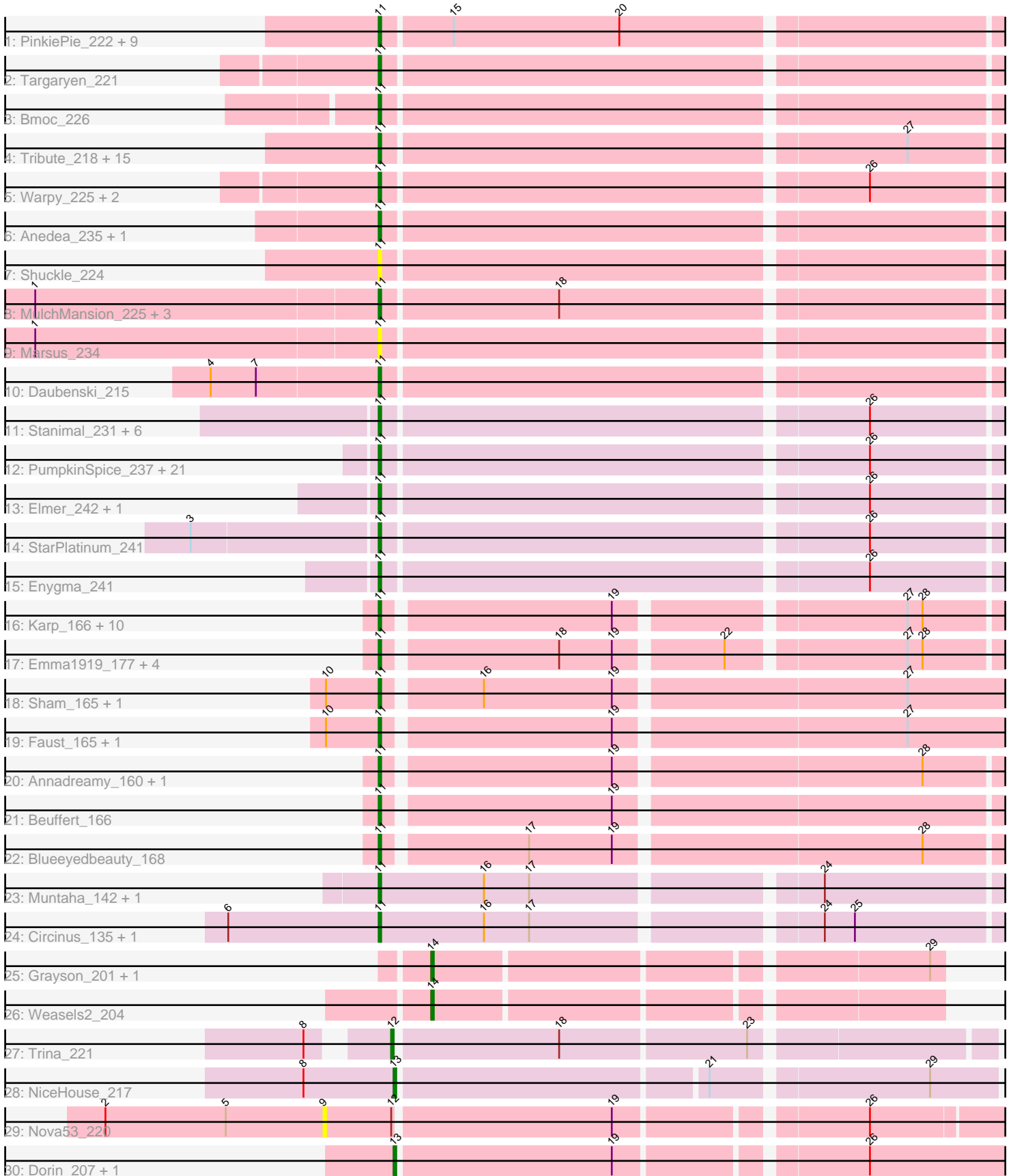


Pham 212470



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 212470 Report

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

Pham number 212470 has 109 members, 10 are drafts.

Phages represented in each track:

- Track 1 : PinkiePie\_222, Paradiddles\_214, Bartholomune\_222, Persimmon\_225, Braelyn\_218, NootNoot\_219, Navo\_216, WhereRU\_221, Liandry\_222, Squillium\_225
- Track 2 : Targaryen\_221
- Track 3 : Bmoc\_226
- Track 4 : Tribute\_218, PacManQ\_218, EGole\_226, Sushi23\_222, Lululemon\_218, HangryHippo\_220, Teutsch\_221, Watermoore\_221, BlueOtter\_220, Samisti12\_226, Leo04\_222, Scheme\_225, Cross\_221, Cursive\_224, Pepperwood\_222, Larnav\_221
- Track 5 : Warpy\_225, Evy\_212, Jay2Jay\_227
- Track 6 : Anedea\_235, Riptide\_228
- Track 7 : Shuckle\_224
- Track 8 : MulchMansion\_225, Angela\_224, Mildred21\_231, LilMartin\_221
- Track 9 : Marsus\_234
- Track 10 : Daubenski\_215
- Track 11 : Stanimal\_231, Sollertia\_232, BoomerJR\_231, Mugiwara\_246, Yaboi\_236, Genie2\_231, LukeCage\_237
- Track 12 : PumpkinSpice\_237, Tomas\_234, MindFlayer\_227, Jollison\_231, Bordeaux\_232, Spilled\_241, Wipeout\_224, SaltySpitooon\_234, Rikishi\_242, Gibbi\_242, Amabiko\_238, Spelly\_239, Quaran19\_234, Birchlyn\_233, Karimac\_234, CeilingFan\_238, IchabodCrane\_228, Battuta\_232, TomSawyer\_238, KentuckyRacer\_240, Starbow\_231, JimJam\_241
- Track 13 : Elmer\_242, Wofford\_234
- Track 14 : StarPlatinum\_241
- Track 15 : Enygma\_241
- Track 16 : Karp\_166, Kenrey\_179, Comrade\_169, Belfort\_172, SparkleGoddess\_172, Westy\_173, Francob\_173, Stigma\_170, Moab\_174, Phredrick\_177, Patelgo\_175
- Track 17 : Emma1919\_177, Jada\_175, Forrest\_178, Gilson\_176, MeganTheeKilla\_176
- Track 18 : Sham\_165, TunaTartare\_172
- Track 19 : Faust\_165, SeresaTree\_167
- Track 20 : Annadreamy\_160, Limpid\_167
- Track 21 : Beuffert\_166
- Track 22 : Blueeyedbeauty\_168
- Track 23 : Muntaha\_142, Wakanda\_141
- Track 24 : Circinus\_135, BillNye\_134
- Track 25 : Grayson\_201, Peregrin\_199
- Track 26 : Weasels2\_204

- Track 27 : Trina\_221
- Track 28 : NiceHouse\_217
- Track 29 : Nova53\_220
- Track 30 : Dorin\_207, Francesca\_208

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

The start number called the most often in the published annotations is 11, it was called in 92 of the 99 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko\_238, Anedea\_235, Angela\_224, Annadreamy\_160, Bartholomune\_222, Battuta\_232, Belfort\_172, Beuffert\_166, BillNye\_134, Birchlyn\_233, BlueOtter\_220, Blueeyedbeauty\_168, Bmoc\_226, BoomerJR\_231, Bordeaux\_232, Braelyn\_218, CeilingFan\_238, Circinus\_135, Comrade\_169, Cross\_221, Cursive\_224, Daubenski\_215, EGole\_226, Elmer\_242, Emma1919\_177, Enygma\_241, Evy\_212, Faust\_165, Forrest\_178, Francob\_173, Genie2\_231, Gibbi\_242, Gilson\_176, HangryHippo\_220, IchabodCrane\_228, Jada\_175, Jay2Jay\_227, JimJam\_241, Jollison\_231, Karimac\_234, Karp\_166, Kenrey\_179, KentuckyRacer\_240, Larnav\_221, Leo04\_222, Liandry\_222, LilMartin\_221, Limpid\_167, LukeCage\_237, Lululemon\_218, Marsus\_234, MeganTheeKilla\_176, Mildred21\_231, MindFlayer\_227, Moab\_174, Mugiwara\_246, MulchMansion\_225, Muntaha\_142, Navo\_216, NootNoot\_219, PacManQ\_218, Paradiddles\_214, Patelgo\_175, Pepperwood\_222, Persimmon\_225, Phredrick\_177, PinkiePie\_222, PumpkinSpice\_237, Quarant19\_234, Rikishi\_242, Riptide\_228, SaltySpittoon\_234, Samisti12\_226, Scheme\_225, SeresaTree\_167, Sham\_165, Shuckle\_224, Sollertia\_232, SparkleGoddess\_172, Spelly\_239, Spilled\_241, Squillum\_225, Stanimal\_231, StarPlatinum\_241, Starbow\_231, Stigma\_170, Sushi23\_222, Targaryen\_221, Teutsch\_221, TomSawyer\_238, Tomas\_234, Tribute\_218, TunaTartare\_172, Wakanda\_141, Warpy\_225, Watermoore\_221, Westy\_173, WhereRU\_221, Wipeout\_224, Wofford\_234, Yaboi\_236,

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

- 

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

- Dorin\_207, Francesca\_208, Grayson\_201, NiceHouse\_217, Nova53\_220, Peregrin\_199, Trina\_221, Weasels2\_204,

**Summary by start number:**

Start 9:

- Found in 1 of 109 ( 0.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nova53\_220 (CG),

Start 11:

- Found in 101 of 109 ( 92.7% ) of genes in pham
- Manual Annotations of this start: 92 of 99

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amabiko\_238 (BE2), Anedea\_235 (BE1), Angela\_224 (BE1), Annadreamy\_160 (BK1), Bartholomune\_222 (BE1), Battuta\_232 (BE2), Belfort\_172 (BK1), Beuffert\_166 (BK1), BillNye\_134 (BK2), Birchlyn\_233 (BE2), BlueOtter\_220 (BE1), Blueeyedbeauty\_168 (BK1), Bmoc\_226 (BE1), BoomerJR\_231 (BE2), Bordeaux\_232 (BE2), Braelyn\_218 (BE1), CeilingFan\_238 (BE2), Circinus\_135 (BK2), Comrade\_169 (BK1), Cross\_221 (BE1), Cursive\_224 (BE1), Daubenski\_215 (BE1), EGole\_226 (BE1), Elmer\_242 (BE2), Emma1919\_177 (BK1), Enigma\_241 (BE2), Evy\_212 (BE1), Faust\_165 (BK1), Forrest\_178 (BK1), Francob\_173 (BK1), Genie2\_231 (BE2), Gibbi\_242 (BE2), Gilson\_176 (BK1), HangryHippo\_220 (BE1), IchabodCrane\_228 (BE2), Jada\_175 (BK1), Jay2Jay\_227 (BE1), JimJam\_241 (BE2), Jollison\_231 (BE2), Karimac\_234 (BE2), Karp\_166 (BK1), Kenrey\_179 (BK1), KentuckyRacer\_240 (BE2), Larnav\_221 (BE1), Leo04\_222 (BE1), Liandry\_222 (BE1), LilMartin\_221 (BE1), Limpid\_167 (BK1), LukeCage\_237 (BE2), Lululemon\_218 (BE1), Marsus\_234 (BE1), MeganTheeKilla\_176 (BK1), Mildred21\_231 (BE1), MindFlayer\_227 (BE2), Moab\_174 (BK1), Mugiwara\_246 (BE2), MulchMansion\_225 (BE1), Muntaha\_142 (BK2), Navo\_216 (BE1), NootNoot\_219 (BE1), PacManQ\_218 (BE1), Paradiddles\_214 (BE1), Patelgo\_175 (BK1), Pepperwood\_222 (BE1), Persimmon\_225 (BE1), Phredrick\_177 (BK1), PinkiePie\_222 (BE1), PumpkinSpice\_237 (BE2), Quarant19\_234 (BE2), Rikishi\_242 (BE2), Riptide\_228 (BE1), SaltySpittoon\_234 (BE2), Samisti12\_226 (BE1), Scheme\_225 (BE1), SeresaTree\_167 (BK1), Sham\_165 (BK1), Shuckle\_224 (BE1), Sollertia\_232 (BE2), SparkleGoddess\_172 (BK1), Spelly\_239 (BE2), Spilled\_241 (BE2), Squillium\_225 (BE1), Stanimal\_231 (BE2), StarPlatinum\_241 (BE2), Starbow\_231 (BE2), Stigma\_170 (BK1), Sushi23\_222 (BE1), Targaryen\_221 (BE1), Teutsch\_221 (BE1), TomSawyer\_238 (BE2), Tomas\_234 (BE2), Tribute\_218 (BE1), TunaTartare\_172 (BK1), Wakanda\_141 (BK2), Warpy\_225 (BE1), Watermoore\_221 (BE1), Westy\_173 (BK1), WhereRU\_221 (BE1), Wipeout\_224 (BE2), Wofford\_234 (BE2), Yaboi\_236 (BE2),

#### Start 12:

- Found in 2 of 109 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 99
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Trina\_221 (CE),

#### Start 13:

- Found in 3 of 109 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 3 of 99
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dorin\_207 (CG), Francesca\_208 (CG), NiceHouse\_217 (CE),

#### Start 14:

- Found in 3 of 109 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 3 of 99
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Grayson\_201 (CB), Peregrin\_199 (CB), Weasels2\_204 (CB),

### Summary by clusters:

There are 7 clusters represented in this pham: CB, CG, CE, BK1, BK2, BE2, BE1,

Info for manual annotations of cluster BE1:

- Start number 11 was manually annotated 36 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 11 was manually annotated 30 times for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 11 was manually annotated 22 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 11 was manually annotated 4 times for cluster BK2.

Info for manual annotations of cluster CB:

- Start number 14 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 12 was manually annotated 1 time for cluster CE.
- Start number 13 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster CG:

- Start number 13 was manually annotated 2 times for cluster CG.

### ***Gene Information:***

Gene: Amabiko\_238 Start: 110860, Stop: 111099, Start Num: 11

Candidate Starts for Amabiko\_238:

(Start: 11 @110860 has 92 MA's), (26, 111046),

Gene: Anedea\_235 Start: 114340, Stop: 114579, Start Num: 11

Candidate Starts for Anedea\_235:

(Start: 11 @114340 has 92 MA's),

Gene: Angela\_224 Start: 112143, Stop: 112382, Start Num: 11

Candidate Starts for Angela\_224:

(1, 112008), (Start: 11 @112143 has 92 MA's), (18, 112212),

Gene: Annadreamy\_160 Start: 87923, Stop: 88159, Start Num: 11

Candidate Starts for Annadreamy\_160:

(Start: 11 @87923 has 92 MA's), (19, 88010), (28, 88127),

Gene: Bartholomune\_222 Start: 112320, Stop: 112559, Start Num: 11

Candidate Starts for Bartholomune\_222:

(Start: 11 @112320 has 92 MA's), (15, 112347), (20, 112413),

Gene: Battuta\_232 Start: 110175, Stop: 110414, Start Num: 11

Candidate Starts for Battuta\_232:

(Start: 11 @110175 has 92 MA's), (26, 110361),

Gene: Belfort\_172 Start: 93753, Stop: 93986, Start Num: 11

Candidate Starts for Belfort\_172:  
(Start: 11 @93753 has 92 MA's), (19, 93840), (27, 93945), (28, 93951),

Gene: Beuffert\_166 Start: 92106, Stop: 92342, Start Num: 11  
Candidate Starts for Beuffert\_166:  
(Start: 11 @92106 has 92 MA's), (19, 92193),

Gene: BillNye\_134 Start: 83332, Stop: 83571, Start Num: 11  
Candidate Starts for BillNye\_134:  
(6, 83272), (Start: 11 @83332 has 92 MA's), (16, 83374), (17, 83392), (24, 83497), (25, 83509),

Gene: Birchlyn\_233 Start: 108108, Stop: 108347, Start Num: 11  
Candidate Starts for Birchlyn\_233:  
(Start: 11 @108108 has 92 MA's), (26, 108294),

Gene: BlueOtter\_220 Start: 112456, Stop: 112695, Start Num: 11  
Candidate Starts for BlueOtter\_220:  
(Start: 11 @112456 has 92 MA's), (27, 112657),

Gene: Blueeyedbeauty\_168 Start: 91690, Stop: 91926, Start Num: 11  
Candidate Starts for Blueeyedbeauty\_168:  
(Start: 11 @91690 has 92 MA's), (17, 91744), (19, 91777), (28, 91894),

Gene: Bmoc\_226 Start: 112584, Stop: 112823, Start Num: 11  
Candidate Starts for Bmoc\_226:  
(Start: 11 @112584 has 92 MA's),

Gene: BoomerJR\_231 Start: 110776, Stop: 111015, Start Num: 11  
Candidate Starts for BoomerJR\_231:  
(Start: 11 @110776 has 92 MA's), (26, 110962),

Gene: Bordeaux\_232 Start: 110758, Stop: 110997, Start Num: 11  
Candidate Starts for Bordeaux\_232:  
(Start: 11 @110758 has 92 MA's), (26, 110944),

Gene: Braelyn\_218 Start: 111967, Stop: 112206, Start Num: 11  
Candidate Starts for Braelyn\_218:  
(Start: 11 @111967 has 92 MA's), (15, 111994), (20, 112060),

Gene: CeilingFan\_238 Start: 111553, Stop: 111792, Start Num: 11  
Candidate Starts for CeilingFan\_238:  
(Start: 11 @111553 has 92 MA's), (26, 111739),

Gene: Circinus\_135 Start: 83300, Stop: 83539, Start Num: 11  
Candidate Starts for Circinus\_135:  
(6, 83240), (Start: 11 @83300 has 92 MA's), (16, 83342), (17, 83360), (24, 83465), (25, 83477),

Gene: Comrade\_169 Start: 93955, Stop: 94188, Start Num: 11  
Candidate Starts for Comrade\_169:  
(Start: 11 @93955 has 92 MA's), (19, 94042), (27, 94147), (28, 94153),

Gene: Cross\_221 Start: 113101, Stop: 113340, Start Num: 11  
Candidate Starts for Cross\_221:

(Start: 11 @113101 has 92 MA's), (27, 113302),

Gene: Cursive\_224 Start: 112784, Stop: 113023, Start Num: 11

Candidate Starts for Cursive\_224:

(Start: 11 @112784 has 92 MA's), (27, 112985),

Gene: Daubenski\_215 Start: 113166, Stop: 113405, Start Num: 11

Candidate Starts for Daubenski\_215:

(4, 113100), (7, 113118), (Start: 11 @113166 has 92 MA's),

Gene: Dorin\_207 Start: 111817, Stop: 112053, Start Num: 13

Candidate Starts for Dorin\_207:

(Start: 13 @111817 has 3 MA's), (19, 111901), (26, 111991),

Gene: EGole\_226 Start: 115292, Stop: 115531, Start Num: 11

Candidate Starts for EGole\_226:

(Start: 11 @115292 has 92 MA's), (27, 115493),

Gene: Elmer\_242 Start: 114351, Stop: 114590, Start Num: 11

Candidate Starts for Elmer\_242:

(Start: 11 @114351 has 92 MA's), (26, 114537),

Gene: Emma1919\_177 Start: 92997, Stop: 93230, Start Num: 11

Candidate Starts for Emma1919\_177:

(Start: 11 @92997 has 92 MA's), (18, 93063), (19, 93084), (22, 93123), (27, 93189), (28, 93195),

Gene: Enygma\_241 Start: 113561, Stop: 113800, Start Num: 11

Candidate Starts for Enygma\_241:

(Start: 11 @113561 has 92 MA's), (26, 113747),

Gene: Evy\_212 Start: 113275, Stop: 113514, Start Num: 11

Candidate Starts for Evy\_212:

(Start: 11 @113275 has 92 MA's), (26, 113461),

Gene: Faust\_165 Start: 93075, Stop: 93317, Start Num: 11

Candidate Starts for Faust\_165:

(10, 93054), (Start: 11 @93075 has 92 MA's), (19, 93162), (27, 93273),

Gene: Forrest\_178 Start: 94432, Stop: 94665, Start Num: 11

Candidate Starts for Forrest\_178:

(Start: 11 @94432 has 92 MA's), (18, 94498), (19, 94519), (22, 94558), (27, 94624), (28, 94630),

Gene: Francesca\_208 Start: 112469, Stop: 112705, Start Num: 13

Candidate Starts for Francesca\_208:

(Start: 13 @112469 has 3 MA's), (19, 112553), (26, 112643),

Gene: Francob\_173 Start: 92988, Stop: 93221, Start Num: 11

Candidate Starts for Francob\_173:

(Start: 11 @92988 has 92 MA's), (19, 93075), (27, 93180), (28, 93186),

Gene: Genie2\_231 Start: 110901, Stop: 111140, Start Num: 11

Candidate Starts for Genie2\_231:

(Start: 11 @110901 has 92 MA's), (26, 111087),

Gene: Gibbi\_242 Start: 111046, Stop: 111285, Start Num: 11

Candidate Starts for Gibbi\_242:

(Start: 11 @111046 has 92 MA's), (26, 111232),

Gene: Gilson\_176 Start: 92959, Stop: 93192, Start Num: 11

Candidate Starts for Gilson\_176:

(Start: 11 @92959 has 92 MA's), (18, 93025), (19, 93046), (22, 93085), (27, 93151), (28, 93157),

Gene: Grayson\_201 Start: 103227, Stop: 103415, Start Num: 14

Candidate Starts for Grayson\_201:

(Start: 14 @103227 has 3 MA's), (29, 103410),

Gene: HangryHippo\_220 Start: 112456, Stop: 112695, Start Num: 11

Candidate Starts for HangryHippo\_220:

(Start: 11 @112456 has 92 MA's), (27, 112657),

Gene: IchabodCrane\_228 Start: 110561, Stop: 110800, Start Num: 11

Candidate Starts for IchabodCrane\_228:

(Start: 11 @110561 has 92 MA's), (26, 110747),

Gene: Jada\_175 Start: 93125, Stop: 93358, Start Num: 11

Candidate Starts for Jada\_175:

(Start: 11 @93125 has 92 MA's), (18, 93191), (19, 93212), (22, 93251), (27, 93317), (28, 93323),

Gene: Jay2Jay\_227 Start: 113430, Stop: 113669, Start Num: 11

Candidate Starts for Jay2Jay\_227:

(Start: 11 @113430 has 92 MA's), (26, 113616),

Gene: JimJam\_241 Start: 112482, Stop: 112721, Start Num: 11

Candidate Starts for JimJam\_241:

(Start: 11 @112482 has 92 MA's), (26, 112668),

Gene: Jollison\_231 Start: 110692, Stop: 110931, Start Num: 11

Candidate Starts for Jollison\_231:

(Start: 11 @110692 has 92 MA's), (26, 110878),

Gene: Karimac\_234 Start: 110877, Stop: 111116, Start Num: 11

Candidate Starts for Karimac\_234:

(Start: 11 @110877 has 92 MA's), (26, 111063),

Gene: Karp\_166 Start: 93179, Stop: 93412, Start Num: 11

Candidate Starts for Karp\_166:

(Start: 11 @93179 has 92 MA's), (19, 93266), (27, 93371), (28, 93377),

Gene: Kenrey\_179 Start: 93992, Stop: 94225, Start Num: 11

Candidate Starts for Kenrey\_179:

(Start: 11 @93992 has 92 MA's), (19, 94079), (27, 94184), (28, 94190),

Gene: KentuckyRacer\_240 Start: 112397, Stop: 112636, Start Num: 11

Candidate Starts for KentuckyRacer\_240:

(Start: 11 @112397 has 92 MA's), (26, 112583),



Gene: Larnav\_221 Start: 112950, Stop: 113189, Start Num: 11  
Candidate Starts for Larnav\_221:  
(Start: 11 @112950 has 92 MA's), (27, 113151),

Gene: Leo04\_222 Start: 113482, Stop: 113721, Start Num: 11  
Candidate Starts for Leo04\_222:  
(Start: 11 @113482 has 92 MA's), (27, 113683),

Gene: Liandry\_222 Start: 112856, Stop: 113095, Start Num: 11  
Candidate Starts for Liandry\_222:  
(Start: 11 @112856 has 92 MA's), (15, 112883), (20, 112949),

Gene: LilMartin\_221 Start: 111507, Stop: 111746, Start Num: 11  
Candidate Starts for LilMartin\_221:  
(1, 111372), (Start: 11 @111507 has 92 MA's), (18, 111576),

Gene: Limpid\_167 Start: 93236, Stop: 93472, Start Num: 11  
Candidate Starts for Limpid\_167:  
(Start: 11 @93236 has 92 MA's), (19, 93323), (28, 93440),

Gene: LukeCage\_237 Start: 112722, Stop: 112961, Start Num: 11  
Candidate Starts for LukeCage\_237:  
(Start: 11 @112722 has 92 MA's), (26, 112908),

Gene: Lululemon\_218 Start: 111837, Stop: 112076, Start Num: 11  
Candidate Starts for Lululemon\_218:  
(Start: 11 @111837 has 92 MA's), (27, 112038),

Gene: Marsus\_234 Start: 113172, Stop: 113411, Start Num: 11  
Candidate Starts for Marsus\_234:  
(1, 113037), (Start: 11 @113172 has 92 MA's),

Gene: MeganTheeKilla\_176 Start: 93028, Stop: 93261, Start Num: 11  
Candidate Starts for MeganTheeKilla\_176:  
(Start: 11 @93028 has 92 MA's), (18, 93094), (19, 93115), (22, 93154), (27, 93220), (28, 93226),

Gene: Mildred21\_231 Start: 111222, Stop: 111461, Start Num: 11  
Candidate Starts for Mildred21\_231:  
(1, 111087), (Start: 11 @111222 has 92 MA's), (18, 111291),

Gene: MindFlayer\_227 Start: 110077, Stop: 110316, Start Num: 11  
Candidate Starts for MindFlayer\_227:  
(Start: 11 @110077 has 92 MA's), (26, 110263),

Gene: Moab\_174 Start: 95462, Stop: 95701, Start Num: 11  
Candidate Starts for Moab\_174:  
(Start: 11 @95462 has 92 MA's), (19, 95549), (27, 95660), (28, 95666),

Gene: Mugiwara\_246 Start: 113260, Stop: 113499, Start Num: 11  
Candidate Starts for Mugiwara\_246:  
(Start: 11 @113260 has 92 MA's), (26, 113446),

Gene: MulchMansion\_225 Start: 113141, Stop: 113380, Start Num: 11

Candidate Starts for MulchMansion\_225:

(1, 113006), (Start: 11 @113141 has 92 MA's), (18, 113210),

Gene: Muntaha\_142 Start: 82281, Stop: 82520, Start Num: 11

Candidate Starts for Muntaha\_142:

(Start: 11 @82281 has 92 MA's), (16, 82323), (17, 82341), (24, 82446),

Gene: Navo\_216 Start: 111171, Stop: 111410, Start Num: 11

Candidate Starts for Navo\_216:

(Start: 11 @111171 has 92 MA's), (15, 111198), (20, 111264),

Gene: NiceHouse\_217 Start: 118286, Stop: 118510, Start Num: 13

Candidate Starts for NiceHouse\_217:

(8, 118250), (Start: 13 @118286 has 3 MA's), (21, 118403), (29, 118484),

Gene: NootNoot\_219 Start: 111701, Stop: 111940, Start Num: 11

Candidate Starts for NootNoot\_219:

(Start: 11 @111701 has 92 MA's), (15, 111728), (20, 111794),

Gene: Nova53\_220 Start: 116561, Stop: 116821, Start Num: 9

Candidate Starts for Nova53\_220:

(2, 116474), (5, 116522), (9, 116561), (Start: 12 @116588 has 1 MA's), (19, 116672), (26, 116762),

Gene: PacManQ\_218 Start: 111837, Stop: 112076, Start Num: 11

Candidate Starts for PacManQ\_218:

(Start: 11 @111837 has 92 MA's), (27, 112038),

Gene: Paradiddles\_214 Start: 114076, Stop: 114315, Start Num: 11

Candidate Starts for Paradiddles\_214:

(Start: 11 @114076 has 92 MA's), (15, 114103), (20, 114169),

Gene: Patelgo\_175 Start: 95920, Stop: 96159, Start Num: 11

Candidate Starts for Patelgo\_175:

(Start: 11 @95920 has 92 MA's), (19, 96007), (27, 96118), (28, 96124),

Gene: Pepperwood\_222 Start: 113153, Stop: 113392, Start Num: 11

Candidate Starts for Pepperwood\_222:

(Start: 11 @113153 has 92 MA's), (27, 113354),

Gene: Peregrin\_199 Start: 103629, Stop: 103817, Start Num: 14

Candidate Starts for Peregrin\_199:

(Start: 14 @103629 has 3 MA's), (29, 103812),

Gene: Persimmon\_225 Start: 112189, Stop: 112428, Start Num: 11

Candidate Starts for Persimmon\_225:

(Start: 11 @112189 has 92 MA's), (15, 112216), (20, 112282),

Gene: Phredrick\_177 Start: 92623, Stop: 92856, Start Num: 11

Candidate Starts for Phredrick\_177:

(Start: 11 @92623 has 92 MA's), (19, 92710), (27, 92815), (28, 92821),

Gene: PinkiePie\_222 Start: 112856, Stop: 113095, Start Num: 11

Candidate Starts for PinkiePie\_222:

(Start: 11 @112856 has 92 MA's), (15, 112883), (20, 112949),

Gene: PumpkinSpice\_237 Start: 111298, Stop: 111537, Start Num: 11

Candidate Starts for PumpkinSpice\_237:

(Start: 11 @111298 has 92 MA's), (26, 111484),

Gene: Quaran19\_234 Start: 110739, Stop: 110978, Start Num: 11

Candidate Starts for Quaran19\_234:

(Start: 11 @110739 has 92 MA's), (26, 110925),

Gene: Rikishi\_242 Start: 111020, Stop: 111259, Start Num: 11

Candidate Starts for Rikishi\_242:

(Start: 11 @111020 has 92 MA's), (26, 111206),

Gene: Riptide\_228 Start: 111870, Stop: 112109, Start Num: 11

Candidate Starts for Riptide\_228:

(Start: 11 @111870 has 92 MA's),

Gene: SaltySpittoon\_234 Start: 110281, Stop: 110520, Start Num: 11

Candidate Starts for SaltySpittoon\_234:

(Start: 11 @110281 has 92 MA's), (26, 110467),

Gene: Samisti12\_226 Start: 114747, Stop: 114986, Start Num: 11

Candidate Starts for Samisti12\_226:

(Start: 11 @114747 has 92 MA's), (27, 114948),

Gene: Scheme\_225 Start: 114392, Stop: 114631, Start Num: 11

Candidate Starts for Scheme\_225:

(Start: 11 @114392 has 92 MA's), (27, 114593),

Gene: SeresaTree\_167 Start: 92457, Stop: 92699, Start Num: 11

Candidate Starts for SeresaTree\_167:

(10, 92436), (Start: 11 @92457 has 92 MA's), (19, 92544), (27, 92655),

Gene: Sham\_165 Start: 94074, Stop: 94316, Start Num: 11

Candidate Starts for Sham\_165:

(10, 94053), (Start: 11 @94074 has 92 MA's), (16, 94110), (19, 94161), (27, 94272),

Gene: Shuckle\_224 Start: 113281, Stop: 113520, Start Num: 11

Candidate Starts for Shuckle\_224:

(Start: 11 @113281 has 92 MA's),

Gene: Sollertia\_232 Start: 110890, Stop: 111129, Start Num: 11

Candidate Starts for Sollertia\_232:

(Start: 11 @110890 has 92 MA's), (26, 111076),

Gene: SparkleGoddess\_172 Start: 94163, Stop: 94396, Start Num: 11

Candidate Starts for SparkleGoddess\_172:

(Start: 11 @94163 has 92 MA's), (19, 94250), (27, 94355), (28, 94361),

Gene: Spelly\_239 Start: 110210, Stop: 110449, Start Num: 11

Candidate Starts for Spelly\_239:

(Start: 11 @110210 has 92 MA's), (26, 110396),

Gene: Spilled\_241 Start: 111414, Stop: 111653, Start Num: 11  
Candidate Starts for Spilled\_241:  
(Start: 11 @111414 has 92 MA's), (26, 111600),

Gene: Squillium\_225 Start: 112858, Stop: 113097, Start Num: 11  
Candidate Starts for Squillium\_225:  
(Start: 11 @112858 has 92 MA's), (15, 112885), (20, 112951),

Gene: Stanimal\_231 Start: 111262, Stop: 111501, Start Num: 11  
Candidate Starts for Stanimal\_231:  
(Start: 11 @111262 has 92 MA's), (26, 111448),

Gene: StarPlatinum\_241 Start: 113222, Stop: 113461, Start Num: 11  
Candidate Starts for StarPlatinum\_241:  
(3, 113150), (Start: 11 @113222 has 92 MA's), (26, 113408),

Gene: Starbow\_231 Start: 110254, Stop: 110493, Start Num: 11  
Candidate Starts for Starbow\_231:  
(Start: 11 @110254 has 92 MA's), (26, 110440),

Gene: Stigma\_170 Start: 94400, Stop: 94633, Start Num: 11  
Candidate Starts for Stigma\_170:  
(Start: 11 @94400 has 92 MA's), (19, 94487), (27, 94592), (28, 94598),

Gene: Sushi23\_222 Start: 113787, Stop: 114026, Start Num: 11  
Candidate Starts for Sushi23\_222:  
(Start: 11 @113787 has 92 MA's), (27, 113988),

Gene: Targaryen\_221 Start: 113959, Stop: 114198, Start Num: 11  
Candidate Starts for Targaryen\_221:  
(Start: 11 @113959 has 92 MA's),

Gene: Teutsch\_221 Start: 113576, Stop: 113815, Start Num: 11  
Candidate Starts for Teutsch\_221:  
(Start: 11 @113576 has 92 MA's), (27, 113777),

Gene: TomSawyer\_238 Start: 112725, Stop: 112964, Start Num: 11  
Candidate Starts for TomSawyer\_238:  
(Start: 11 @112725 has 92 MA's), (26, 112911),

Gene: Tomas\_234 Start: 114656, Stop: 114895, Start Num: 11  
Candidate Starts for Tomas\_234:  
(Start: 11 @114656 has 92 MA's), (26, 114842),

Gene: Tribute\_218 Start: 113741, Stop: 113980, Start Num: 11  
Candidate Starts for Tribute\_218:  
(Start: 11 @113741 has 92 MA's), (27, 113942),

Gene: Trina\_221 Start: 117099, Stop: 117323, Start Num: 12  
Candidate Starts for Trina\_221:  
(8, 117075), (Start: 12 @117099 has 1 MA's), (18, 117162), (23, 117234),

Gene: TunaTartare\_172 Start: 95786, Stop: 96028, Start Num: 11  
Candidate Starts for TunaTartare\_172:  
(10, 95765), (Start: 11 @95786 has 92 MA's), (16, 95822), (19, 95873), (27, 95984),

Gene: Wakanda\_141 Start: 82223, Stop: 82462, Start Num: 11  
Candidate Starts for Wakanda\_141:  
(Start: 11 @82223 has 92 MA's), (16, 82265), (17, 82283), (24, 82388),

Gene: Warpy\_225 Start: 112868, Stop: 113107, Start Num: 11  
Candidate Starts for Warpy\_225:  
(Start: 11 @112868 has 92 MA's), (26, 113054),

Gene: Watermoore\_221 Start: 114099, Stop: 114338, Start Num: 11  
Candidate Starts for Watermoore\_221:  
(Start: 11 @114099 has 92 MA's), (27, 114300),

Gene: Weasels2\_204 Start: 106469, Stop: 106657, Start Num: 14  
Candidate Starts for Weasels2\_204:  
(Start: 14 @106469 has 3 MA's),

Gene: Westy\_173 Start: 94712, Stop: 94945, Start Num: 11  
Candidate Starts for Westy\_173:  
(Start: 11 @94712 has 92 MA's), (19, 94799), (27, 94904), (28, 94910),

Gene: WhereRU\_221 Start: 112350, Stop: 112589, Start Num: 11  
Candidate Starts for WhereRU\_221:  
(Start: 11 @112350 has 92 MA's), (15, 112377), (20, 112443),

Gene: Wipeout\_224 Start: 111677, Stop: 111916, Start Num: 11  
Candidate Starts for Wipeout\_224:  
(Start: 11 @111677 has 92 MA's), (26, 111863),

Gene: Wofford\_234 Start: 113965, Stop: 114204, Start Num: 11  
Candidate Starts for Wofford\_234:  
(Start: 11 @113965 has 92 MA's), (26, 114151),

Gene: Yaboi\_236 Start: 110825, Stop: 111064, Start Num: 11  
Candidate Starts for Yaboi\_236:  
(Start: 11 @110825 has 92 MA's), (26, 111011),