 MA's),

Gene: Panchaali\_157 Start: 102119, Stop: 102511, Start Num: 12

Candidate Starts for Panchaali\_157:

(Start: 12 @102119 has 1 MA's), (50, 102368),

Gene: ReginaGlobina\_162 Start: 106523, Stop: 106861, Start Num: 18

Candidate Starts for ReginaGlobina\_162:

(Start: 18 @106523 has 1 MA's),



Gene: ReginaGlobina\_161 Start: 106194, Stop: 106517, Start Num: 24  
Candidate Starts for ReginaGlobina\_161:  
(Start: 24 @106194 has 1 MA's), (32, 106266), (40, 106302), (57, 106473),

Gene: ReginaGlobina\_163 Start: 106864, Stop: 107292, Start Num: 12  
Candidate Starts for ReginaGlobina\_163:  
(Start: 12 @106864 has 1 MA's), (62, 107263),

Gene: Rockabye\_160 Start: 97547, Stop: 97930, Start Num: 13  
Candidate Starts for Rockabye\_160:  
(13, 97547),

Gene: SJReid\_163 Start: 96607, Stop: 96969, Start Num: 14  
Candidate Starts for SJReid\_163:  
(8, 96553), (9, 96559), (14, 96607), (54, 96853),

Gene: SeresaTree\_210 Start: 105448, Stop: 105759, Start Num: 27  
Candidate Starts for SeresaTree\_210:  
(26, 105445), (Start: 27 @105448 has 1 MA's), (48, 105619), (49, 105625),

Gene: SeresaTree\_211 Start: 105756, Stop: 106073, Start Num: 24  
Candidate Starts for SeresaTree\_211:  
(Start: 24 @105756 has 1 MA's), (Start: 29 @105768 has 13 MA's), (56, 105966), (62, 106044),

Gene: Sham\_203 Start: 106846, Stop: 107148, Start Num: 29  
Candidate Starts for Sham\_203:  
(5, 106684), (6, 106687), (7, 106708), (10, 106744), (11, 106756), (Start: 29 @106846 has 13 MA's),  
(48, 107002), (56, 107041), (62, 107119),

Gene: TunaTartare\_211 Start: 109144, Stop: 109446, Start Num: 29  
Candidate Starts for TunaTartare\_211:  
(5, 108982), (6, 108985), (7, 109006), (10, 109042), (11, 109054), (Start: 16 @109096 has 1 MA's),  
(Start: 29 @109144 has 13 MA's), (48, 109300), (56, 109339), (62, 109417),

Gene: WaddleDee\_153 Start: 101130, Stop: 101513, Start Num: 12  
Candidate Starts for WaddleDee\_153:  
(Start: 12 @101130 has 1 MA's), (35, 101292), (55, 101403),

Gene: WaddleDee\_152 Start: 100787, Stop: 101128, Start Num: 23  
Candidate Starts for WaddleDee\_152:  
(23, 100787),

Gene: WaddleDee\_151 Start: 100447, Stop: 100776, Start Num: 24  
Candidate Starts for WaddleDee\_151:  
(Start: 24 @100447 has 1 MA's),

Gene: Wakanda\_203 Start: 101737, Stop: 102090, Start Num: 20  
Candidate Starts for Wakanda\_203:  
(Start: 20 @101737 has 4 MA's), (34, 101842), (45, 101911), (48, 101941), (60, 102058),

Gene: Wakanda\_196 Start: 99838, Stop: 100137, Start Num: 28  
Candidate Starts for Wakanda\_196:

(Start: 28 @99838 has 2 MA's), (50, 100006), (61, 100111),

Gene: Wakanda\_200 Start: 100892, Stop: 101203, Start Num: 29

Candidate Starts for Wakanda\_200:

(Start: 29 @100892 has 13 MA's), (33, 100967),