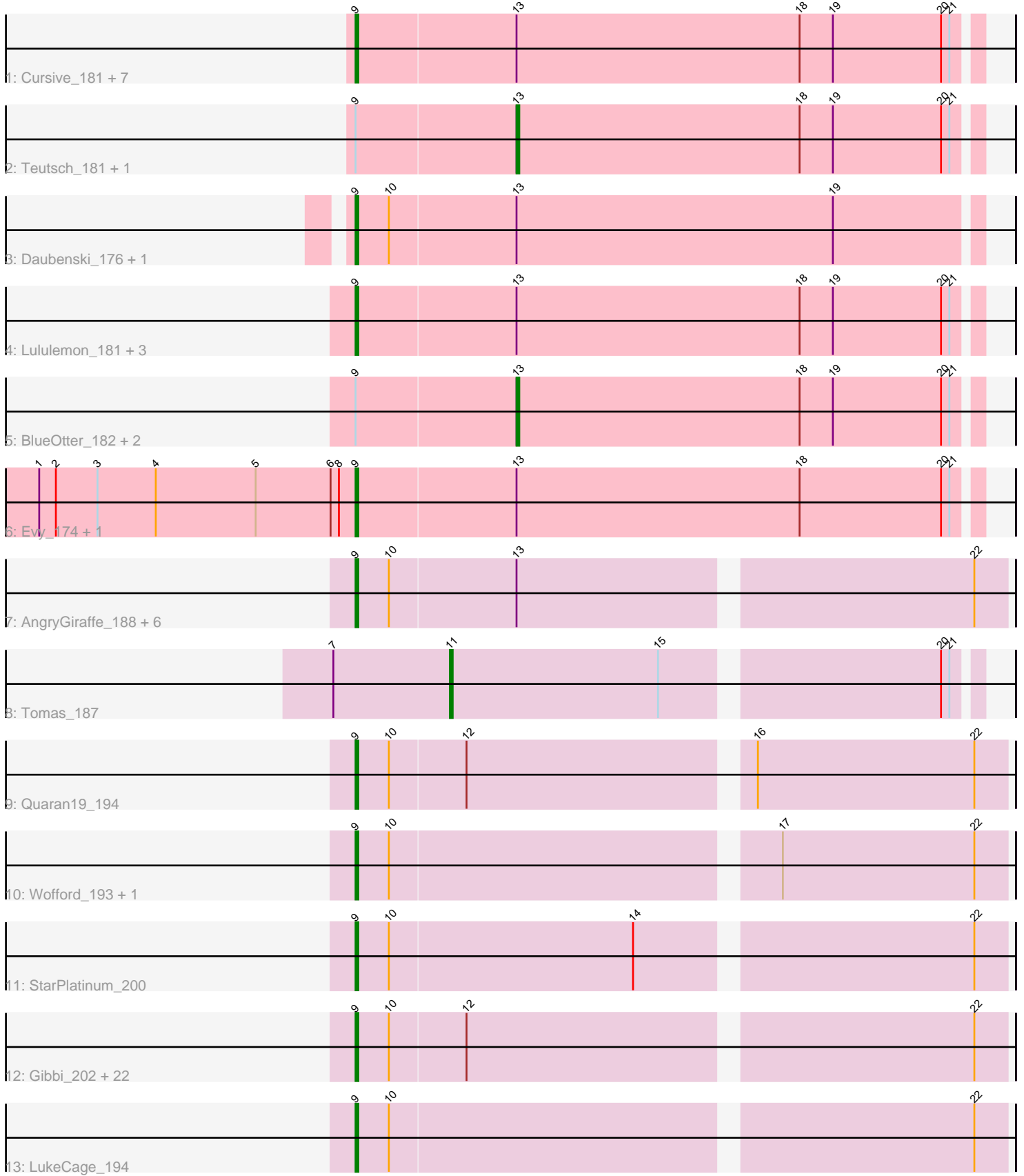


Pham 303408



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 303408 Report

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

Pham number 303408 has 57 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Cursive\_181, Samisti12\_185, Pepperwood\_182, Tribute\_180, Leo04\_184, Sushi23\_183, Scheme\_186, Peebs\_180
- Track 2 : Deutsch\_181, Larnav\_183
- Track 3 : Daubenski\_176, Cadmus\_177
- Track 4 : Lululemon\_181, PacManQ\_181, Cross\_182, Coogler\_181
- Track 5 : BlueOtter\_182, Watermoore\_181, HangryHippo\_182
- Track 6 : Evy\_174, Targaryen\_182
- Track 7 : AngryGiraffe\_188, Enygma\_199, Sollertia\_190, Yaboi\_193, Genie2\_189, BoomerJR\_189, Stanimal\_189
- Track 8 : Tomas\_187
- Track 9 : Quarant19\_194
- Track 10 : Wofford\_193, Elmer\_200
- Track 11 : StarPlatinum\_200
- Track 12 : Gibbi\_202, Battuta\_192, JimJam\_201, KentuckyRacer\_200, Spelly\_197, Amabiko\_198, PumpkinSpice\_196, Mugiwara\_196, Karimac\_194, CeilingFan\_198, Rikishi\_194, AcciDwight\_202, TomSawyer\_199, Wipeout\_186, Jollison\_191, Bordeaux\_193, Brizzy\_194, SaltySpittoon\_193, Birchlyn\_193, IchabodCrane\_190, Spilled\_200, MindFlayer\_187, Starbow\_192
- Track 13 : LukeCage\_194

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

The start number called the most often in the published annotations is 9, it was called in 49 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AcciDwight\_202, Amabiko\_198, AngryGiraffe\_188, Battuta\_192, Birchlyn\_193, BoomerJR\_189, Bordeaux\_193, Brizzy\_194, Cadmus\_177, CeilingFan\_198, Coogler\_181, Cross\_182, Cursive\_181, Daubenski\_176, Elmer\_200, Enygma\_199, Evy\_174, Genie2\_189, Gibbi\_202, IchabodCrane\_190, JimJam\_201, Jollison\_191, Karimac\_194, KentuckyRacer\_200, Leo04\_184, LukeCage\_194, Lululemon\_181, MindFlayer\_187, Mugiwara\_196, PacManQ\_181, Peebs\_180, Pepperwood\_182, PumpkinSpice\_196, Quarant19\_194, Rikishi\_194, SaltySpittoon\_193, Samisti12\_185, Scheme\_186, Sollertia\_190, Spelly\_197, Spilled\_200, Stanimal\_189,

StarPlatinum\_200, Starbow\_192, Sushi23\_183, Targaryen\_182, TomSawyer\_199, Tribute\_180, Wipeout\_186, Wofford\_193, Yaboi\_193,

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

- BlueOtter\_182, HangryHippo\_182, Larnav\_183, Teutsch\_181, Watermoore\_181,

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

- Tomas\_187,

### Summary by start number:

Start 9:

- Found in 56 of 57 ( 98.2% ) of genes in pham
- Manual Annotations of this start: 49 of 55
- Called 91.1% of time when present
- Phage (with cluster) where this start called: AcciDwight\_202 (BE2), Amabiko\_198 (BE2), AngryGiraffe\_188 (BE2), Battuta\_192 (BE2), Birchlyn\_193 (BE2), BoomerJR\_189 (BE2), Bordeaux\_193 (BE2), Brizzy\_194 (BE2), Cadmus\_177 (BE1), CeilingFan\_198 (BE2), Coogler\_181 (BE1), Cross\_182 (BE1), Cursive\_181 (BE1), Daubenski\_176 (BE1), Elmer\_200 (BE2), Enygma\_199 (BE2), Evy\_174 (BE1), Genie2\_189 (BE2), Gibbi\_202 (BE2), IchabodCrane\_190 (BE2), JimJam\_201 (BE2), Jollison\_191 (BE2), Karimac\_194 (BE2), KentuckyRacer\_200 (BE2), Leo04\_184 (BE1), LukeCage\_194 (BE2), Lululemon\_181 (BE1), MindFlayer\_187 (BE2), Mugiwara\_196 (BE2), PacManQ\_181 (BE1), Peebs\_180 (BE1), Pepperwood\_182 (BE1), PumpkinSpice\_196 (BE2), Quarant19\_194 (BE2), Rikishi\_194 (BE2), SaltySpittoon\_193 (BE2), Samisti12\_185 (BE1), Scheme\_186 (BE1), Sollertia\_190 (BE2), Spelly\_197 (BE2), Spilled\_200 (BE2), Stanimal\_189 (BE2), StarPlatinum\_200 (BE2), Starbow\_192 (BE2), Sushi23\_183 (BE1), Targaryen\_182 (BE1), TomSawyer\_199 (BE2), Tribute\_180 (BE1), Wipeout\_186 (BE2), Wofford\_193 (BE2), Yaboi\_193 (BE2),

Start 11:

- Found in 1 of 57 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tomas\_187 (BE2),

Start 13:

- Found in 28 of 57 ( 49.1% ) of genes in pham
- Manual Annotations of this start: 5 of 55
- Called 17.9% of time when present
- Phage (with cluster) where this start called: BlueOtter\_182 (BE1), HangryHippo\_182 (BE1), Larnav\_183 (BE1), Teutsch\_181 (BE1), Watermoore\_181 (BE1),

### Summary by clusters:

There are 2 clusters represented in this pham: BE2, BE1,

Info for manual annotations of cluster BE1:

- Start number 9 was manually annotated 16 times for cluster BE1.
- Start number 13 was manually annotated 5 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 9 was manually annotated 33 times for cluster BE2.
- Start number 11 was manually annotated 1 time for cluster BE2.

### **Gene Information:**

Gene: AcciDwight\_202 Start: 98523, Stop: 98747, Start Num: 9

Candidate Starts for AcciDwight\_202:

(Start: 9 @98523 has 49 MA's), (10, 98535), (12, 98562), (22, 98736),

Gene: Amabiko\_198 Start: 98341, Stop: 98565, Start Num: 9

Candidate Starts for Amabiko\_198:

(Start: 9 @98341 has 49 MA's), (10, 98353), (12, 98380), (22, 98554),

Gene: AngryGiraffe\_188 Start: 97200, Stop: 97424, Start Num: 9

Candidate Starts for AngryGiraffe\_188:

(Start: 9 @97200 has 49 MA's), (10, 97212), (Start: 13 @97257 has 5 MA's), (22, 97413),

Gene: Battuta\_192 Start: 97657, Stop: 97881, Start Num: 9

Candidate Starts for Battuta\_192:

(Start: 9 @97657 has 49 MA's), (10, 97669), (12, 97696), (22, 97870),

Gene: Birchlyn\_193 Start: 95589, Stop: 95813, Start Num: 9

Candidate Starts for Birchlyn\_193:

(Start: 9 @95589 has 49 MA's), (10, 95601), (12, 95628), (22, 95802),

Gene: BlueOtter\_182 Start: 97284, Stop: 97448, Start Num: 13

Candidate Starts for BlueOtter\_182:

(Start: 9 @97227 has 49 MA's), (Start: 13 @97284 has 5 MA's), (18, 97386), (19, 97398), (20, 97437), (21, 97440),

Gene: BoomerJR\_189 Start: 97633, Stop: 97857, Start Num: 9

Candidate Starts for BoomerJR\_189:

(Start: 9 @97633 has 49 MA's), (10, 97645), (Start: 13 @97690 has 5 MA's), (22, 97846),

Gene: Bordeaux\_193 Start: 98240, Stop: 98464, Start Num: 9

Candidate Starts for Bordeaux\_193:

(Start: 9 @98240 has 49 MA's), (10, 98252), (12, 98279), (22, 98453),

Gene: Brizzy\_194 Start: 98785, Stop: 99009, Start Num: 9

Candidate Starts for Brizzy\_194:

(Start: 9 @98785 has 49 MA's), (10, 98797), (12, 98824), (22, 98998),

Gene: Cadmus\_177 Start: 96509, Stop: 96730, Start Num: 9

Candidate Starts for Cadmus\_177:

(Start: 9 @96509 has 49 MA's), (10, 96521), (Start: 13 @96566 has 5 MA's), (19, 96680),

Gene: CeilingFan\_198 Start: 99034, Stop: 99258, Start Num: 9

Candidate Starts for CeilingFan\_198:

(Start: 9 @99034 has 49 MA's), (10, 99046), (12, 99073), (22, 99247),

Gene: Coogler\_181 Start: 97896, Stop: 98117, Start Num: 9

Candidate Starts for Coogler\_181:

(Start: 9 @97896 has 49 MA's), (Start: 13 @97953 has 5 MA's), (18, 98055), (19, 98067), (20, 98106), (21, 98109),

Gene: Cross\_182 Start: 97872, Stop: 98093, Start Num: 9

Candidate Starts for Cross\_182:

(Start: 9 @97872 has 49 MA's), (Start: 13 @97929 has 5 MA's), (18, 98031), (19, 98043), (20, 98082), (21, 98085),

Gene: Cursive\_181 Start: 96082, Stop: 96303, Start Num: 9

Candidate Starts for Cursive\_181:

(Start: 9 @96082 has 49 MA's), (Start: 13 @96139 has 5 MA's), (18, 96241), (19, 96253), (20, 96292), (21, 96295),

Gene: Daubenski\_176 Start: 97746, Stop: 97967, Start Num: 9

Candidate Starts for Daubenski\_176:

(Start: 9 @97746 has 49 MA's), (10, 97758), (Start: 13 @97803 has 5 MA's), (19, 97917),

Gene: Elmer\_200 Start: 101140, Stop: 101364, Start Num: 9

Candidate Starts for Elmer\_200:

(Start: 9 @101140 has 49 MA's), (10, 101152), (17, 101284), (22, 101353),

Gene: Enygma\_199 Start: 100871, Stop: 101095, Start Num: 9

Candidate Starts for Enygma\_199:

(Start: 9 @100871 has 49 MA's), (10, 100883), (Start: 13 @100928 has 5 MA's), (22, 101084),

Gene: Evy\_174 Start: 97572, Stop: 97793, Start Num: 9

Candidate Starts for Evy\_174:

(1, 97458), (2, 97464), (3, 97479), (4, 97500), (5, 97536), (6, 97563), (8, 97566), (Start: 9 @97572 has 49 MA's), (Start: 13 @97629 has 5 MA's), (18, 97731), (20, 97782), (21, 97785),

Gene: Genie2\_189 Start: 97747, Stop: 97971, Start Num: 9

Candidate Starts for Genie2\_189:

(Start: 9 @97747 has 49 MA's), (10, 97759), (Start: 13 @97804 has 5 MA's), (22, 97960),

Gene: Gibbi\_202 Start: 98527, Stop: 98751, Start Num: 9

Candidate Starts for Gibbi\_202:

(Start: 9 @98527 has 49 MA's), (10, 98539), (12, 98566), (22, 98740),

Gene: HangryHippo\_182 Start: 97284, Stop: 97448, Start Num: 13

Candidate Starts for HangryHippo\_182:

(Start: 9 @97227 has 49 MA's), (Start: 13 @97284 has 5 MA's), (18, 97386), (19, 97398), (20, 97437), (21, 97440),

Gene: IchabodCrane\_190 Start: 98042, Stop: 98266, Start Num: 9

Candidate Starts for IchabodCrane\_190:

(Start: 9 @98042 has 49 MA's), (10, 98054), (12, 98081), (22, 98255),

Gene: JimJam\_201 Start: 99963, Stop: 100187, Start Num: 9

Candidate Starts for JimJam\_201:

(Start: 9 @99963 has 49 MA's), (10, 99975), (12, 100002), (22, 100176),

Gene: Jollison\_191 Start: 98173, Stop: 98400, Start Num: 9

Candidate Starts for Jollison\_191:

(Start: 9 @98173 has 49 MA's), (10, 98185), (12, 98212), (22, 98386),

Gene: Karimac\_194 Start: 98367, Stop: 98591, Start Num: 9

Candidate Starts for Karimac\_194:

(Start: 9 @98367 has 49 MA's), (10, 98379), (12, 98406), (22, 98580),

Gene: KentuckyRacer\_200 Start: 99878, Stop: 100102, Start Num: 9

Candidate Starts for KentuckyRacer\_200:

(Start: 9 @99878 has 49 MA's), (10, 99890), (12, 99917), (22, 100091),

Gene: Larnav\_183 Start: 97904, Stop: 98068, Start Num: 13

Candidate Starts for Larnav\_183:

(Start: 9 @97847 has 49 MA's), (Start: 13 @97904 has 5 MA's), (18, 98006), (19, 98018), (20, 98057), (21, 98060),

Gene: Leo04\_184 Start: 98238, Stop: 98459, Start Num: 9

Candidate Starts for Leo04\_184:

(Start: 9 @98238 has 49 MA's), (Start: 13 @98295 has 5 MA's), (18, 98397), (19, 98409), (20, 98448), (21, 98451),

Gene: LukeCage\_194 Start: 99297, Stop: 99521, Start Num: 9

Candidate Starts for LukeCage\_194:

(Start: 9 @99297 has 49 MA's), (10, 99309), (22, 99510),

Gene: Lululemon\_181 Start: 96608, Stop: 96829, Start Num: 9

Candidate Starts for Lululemon\_181:

(Start: 9 @96608 has 49 MA's), (Start: 13 @96665 has 5 MA's), (18, 96767), (19, 96779), (20, 96818), (21, 96821),

Gene: MindFlayer\_187 Start: 97558, Stop: 97782, Start Num: 9

Candidate Starts for MindFlayer\_187:

(Start: 9 @97558 has 49 MA's), (10, 97570), (12, 97597), (22, 97771),

Gene: Mugiwara\_196 Start: 99700, Stop: 99924, Start Num: 9

Candidate Starts for Mugiwara\_196:

(Start: 9 @99700 has 49 MA's), (10, 99712), (12, 99739), (22, 99913),

Gene: PacManQ\_181 Start: 96608, Stop: 96829, Start Num: 9

Candidate Starts for PacManQ\_181:

(Start: 9 @96608 has 49 MA's), (Start: 13 @96665 has 5 MA's), (18, 96767), (19, 96779), (20, 96818), (21, 96821),

Gene: Peebs\_180 Start: 97550, Stop: 97771, Start Num: 9

Candidate Starts for Peebs\_180:

(Start: 9 @97550 has 49 MA's), (Start: 13 @97607 has 5 MA's), (18, 97709), (19, 97721), (20, 97760), (21, 97763),

Gene: Pepperwood\_182 Start: 97508, Stop: 97729, Start Num: 9

Candidate Starts for Pepperwood\_182:

(Start: 9 @97508 has 49 MA's), (Start: 13 @97565 has 5 MA's), (18, 97667), (19, 97679), (20, 97718), (21, 97721),

Gene: PumpkinSpice\_196 Start: 98779, Stop: 99003, Start Num: 9  
Candidate Starts for PumpkinSpice\_196:  
(Start: 9 @98779 has 49 MA's), (10, 98791), (12, 98818), (22, 98992),

Gene: Quaran19\_194 Start: 98220, Stop: 98444, Start Num: 9  
Candidate Starts for Quaran19\_194:  
(Start: 9 @98220 has 49 MA's), (10, 98232), (12, 98259), (16, 98355), (22, 98433),

Gene: Rikishi\_194 Start: 98501, Stop: 98725, Start Num: 9  
Candidate Starts for Rikishi\_194:  
(Start: 9 @98501 has 49 MA's), (10, 98513), (12, 98540), (22, 98714),

Gene: SaltySpittoon\_193 Start: 97762, Stop: 97986, Start Num: 9  
Candidate Starts for SaltySpittoon\_193:  
(Start: 9 @97762 has 49 MA's), (10, 97774), (12, 97801), (22, 97975),

Gene: Samisti12\_185 Start: 98934, Stop: 99155, Start Num: 9  
Candidate Starts for Samisti12\_185:  
(Start: 9 @98934 has 49 MA's), (Start: 13 @98991 has 5 MA's), (18, 99093), (19, 99105), (20, 99144),  
(21, 99147),

Gene: Scheme\_186 Start: 99115, Stop: 99336, Start Num: 9  
Candidate Starts for Scheme\_186:  
(Start: 9 @99115 has 49 MA's), (Start: 13 @99172 has 5 MA's), (18, 99274), (19, 99286), (20, 99325),  
(21, 99328),

Gene: Sollertia\_190 Start: 97747, Stop: 97971, Start Num: 9  
Candidate Starts for Sollertia\_190:  
(Start: 9 @97747 has 49 MA's), (10, 97759), (Start: 13 @97804 has 5 MA's), (22, 97960),

Gene: Spelly\_197 Start: 97691, Stop: 97915, Start Num: 9  
Candidate Starts for Spelly\_197:  
(Start: 9 @97691 has 49 MA's), (10, 97703), (12, 97730), (22, 97904),

Gene: Spilled\_200 Start: 98895, Stop: 99119, Start Num: 9  
Candidate Starts for Spilled\_200:  
(Start: 9 @98895 has 49 MA's), (10, 98907), (12, 98934), (22, 99108),

Gene: Stanimal\_189 Start: 98108, Stop: 98332, Start Num: 9  
Candidate Starts for Stanimal\_189:  
(Start: 9 @98108 has 49 MA's), (10, 98120), (Start: 13 @98165 has 5 MA's), (22, 98321),

Gene: StarPlatinum\_200 Start: 100164, Stop: 100388, Start Num: 9  
Candidate Starts for StarPlatinum\_200:  
(Start: 9 @100164 has 49 MA's), (10, 100176), (14, 100263), (22, 100377),

Gene: Starbow\_192 Start: 97735, Stop: 97959, Start Num: 9  
Candidate Starts for Starbow\_192:  
(Start: 9 @97735 has 49 MA's), (10, 97747), (12, 97774), (22, 97948),

Gene: Sushi23\_183 Start: 98614, Stop: 98835, Start Num: 9  
Candidate Starts for Sushi23\_183:

(Start: 9 @98614 has 49 MA's), (Start: 13 @98671 has 5 MA's), (18, 98773), (19, 98785), (20, 98824), (21, 98827),

Gene: Targaryen\_182 Start: 98781, Stop: 99002, Start Num: 9

Candidate Starts for Targaryen\_182:

(1, 98667), (2, 98673), (3, 98688), (4, 98709), (5, 98745), (6, 98772), (8, 98775), (Start: 9 @98781 has 49 MA's), (Start: 13 @98838 has 5 MA's), (18, 98940), (20, 98991), (21, 98994),

Gene: Teutsch\_181 Start: 98089, Stop: 98253, Start Num: 13

Candidate Starts for Teutsch\_181:

(Start: 9 @98032 has 49 MA's), (Start: 13 @98089 has 5 MA's), (18, 98191), (19, 98203), (20, 98242), (21, 98245),

Gene: TomSawyer\_199 Start: 100206, Stop: 100430, Start Num: 9

Candidate Starts for TomSawyer\_199:

(Start: 9 @100206 has 49 MA's), (10, 100218), (12, 100245), (22, 100419),

Gene: Tomas\_187 Start: 97430, Stop: 97609, Start Num: 11

Candidate Starts for Tomas\_187:

(7, 97388), (Start: 11 @97430 has 1 MA's), (15, 97505), (20, 97598), (21, 97601),

Gene: Tribute\_180 Start: 98049, Stop: 98270, Start Num: 9

Candidate Starts for Tribute\_180:

(Start: 9 @98049 has 49 MA's), (Start: 13 @98106 has 5 MA's), (18, 98208), (19, 98220), (20, 98259), (21, 98262),

Gene: Watermoore\_181 Start: 98500, Stop: 98664, Start Num: 13

Candidate Starts for Watermoore\_181:

(Start: 9 @98443 has 49 MA's), (Start: 13 @98500 has 5 MA's), (18, 98602), (19, 98614), (20, 98653), (21, 98656),

Gene: Wipeout\_186 Start: 99158, Stop: 99382, Start Num: 9

Candidate Starts for Wipeout\_186:

(Start: 9 @99158 has 49 MA's), (10, 99170), (12, 99197), (22, 99371),

Gene: Wofford\_193 Start: 101100, Stop: 101324, Start Num: 9

Candidate Starts for Wofford\_193:

(Start: 9 @101100 has 49 MA's), (10, 101112), (17, 101244), (22, 101313),

Gene: Yaboi\_193 Start: 97682, Stop: 97906, Start Num: 9

Candidate Starts for Yaboi\_193:

(Start: 9 @97682 has 49 MA's), (10, 97694), (Start: 13 @97739 has 5 MA's), (22, 97895),