

# Pham 200065



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 200065 Report

This analysis was run 01/18/25 on database version 583.

Pham number 200065 has 148 members, 16 are drafts.

Phages represented in each track:

- Track 1 : BlueOtter\_268, Cross\_20, Leo04\_271, HangryHippo\_268, Cross\_268, Watermoore\_267, Cursive\_18, Cursive\_272, PacManQ\_19, BlueOtter\_20, Watermoore\_20, Leo04\_20, PacManQ\_266, HangryHippo\_20, EGole\_273, Lululemon\_266, EGole\_19, Lululemon\_19
- Track 2 : Braelyn\_19, Navo\_260, Bartholomune\_19, Bartholomune\_269, Squillium\_271, PinkiePie\_19, Warpy\_275, Persimmon\_269, Braelyn\_264, Liandry\_268, Warpy\_23, WhereRU\_18, Liandry\_19, PinkiePie\_269, Evy\_20, WhereRU\_267, Evy\_258, NootNoot\_264, Navo\_18, Squillium\_19, NootNoot\_19, Targaryen\_269, Targaryen\_18, Persimmon\_18
- Track 3 : LilMartin\_271, MulchMansion\_19, Angela\_276, LilMartin\_19, MulchMansion\_275, Angela\_19
- Track 4 : Riptide\_19, Anedea\_282, Anedea\_17, Bmoc\_274, Riptide\_276, Bmoc\_18
- Track 5 : Daubenski\_19
- Track 6 : Peebs\_267, Scheme\_274, Pepperwood\_21, Peebs\_20, Tribute\_19, Sushi23\_21, Pepperwood\_270, Samisti12\_269, Deutsch\_266, Deutsch\_19, Scheme\_21, Sushi23\_271, Tribute\_265, Samisti12\_18
- Track 7 : Larnav\_270, Larnav\_20
- Track 8 : Marsus\_20, Marsus\_288
- Track 9 : Daubenski\_263
- Track 10 : Paradiddles\_19, Paradiddles\_260
- Track 11 : Mildred21\_282, Mildred21\_19
- Track 12 : Shuckle\_20, Shuckle\_273
- Track 13 : Jay2Jay\_278, Jay2Jay\_23
- Track 14 : IchabodCrane\_19, MindFlayer\_271, IchabodCrane\_272, JimJam\_288
- Track 15 : MindFlayer\_19, JimJam\_20, PumpkinSpice\_20, Wipeout\_273, Battuta\_277, Spelly\_286, Jollison\_21, PumpkinSpice\_284, Quaran19\_281, Spilled\_19, Jollison\_278, Quaran19\_20, Wipeout\_19, SaltySpitooon\_20, Birchlyn\_277, Starbow\_20, SaltySpitooon\_280, TomSawyer\_285, Karimac\_278, Battuta\_20, Starbow\_277, Karimac\_20, Amabiko\_285, Birchlyn\_17, Amabiko\_21, Bordeaux\_277, Bordeaux\_20, Gibbi\_293, Spilled\_287, TomSawyer\_20, Gibbi\_22, Spelly\_20
- Track 16 : Yaboi\_20, Yaboi\_281, LukeCage\_19, CeilingFan\_295, Stanimal\_276, BoomerJR\_21, CeilingFan\_21, KentuckyRacer\_287, LukeCage\_282, StarPlatinum\_19, Genie2\_21, Sollertia\_277, Sollertia\_21, KentuckyRacer\_19, StarPlatinum\_289, BoomerJR\_276, Genie2\_276, Stanimal\_21
- Track 17 : Enygma\_286, Enygma\_18
- Track 18 : Elmer\_286, Elmer\_19, Wofford\_277, Wofford\_19
- Track 19 : Tomas\_21, Tomas\_277

- Track 20 : Rikishi\_23, Rikishi\_293
- Track 21 : Mugiwara\_291, Mugiwara\_19

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

The start number called the most often in the published annotations is 7, it was called in 73 of the 132 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea\_17, Anedea\_282, Angela\_19, Angela\_276, Bartholomune\_19, Bartholomune\_269, BlueOtter\_20, BlueOtter\_268, Bmoc\_18, Bmoc\_274, Braelyn\_19, Braelyn\_264, Cross\_20, Cross\_268, Cursive\_18, Cursive\_272, Daubenski\_263, EGole\_19, EGole\_273, Evy\_20, Evy\_258, HangryHippo\_20, HangryHippo\_268, Jay2Jay\_23, Jay2Jay\_278, Larnav\_20, Larnav\_270, Leo04\_20, Leo04\_271, Liandry\_19, Liandry\_268, LilMartin\_19, LilMartin\_271, Lululemon\_19, Lululemon\_266, Marsus\_20, Marsus\_288, Mildred21\_19, Mildred21\_282, MulchMansion\_19, MulchMansion\_275, Navo\_18, Navo\_260, NootNoot\_19, NootNoot\_264, PacManQ\_19, PacManQ\_266, Paradiddles\_19, Paradiddles\_260, Peebs\_20, Peebs\_267, Pepperwood\_21, Pepperwood\_270, Persimmon\_18, Persimmon\_269, PinkiePie\_19, PinkiePie\_269, Riptide\_19, Riptide\_276, Samisti12\_18, Samisti12\_269, Scheme\_21, Scheme\_274, Shuckle\_20, Shuckle\_273, Squillium\_19, Squillium\_271, Sushi23\_21, Sushi23\_271, Targaryen\_18, Targaryen\_269, Teutsch\_19, Teutsch\_266, Tribute\_19, Tribute\_265, Warpy\_23, Warpy\_275, Watermoore\_20, Watermoore\_267, WhereRU\_18, WhereRU\_267,

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

- Daubenski\_19,

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

- Amabiko\_21, Amabiko\_285, Battuta\_20, Battuta\_277, Birchlyn\_17, Birchlyn\_277, BoomerJR\_21, BoomerJR\_276, Bordeaux\_20, Bordeaux\_277, CeilingFan\_21, CeilingFan\_295, Elmer\_19, Elmer\_286, Enygma\_18, Enygma\_286, Genie2\_21, Genie2\_276, Gibbi\_22, Gibbi\_293, IchabodCrane\_19, IchabodCrane\_272, JimJam\_20, JimJam\_288, Jollison\_21, Jollison\_278, Karimac\_20, Karimac\_278, KentuckyRacer\_19, KentuckyRacer\_287, LukeCage\_19, LukeCage\_282, MindFlayer\_19, MindFlayer\_271, Mugiwara\_19, Mugiwara\_291, PumpkinSpice\_20, PumpkinSpice\_284, Quaran19\_20, Quaran19\_281, Rikishi\_23, Rikishi\_293, SaltySpitooon\_20, SaltySpitooon\_280, Sollertia\_21, Sollertia\_277, Spelly\_20, Spelly\_286, Spilled\_19, Spilled\_287, Stanimal\_21, Stanimal\_276, StarPlatinum\_19, StarPlatinum\_289, Starbow\_20, Starbow\_277, TomSawyer\_20, TomSawyer\_285, Tomas\_21, Tomas\_277, Wipeout\_19, Wipeout\_273, Wofford\_19, Wofford\_277, Yaboi\_20, Yaboi\_281,

### **Summary by start number:**

Start 4:

- Found in 38 of 148 ( 25.7% ) of genes in pham
- Manual Annotations of this start: 4 of 132
- Called 10.5% of time when present

- Phage (with cluster) where this start called: IchabodCrane\_19 (BE2), IchabodCrane\_272 (BE2), JimJam\_288 (BE2), MindFlayer\_271 (BE2),

#### Start 5:

- Found in 2 of 148 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 132
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Daubenski\_19 (BE1),

#### Start 7:

- Found in 82 of 148 ( 55.4% ) of genes in pham
- Manual Annotations of this start: 73 of 132
- Called 98.8% of time when present
- Phage (with cluster) where this start called: Anedea\_17 (BE1), Anedea\_282 (BE1), Angela\_19 (BE1), Angela\_276 (BE1), Bartholomune\_19 (BE1), Bartholomune\_269 (BE1), BlueOtter\_20 (BE1), BlueOtter\_268 (BE1), Bmoc\_18 (BE1), Bmoc\_274 (BE1), Braelyn\_19 (BE1), Braelyn\_264 (BE1), Cross\_20 (BE1), Cross\_268 (BE1), Cursive\_18 (BE1), Cursive\_272 (BE1), Daubenski\_263 (BE1), EGole\_19 (BE1), EGole\_273 (BE1), Evy\_20 (BE1), Evy\_258 (BE1), HangryHippo\_20 (BE1), HangryHippo\_268 (BE1), Jay2Jay\_23 (BE1), Jay2Jay\_278 (BE1), Larnav\_20 (BE1), Larnav\_270 (BE1), Leo04\_20 (BE1), Leo04\_271 (BE1), Liandry\_19 (BE1), Liandry\_268 (BE1), LilMartin\_19 (BE1), LilMartin\_271 (BE1), Lululemon\_19 (BE1), Lululemon\_266 (BE1), Marsus\_20 (BE1), Marsus\_288 (BE1), Mildred21\_19 (BE1), Mildred21\_282 (BE1), MulchMansion\_19 (BE1), MulchMansion\_275 (BE1), Navo\_18 (BE1), Navo\_260 (BE1), NootNoot\_19 (BE1), NootNoot\_264 (BE1), PacManQ\_19 (BE1), PacManQ\_266 (BE1), Paradiddles\_19 (BE1), Paradiddles\_260 (BE1), Peebs\_20 (BE1), Peebs\_267 (BE1), Pepperwood\_21 (BE1), Pepperwood\_270 (BE1), Persimmon\_18 (BE1), Persimmon\_269 (BE1), PinkiePie\_19 (BE1), PinkiePie\_269 (BE1), Riptide\_19 (BE1), Riptide\_276 (BE1), Samisti12\_18 (BE1), Samisti12\_269 (BE1), Scheme\_21 (BE1), Scheme\_274 (BE1), Shuckle\_20 (BE1), Shuckle\_273 (BE1), Squillium\_19 (BE1), Squillium\_271 (BE1), Sushi23\_21 (BE1), Sushi23\_271 (BE1), Targaryen\_18 (BE1), Targaryen\_269 (BE1), Teutsch\_19 (BE1), Teutsch\_266 (BE1), Tribute\_19 (BE1), Tribute\_265 (BE1), Warpy\_23 (BE1), Warpy\_275 (BE1), Watermoore\_20 (BE1), Watermoore\_267 (BE1), WhereRU\_18 (BE1), WhereRU\_267 (BE1),

#### Start 8:

- Found in 2 of 148 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 132
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tomas\_21 (BE2), Tomas\_277 (BE2),

#### Start 9:

- Found in 64 of 148 ( 43.2% ) of genes in pham
- Manual Annotations of this start: 52 of 132
- Called 93.8% of time when present
- Phage (with cluster) where this start called: Amabiko\_21 (BE2), Amabiko\_285 (BE2), Battuta\_20 (BE2), Battuta\_277 (BE2), Birchlyn\_17 (BE2), Birchlyn\_277 (BE2), BoomerJR\_21 (BE2), BoomerJR\_276 (BE2), Bordeaux\_20 (BE2), Bordeaux\_277 (BE2), CeilingFan\_21 (BE2), CeilingFan\_295 (BE2), Elmer\_19 (BE2), Elmer\_286 (BE2), Enygma\_18 (BE2), Enygma\_286 (BE2), Genie2\_21 (BE2), Genie2\_276 (BE2), Gibbi\_22 (BE2), Gibbi\_293 (BE2), JimJam\_20 (BE2), Jollison\_21 (BE2), Jollison\_278 (BE2), Karimac\_20 (BE2), Karimac\_278 (BE2), KentuckyRacer\_19 (BE2),

KentuckyRacer\_287 (BE2), LukeCage\_19 (BE2), LukeCage\_282 (BE2), MindFlayer\_19 (BE2), Mugiwara\_19 (BE2), Mugiwara\_291 (BE2), PumpkinSpice\_20 (BE2), PumpkinSpice\_284 (BE2), Quaran19\_20 (BE2), Quaran19\_281 (BE2), Rikishi\_23 (BE2), Rikishi\_293 (BE2), SaltySpittoon\_20 (BE2), SaltySpittoon\_280 (BE2), Sollertia\_21 (BE2), Sollertia\_277 (BE2), Spelly\_20 (BE2), Spelly\_286 (BE2), Spilled\_19 (BE2), Spilled\_287 (BE2), Stanimal\_21 (BE2), Stanimal\_276 (BE2), StarPlatinum\_19 (BE2), StarPlatinum\_289 (BE2), Starbow\_20 (BE2), Starbow\_277 (BE2), TomSawyer\_20 (BE2), TomSawyer\_285 (BE2), Wipeout\_19 (BE2), Wipeout\_273 (BE2), Wofford\_19 (BE2), Wofford\_277 (BE2), Yaboi\_20 (BE2), Yaboi\_281 (BE2),

### **Summary by clusters:**

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

Info for manual annotations of cluster BE1:

- Start number 5 was manually annotated 1 time for cluster BE1.
- Start number 7 was manually annotated 73 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 4 was manually annotated 4 times for cluster BE2.
- Start number 8 was manually annotated 2 times for cluster BE2.
- Start number 9 was manually annotated 52 times for cluster BE2.

### **Gene Information:**

Gene: Amabiko\_285 Start: 128855, Stop: 128559, Start Num: 9

Candidate Starts for Amabiko\_285:

(Start: 4 @128897 has 4 MA's), (Start: 9 @128855 has 52 MA's), (16, 128738),

Gene: Amabiko\_21 Start: 10029, Stop: 9733, Start Num: 9

Candidate Starts for Amabiko\_21:

(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: Anedea\_282 Start: 131812, Stop: 131501, Start Num: 7

Candidate Starts for Anedea\_282:

(Start: 7 @131812 has 73 MA's), (20, 131587),

Gene: Anedea\_17 Start: 8763, Stop: 8452, Start Num: 7

Candidate Starts for Anedea\_17:

(Start: 7 @8763 has 73 MA's), (20, 8538),

Gene: Angela\_276 Start: 132020, Stop: 131709, Start Num: 7

Candidate Starts for Angela\_276:

(Start: 7 @132020 has 73 MA's), (10, 132002), (20, 131795),

Gene: Angela\_19 Start: 9617, Stop: 9306, Start Num: 7

Candidate Starts for Angela\_19:

(Start: 7 @9617 has 73 MA's), (10, 9599), (20, 9392),

Gene: Bartholomune\_19 Start: 9197, Stop: 8883, Start Num: 7

Candidate Starts for Bartholomune\_19:  
(Start: 7 @9197 has 73 MA's), (10, 9176), (11, 9146), (20, 8969), (22, 8945),

Gene: Bartholomune\_269 Start: 130296, Stop: 129982, Start Num: 7  
Candidate Starts for Bartholomune\_269:  
(Start: 7 @130296 has 73 MA's), (10, 130275), (11, 130245), (20, 130068), (22, 130044),

Gene: Battuta\_277 Start: 128184, Stop: 127888, Start Num: 9  
Candidate Starts for Battuta\_277:  
(Start: 4 @128226 has 4 MA's), (Start: 9 @128184 has 52 MA's), (16, 128067),

Gene: Battuta\_20 Start: 10029, Stop: 9733, Start Num: 9  
Candidate Starts for Battuta\_20:  
(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: Birchlyn\_277 Start: 123973, Stop: 123677, Start Num: 9  
Candidate Starts for Birchlyn\_277:  
(Start: 4 @124015 has 4 MA's), (Start: 9 @123973 has 52 MA's), (16, 123856),

Gene: Birchlyn\_17 Start: 7882, Stop: 7586, Start Num: 9  
Candidate Starts for Birchlyn\_17:  
(Start: 4 @7924 has 4 MA's), (Start: 9 @7882 has 52 MA's), (16, 7765),

Gene: BlueOtter\_268 Start: 130554, Stop: 130243, Start Num: 7  
Candidate Starts for BlueOtter\_268:  
(Start: 7 @130554 has 73 MA's), (10, 130536), (11, 130506), (13, 130491), (20, 130329), (21, 130317),  
(22, 130305),

Gene: BlueOtter\_20 Start: 9467, Stop: 9156, Start Num: 7  
Candidate Starts for BlueOtter\_20:  
(Start: 7 @9467 has 73 MA's), (10, 9449), (11, 9419), (13, 9404), (20, 9242), (21, 9230), (22, 9218),

Gene: Bmoc\_274 Start: 131246, Stop: 130935, Start Num: 7  
Candidate Starts for Bmoc\_274:  
(Start: 7 @131246 has 73 MA's), (20, 131021),

Gene: Bmoc\_18 Start: 9424, Stop: 9113, Start Num: 7  
Candidate Starts for Bmoc\_18:  
(Start: 7 @9424 has 73 MA's), (20, 9199),

Gene: BoomerJR\_21 Start: 9929, Stop: 9630, Start Num: 9  
Candidate Starts for BoomerJR\_21:  
(6, 9965), (Start: 9 @9929 has 52 MA's), (16, 9809),

Gene: BoomerJR\_276 Start: 128717, Stop: 128418, Start Num: 9  
Candidate Starts for BoomerJR\_276:  
(6, 128753), (Start: 9 @128717 has 52 MA's), (16, 128597),

Gene: Bordeaux\_277 Start: 128767, Stop: 128471, Start Num: 9  
Candidate Starts for Bordeaux\_277:  
(Start: 4 @128809 has 4 MA's), (Start: 9 @128767 has 52 MA's), (16, 128650),

Gene: Bordeaux\_20 Start: 10029, Stop: 9733, Start Num: 9

Candidate Starts for Bordeaux\_20:

(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: Braelyn\_19 Start: 9240, Stop: 8926, Start Num: 7

Candidate Starts for Braelyn\_19:

(Start: 7 @9240 has 73 MA's), (10, 9219), (11, 9189), (20, 9012), (22, 8988),

Gene: Braelyn\_264 Start: 129650, Stop: 129336, Start Num: 7

Candidate Starts for Braelyn\_264:

(Start: 7 @129650 has 73 MA's), (10, 129629), (11, 129599), (20, 129422), (22, 129398),

Gene: CeilingFan\_295 Start: 130247, Stop: 129951, Start Num: 9

Candidate Starts for CeilingFan\_295:

(6, 130283), (Start: 9 @130247 has 52 MA's), (16, 130130),

Gene: CeilingFan\_21 Start: 9640, Stop: 9344, Start Num: 9

Candidate Starts for CeilingFan\_21:

(6, 9676), (Start: 9 @9640 has 52 MA's), (16, 9523),

Gene: Cross\_20 Start: 9468, Stop: 9157, Start Num: 7

Candidate Starts for Cross\_20:

(Start: 7 @9468 has 73 MA's), (10, 9450), (11, 9420), (13, 9405), (20, 9243), (21, 9231), (22, 9219),

Gene: Cross\_268 Start: 131200, Stop: 130889, Start Num: 7

Candidate Starts for Cross\_268:

(Start: 7 @131200 has 73 MA's), (10, 131182), (11, 131152), (13, 131137), (20, 130975), (21, 130963), (22, 130951),

Gene: Cursive\_18 Start: 8285, Stop: 7974, Start Num: 7

Candidate Starts for Cursive\_18:

(Start: 7 @8285 has 73 MA's), (10, 8267), (11, 8237), (13, 8222), (20, 8060), (21, 8048), (22, 8036),

Gene: Cursive\_272 Start: 130294, Stop: 129983, Start Num: 7

Candidate Starts for Cursive\_272:

(Start: 7 @130294 has 73 MA's), (10, 130276), (11, 130246), (13, 130231), (20, 130069), (21, 130057), (22, 130045),

Gene: Daubenski\_19 Start: 9153, Stop: 8806, Start Num: 5

Candidate Starts for Daubenski\_19:

(2, 9222), (3, 9213), (Start: 5 @9153 has 1 MA's), (Start: 7 @9117 has 73 MA's), (10, 9099), (11, 9069), (20, 8892), (22, 8868),

Gene: Daubenski\_263 Start: 131493, Stop: 131182, Start Num: 7

Candidate Starts for Daubenski\_263:

(2, 131598), (3, 131589), (Start: 5 @131529 has 1 MA's), (Start: 7 @131493 has 73 MA's), (10, 131475), (11, 131445), (20, 131268), (22, 131244),

Gene: EGole\_273 Start: 134070, Stop: 133759, Start Num: 7

Candidate Starts for EGole\_273:

(Start: 7 @134070 has 73 MA's), (10, 134052), (11, 134022), (13, 134007), (20, 133845), (21, 133833), (22, 133821),

Gene: EGole\_19 Start: 9758, Stop: 9447, Start Num: 7

Candidate Starts for EGole\_19:

(Start: 7 @9758 has 73 MA's), (10, 9740), (11, 9710), (13, 9695), (20, 9533), (21, 9521), (22, 9509),

Gene: Elmer\_286 Start: 131352, Stop: 131071, Start Num: 9

Candidate Starts for Elmer\_286:

(6, 131388), (Start: 9 @131352 has 52 MA's), (16, 131250), (18, 131238), (19, 131169),

Gene: Elmer\_19 Start: 8984, Stop: 8703, Start Num: 9

Candidate Starts for Elmer\_19:

(6, 9020), (Start: 9 @8984 has 52 MA's), (16, 8882), (18, 8870), (19, 8801),

Gene: Enygma\_286 Start: 131635, Stop: 131339, Start Num: 9

Candidate Starts for Enygma\_286:

(Start: 9 @131635 has 52 MA's), (16, 131518), (17, 131512), (18, 131506),

Gene: Enygma\_18 Start: 9211, Stop: 8915, Start Num: 9

Candidate Starts for Enygma\_18:

(Start: 9 @9211 has 52 MA's), (16, 9094), (17, 9088), (18, 9082),

Gene: Evy\_20 Start: 9664, Stop: 9350, Start Num: 7

Candidate Starts for Evy\_20:

(Start: 7 @9664 has 73 MA's), (10, 9643), (11, 9613), (20, 9436), (22, 9412),

Gene: Evy\_258 Start: 131393, Stop: 131079, Start Num: 7

Candidate Starts for Evy\_258:

(Start: 7 @131393 has 73 MA's), (10, 131372), (11, 131342), (20, 131165), (22, 131141),

Gene: Genie2\_21 Start: 9929, Stop: 9630, Start Num: 9

Candidate Starts for Genie2\_21:

(6, 9965), (Start: 9 @9929 has 52 MA's), (16, 9809),

Gene: Genie2\_276 Start: 128830, Stop: 128531, Start Num: 9

Candidate Starts for Genie2\_276:

(6, 128866), (Start: 9 @128830 has 52 MA's), (16, 128710),

Gene: Gibbi\_293 Start: 129740, Stop: 129444, Start Num: 9

Candidate Starts for Gibbi\_293:

(Start: 4 @129782 has 4 MA's), (Start: 9 @129740 has 52 MA's), (16, 129623),

Gene: Gibbi\_22 Start: 9640, Stop: 9344, Start Num: 9

Candidate Starts for Gibbi\_22:

(Start: 4 @9682 has 4 MA's), (Start: 9 @9640 has 52 MA's), (16, 9523),

Gene: HangryHippo\_268 Start: 130554, Stop: 130243, Start Num: 7

Candidate Starts for HangryHippo\_268:

(Start: 7 @130554 has 73 MA's), (10, 130536), (11, 130506), (13, 130491), (20, 130329), (21, 130317), (22, 130305),

Gene: HangryHippo\_20 Start: 9467, Stop: 9156, Start Num: 7

Candidate Starts for HangryHippo\_20:

(Start: 7 @9467 has 73 MA's), (10, 9449), (11, 9419), (13, 9404), (20, 9242), (21, 9230), (22, 9218),

Gene: IchabodCrane\_19 Start: 9679, Stop: 9341, Start Num: 4



Candidate Starts for IchabodCrane\_19:  
(Start: 4 @9679 has 4 MA's), (Start: 9 @9637 has 52 MA's), (16, 9520),

Gene: IchabodCrane\_272 Start: 128222, Stop: 127884, Start Num: 4  
Candidate Starts for IchabodCrane\_272:  
(Start: 4 @128222 has 4 MA's), (Start: 9 @128180 has 52 MA's), (16, 128063),

Gene: Jay2Jay\_278 Start: 131946, Stop: 131632, Start Num: 7  
Candidate Starts for Jay2Jay\_278:  
(Start: 7 @131946 has 73 MA's), (10, 131925), (11, 131895), (20, 131718), (22, 131694),

Gene: Jay2Jay\_23 Start: 9853, Stop: 9539, Start Num: 7  
Candidate Starts for Jay2Jay\_23:  
(Start: 7 @9853 has 73 MA's), (10, 9832), (11, 9802), (20, 9625), (22, 9601),

Gene: JimJam\_20 Start: 10028, Stop: 9732, Start Num: 9  
Candidate Starts for JimJam\_20:  
(Start: 4 @10070 has 4 MA's), (Start: 9 @10028 has 52 MA's), (16, 9911),

Gene: JimJam\_288 Start: 131606, Stop: 131268, Start Num: 4  
Candidate Starts for JimJam\_288:  
(Start: 4 @131606 has 4 MA's), (Start: 9 @131564 has 52 MA's), (16, 131447),

Gene: Jollison\_21 Start: 10029, Stop: 9733, Start Num: 9  
Candidate Starts for Jollison\_21:  
(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: Jollison\_278 Start: 128704, Stop: 128408, Start Num: 9  
Candidate Starts for Jollison\_278:  
(Start: 4 @128746 has 4 MA's), (Start: 9 @128704 has 52 MA's), (16, 128587),

Gene: Karimac\_278 Start: 129350, Stop: 129054, Start Num: 9  
Candidate Starts for Karimac\_278:  
(Start: 4 @129392 has 4 MA's), (Start: 9 @129350 has 52 MA's), (16, 129233),

Gene: Karimac\_20 Start: 10031, Stop: 9735, Start Num: 9  
Candidate Starts for Karimac\_20:  
(Start: 4 @10073 has 4 MA's), (Start: 9 @10031 has 52 MA's), (16, 9914),

Gene: KentuckyRacer\_287 Start: 131092, Stop: 130796, Start Num: 9  
Candidate Starts for KentuckyRacer\_287:  
(6, 131128), (Start: 9 @131092 has 52 MA's), (16, 130975),

Gene: KentuckyRacer\_19 Start: 9641, Stop: 9345, Start Num: 9  
Candidate Starts for KentuckyRacer\_19:  
(6, 9677), (Start: 9 @9641 has 52 MA's), (16, 9524),

Gene: Larnav\_270 Start: 131472, Stop: 131161, Start Num: 7  
Candidate Starts for Larnav\_270:  
(Start: 7 @131472 has 73 MA's), (10, 131454), (11, 131424), (13, 131409), (21, 131235), (22, 131223),

Gene: Larnav\_20 Start: 9467, Stop: 9156, Start Num: 7  
Candidate Starts for Larnav\_20:

(Start: 7 @9467 has 73 MA's), (10, 9449), (11, 9419), (13, 9404), (21, 9230), (22, 9218),

Gene: Leo04\_271 Start: 131584, Stop: 131273, Start Num: 7

Candidate Starts for Leo04\_271:

(Start: 7 @131584 has 73 MA's), (10, 131566), (11, 131536), (13, 131521), (20, 131359), (21, 131347), (22, 131335),

Gene: Leo04\_20 Start: 9466, Stop: 9155, Start Num: 7

Candidate Starts for Leo04\_20:

(Start: 7 @9466 has 73 MA's), (10, 9448), (11, 9418), (13, 9403), (20, 9241), (21, 9229), (22, 9217),

Gene: Liandry\_268 Start: 130717, Stop: 130403, Start Num: 7

Candidate Starts for Liandry\_268:

(Start: 7 @130717 has 73 MA's), (10, 130696), (11, 130666), (20, 130489), (22, 130465),

Gene: Liandry\_19 Start: 9196, Stop: 8882, Start Num: 7

Candidate Starts for Liandry\_19:

(Start: 7 @9196 has 73 MA's), (10, 9175), (11, 9145), (20, 8968), (22, 8944),

Gene: LilMartin\_271 Start: 130909, Stop: 130598, Start Num: 7

Candidate Starts for LilMartin\_271:

(Start: 7 @130909 has 73 MA's), (10, 130891), (20, 130684),

Gene: LilMartin\_19 Start: 9565, Stop: 9254, Start Num: 7

Candidate Starts for LilMartin\_19:

(Start: 7 @9565 has 73 MA's), (10, 9547), (20, 9340),

Gene: LukeCage\_19 Start: 9593, Stop: 9297, Start Num: 9

Candidate Starts for LukeCage\_19:

(6, 9629), (Start: 9 @9593 has 52 MA's), (16, 9476),

Gene: LukeCage\_282 Start: 130497, Stop: 130201, Start Num: 9

Candidate Starts for LukeCage\_282:

(6, 130533), (Start: 9 @130497 has 52 MA's), (16, 130380),

Gene: Lululemon\_266 Start: 129739, Stop: 129428, Start Num: 7

Candidate Starts for Lululemon\_266:

(Start: 7 @129739 has 73 MA's), (10, 129721), (11, 129691), (13, 129676), (20, 129514), (21, 129502), (22, 129490),

Gene: Lululemon\_19 Start: 8847, Stop: 8536, Start Num: 7

Candidate Starts for Lululemon\_19:

(Start: 7 @8847 has 73 MA's), (10, 8829), (11, 8799), (13, 8784), (20, 8622), (21, 8610), (22, 8598),

Gene: Marsus\_20 Start: 9421, Stop: 9110, Start Num: 7

Candidate Starts for Marsus\_20:

(Start: 7 @9421 has 73 MA's), (10, 9403), (15, 9298), (20, 9196), (21, 9184), (22, 9172),

Gene: Marsus\_288 Start: 133125, Stop: 132814, Start Num: 7

Candidate Starts for Marsus\_288:

(Start: 7 @133125 has 73 MA's), (10, 133107), (15, 133002), (20, 132900), (21, 132888), (22, 132876),

Gene: Mildred21\_282 Start: 130401, Stop: 130087, Start Num: 7

Candidate Starts for Mildred21\_282:  
(Start: 7 @130401 has 73 MA's), (10, 130383), (15, 130278), (20, 130173), (22, 130149),

Gene: Mildred21\_19 Start: 9243, Stop: 8929, Start Num: 7  
Candidate Starts for Mildred21\_19:  
(Start: 7 @9243 has 73 MA's), (10, 9225), (15, 9120), (20, 9015), (22, 8991),

Gene: MindFlayer\_19 Start: 9639, Stop: 9343, Start Num: 9  
Candidate Starts for MindFlayer\_19:  
(Start: 4 @9681 has 4 MA's), (Start: 9 @9639 has 52 MA's), (16, 9522),

Gene: MindFlayer\_271 Start: 127741, Stop: 127403, Start Num: 4  
Candidate Starts for MindFlayer\_271:  
(Start: 4 @127741 has 4 MA's), (Start: 9 @127699 has 52 MA's), (16, 127582),

Gene: Mugiwara\_291 Start: 130623, Stop: 130327, Start Num: 9  
Candidate Starts for Mugiwara\_291:  
(Start: 9 @130623 has 52 MA's), (16, 130506),

Gene: Mugiwara\_19 Start: 9238, Stop: 8942, Start Num: 9  
Candidate Starts for Mugiwara\_19:  
(Start: 9 @9238 has 52 MA's), (16, 9121),

Gene: MulchMansion\_19 Start: 9565, Stop: 9254, Start Num: 7  
Candidate Starts for MulchMansion\_19:  
(Start: 7 @9565 has 73 MA's), (10, 9547), (20, 9340),

Gene: MulchMansion\_275 Start: 132543, Stop: 132232, Start Num: 7  
Candidate Starts for MulchMansion\_275:  
(Start: 7 @132543 has 73 MA's), (10, 132525), (20, 132318),

Gene: Navo\_260 Start: 128620, Stop: 128306, Start Num: 7  
Candidate Starts for Navo\_260:  
(Start: 7 @128620 has 73 MA's), (10, 128599), (11, 128569), (20, 128392), (22, 128368),

Gene: Navo\_18 Start: 8995, Stop: 8681, Start Num: 7  
Candidate Starts for Navo\_18:  
(Start: 7 @8995 has 73 MA's), (10, 8974), (11, 8944), (20, 8767), (22, 8743),

Gene: NootNoot\_264 Start: 129506, Stop: 129192, Start Num: 7  
Candidate Starts for NootNoot\_264:  
(Start: 7 @129506 has 73 MA's), (10, 129485), (11, 129455), (20, 129278), (22, 129254),

Gene: NootNoot\_19 Start: 9207, Stop: 8893, Start Num: 7  
Candidate Starts for NootNoot\_19:  
(Start: 7 @9207 has 73 MA's), (10, 9186), (11, 9156), (20, 8979), (22, 8955),

Gene: PacManQ\_19 Start: 8847, Stop: 8536, Start Num: 7  
Candidate Starts for PacManQ\_19:  
(Start: 7 @8847 has 73 MA's), (10, 8829), (11, 8799), (13, 8784), (20, 8622), (21, 8610), (22, 8598),

Gene: PacManQ\_266 Start: 129739, Stop: 129428, Start Num: 7  
Candidate Starts for PacManQ\_266:

(Start: 7 @129739 has 73 MA's), (10, 129721), (11, 129691), (13, 129676), (20, 129514), (21, 129502), (22, 129490),

Gene: Paradiddles\_19 Start: 9195, Stop: 8881, Start Num: 7

Candidate Starts for Paradiddles\_19:

(Start: 7 @9195 has 73 MA's), (10, 9174), (11, 9144), (13, 9129), (20, 8967),

Gene: Paradiddles\_260 Start: 131903, Stop: 131589, Start Num: 7

Candidate Starts for Paradiddles\_260:

(Start: 7 @131903 has 73 MA's), (10, 131882), (11, 131852), (13, 131837), (20, 131675),

Gene: Peebs\_267 Start: 131440, Stop: 131129, Start Num: 7

Candidate Starts for Peebs\_267:

(Start: 7 @131440 has 73 MA's), (10, 131422), (11, 131392), (20, 131215), (21, 131203), (22, 131191),

Gene: Peebs\_20 Start: 9465, Stop: 9154, Start Num: 7

Candidate Starts for Peebs\_20:

(Start: 7 @9465 has 73 MA's), (10, 9447), (11, 9417), (20, 9240), (21, 9228), (22, 9216),

Gene: Pepperwood\_21 Start: 9620, Stop: 9309, Start Num: 7

Candidate Starts for Pepperwood\_21:

(Start: 7 @9620 has 73 MA's), (10, 9602), (11, 9572), (20, 9395), (21, 9383), (22, 9371),

Gene: Pepperwood\_270 Start: 131405, Stop: 131094, Start Num: 7

Candidate Starts for Pepperwood\_270:

(Start: 7 @131405 has 73 MA's), (10, 131387), (11, 131357), (20, 131180), (21, 131168), (22, 131156),

Gene: Persimmon\_269 Start: 129837, Stop: 129523, Start Num: 7

Candidate Starts for Persimmon\_269:

(Start: 7 @129837 has 73 MA's), (10, 129816), (11, 129786), (20, 129609), (22, 129585),

Gene: Persimmon\_18 Start: 9026, Stop: 8712, Start Num: 7

Candidate Starts for Persimmon\_18:

(Start: 7 @9026 has 73 MA's), (10, 9005), (11, 8975), (20, 8798), (22, 8774),

Gene: PinkiePie\_19 Start: 9197, Stop: 8883, Start Num: 7

Candidate Starts for PinkiePie\_19:

(Start: 7 @9197 has 73 MA's), (10, 9176), (11, 9146), (20, 8969), (22, 8945),

Gene: PinkiePie\_269 Start: 130718, Stop: 130404, Start Num: 7

Candidate Starts for PinkiePie\_269:

(Start: 7 @130718 has 73 MA's), (10, 130697), (11, 130667), (20, 130490), (22, 130466),

Gene: PumpkinSpice\_20 Start: 10029, Stop: 9733, Start Num: 9

Candidate Starts for PumpkinSpice\_20:

(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: PumpkinSpice\_284 Start: 129921, Stop: 129625, Start Num: 9

Candidate Starts for PumpkinSpice\_284:

(Start: 4 @129963 has 4 MA's), (Start: 9 @129921 has 52 MA's), (16, 129804),

Gene: Quaran19\_281 Start: 129211, Stop: 128915, Start Num: 9

Candidate Starts for Quaran19\_281:

(Start: 4 @129253 has 4 MA's), (Start: 9 @129211 has 52 MA's), (16, 129094),

Gene: Quaran19\_20 Start: 10029, Stop: 9733, Start Num: 9

Candidate Starts for Quaran19\_20:

(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: Rikishi\_23 Start: 9749, Stop: 9453, Start Num: 9

Candidate Starts for Rikishi\_23:

(1, 9860), (Start: 4 @9791 has 4 MA's), (Start: 9 @9749 has 52 MA's), (16, 9632),

Gene: Rikishi\_293 Start: 129822, Stop: 129526, Start Num: 9

Candidate Starts for Rikishi\_293:

(1, 129933), (Start: 4 @129864 has 4 MA's), (Start: 9 @129822 has 52 MA's), (16, 129705),

Gene: Riptide\_19 Start: 9043, Stop: 8732, Start Num: 7

Candidate Starts for Riptide\_19:

(Start: 7 @9043 has 73 MA's), (20, 8818),

Gene: Riptide\_276 Start: 130495, Stop: 130184, Start Num: 7

Candidate Starts for Riptide\_276:

(Start: 7 @130495 has 73 MA's), (20, 130270),

Gene: SaltySpittoon\_20 Start: 10029, Stop: 9733, Start Num: 9

Candidate Starts for SaltySpittoon\_20:

(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: SaltySpittoon\_280 Start: 128293, Stop: 127997, Start Num: 9

Candidate Starts for SaltySpittoon\_280:

(Start: 4 @128335 has 4 MA's), (Start: 9 @128293 has 52 MA's), (16, 128176),

Gene: Samisti12\_269 Start: 132112, Stop: 131801, Start Num: 7

Candidate Starts for Samisti12\_269:

(Start: 7 @132112 has 73 MA's), (10, 132094), (11, 132064), (20, 131887), (21, 131875), (22, 131863),

Gene: Samisti12\_18 Start: 9068, Stop: 8757, Start Num: 7

Candidate Starts for Samisti12\_18:

(Start: 7 @9068 has 73 MA's), (10, 9050), (11, 9020), (20, 8843), (21, 8831), (22, 8819),

Gene: Scheme\_274 Start: 132815, Stop: 132504, Start Num: 7

Candidate Starts for Scheme\_274:

(Start: 7 @132815 has 73 MA's), (10, 132797), (11, 132767), (20, 132590), (21, 132578), (22, 132566),

Gene: Scheme\_21 Start: 9620, Stop: 9309, Start Num: 7

Candidate Starts for Scheme\_21:

(Start: 7 @9620 has 73 MA's), (10, 9602), (11, 9572), (20, 9395), (21, 9383), (22, 9371),

Gene: Shuckle\_20 Start: 9603, Stop: 9289, Start Num: 7

Candidate Starts for Shuckle\_20:

(Start: 7 @9603 has 73 MA's), (11, 9552), (12, 9546), (20, 9375),

Gene: Shuckle\_273 Start: 132236, Stop: 131922, Start Num: 7

Candidate Starts for Shuckle\_273:

(Start: 7 @132236 has 73 MA's), (11, 132185), (12, 132179), (20, 132008),

Gene: Sollertia\_277 Start: 128819, Stop: 128520, Start Num: 9

Candidate Starts for Sollertia\_277:

(6, 128855), (Start: 9 @128819 has 52 MA's), (16, 128699),

Gene: Sollertia\_21 Start: 9929, Stop: 9630, Start Num: 9

Candidate Starts for Sollertia\_21:

(6, 9965), (Start: 9 @9929 has 52 MA's), (16, 9809),

Gene: Spelly\_286 Start: 128833, Stop: 128537, Start Num: 9

Candidate Starts for Spelly\_286:

(Start: 4 @128875 has 4 MA's), (Start: 9 @128833 has 52 MA's), (16, 128716),

Gene: Spelly\_20 Start: 10029, Stop: 9733, Start Num: 9

Candidate Starts for Spelly\_20:

(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: Spilled\_19 Start: 9639, Stop: 9343, Start Num: 9

Candidate Starts for Spilled\_19:

(Start: 4 @9681 has 4 MA's), (Start: 9 @9639 has 52 MA's), (16, 9522),

Gene: Spilled\_287 Start: 130108, Stop: 129812, Start Num: 9

Candidate Starts for Spilled\_287:

(Start: 4 @130150 has 4 MA's), (Start: 9 @130108 has 52 MA's), (16, 129991),

Gene: Squillium\_271 Start: 130720, Stop: 130406, Start Num: 7

Candidate Starts for Squillium\_271:

(Start: 7 @130720 has 73 MA's), (10, 130699), (11, 130669), (20, 130492), (22, 130468),

Gene: Squillium\_19 Start: 9196, Stop: 8882, Start Num: 7

Candidate Starts for Squillium\_19:

(Start: 7 @9196 has 73 MA's), (10, 9175), (11, 9145), (20, 8968), (22, 8944),

Gene: Stanimal\_276 Start: 129203, Stop: 128904, Start Num: 9

Candidate Starts for Stanimal\_276:

(6, 129239), (Start: 9 @129203 has 52 MA's), (16, 129083),

Gene: Stanimal\_21 Start: 9929, Stop: 9630, Start Num: 9

Candidate Starts for Stanimal\_21:

(6, 9965), (Start: 9 @9929 has 52 MA's), (16, 9809),

Gene: StarPlatinum\_19 Start: 9656, Stop: 9360, Start Num: 9

Candidate Starts for StarPlatinum\_19:

(6, 9692), (Start: 9 @9656 has 52 MA's), (16, 9539),

Gene: StarPlatinum\_289 Start: 131343, Stop: 131047, Start Num: 9

Candidate Starts for StarPlatinum\_289:

(6, 131379), (Start: 9 @131343 has 52 MA's), (16, 131226),

Gene: Starbow\_20 Start: 10029, Stop: 9733, Start Num: 9

Candidate Starts for Starbow\_20:

(Start: 4 @10071 has 4 MA's), (Start: 9 @10029 has 52 MA's), (16, 9912),

Gene: Starbow\_277 Start: 128877, Stop: 128581, Start Num: 9  
Candidate Starts for Starbow\_277:  
(Start: 4 @128919 has 4 MA's), (Start: 9 @128877 has 52 MA's), (16, 128760),

Gene: Sushi23\_21 Start: 9467, Stop: 9156, Start Num: 7  
Candidate Starts for Sushi23\_21:  
(Start: 7 @9467 has 73 MA's), (10, 9449), (11, 9419), (20, 9242), (21, 9230), (22, 9218),

Gene: Sushi23\_271 Start: 132310, Stop: 131999, Start Num: 7  
Candidate Starts for Sushi23\_271:  
(Start: 7 @132310 has 73 MA's), (10, 132292), (11, 132262), (20, 132085), (21, 132073), (22, 132061),

Gene: Targaryen\_269 Start: 133336, Stop: 133022, Start Num: 7  
Candidate Starts for Targaryen\_269:  
(Start: 7 @133336 has 73 MA's), (10, 133315), (11, 133285), (20, 133108), (22, 133084),

Gene: Targaryen\_18 Start: 9660, Stop: 9346, Start Num: 7  
Candidate Starts for Targaryen\_18:  
(Start: 7 @9660 has 73 MA's), (10, 9639), (11, 9609), (20, 9432), (22, 9408),

Gene: Teutsch\_266 Start: 131278, Stop: 130967, Start Num: 7  
Candidate Starts for Teutsch\_266:  
(Start: 7 @131278 has 73 MA's), (10, 131260), (11, 131230), (20, 131053), (21, 131041), (22, 131029),

Gene: Teutsch\_19 Start: 9069, Stop: 8758, Start Num: 7  
Candidate Starts for Teutsch\_19:  
(Start: 7 @9069 has 73 MA's), (10, 9051), (11, 9021), (20, 8844), (21, 8832), (22, 8820),

Gene: TomSawyer\_285 Start: 131401, Stop: 131105, Start Num: 9  
Candidate Starts for TomSawyer\_285:  
(Start: 4 @131443 has 4 MA's), (Start: 9 @131401 has 52 MA's), (16, 131284),

Gene: TomSawyer\_20 Start: 9622, Stop: 9326, Start Num: 9  
Candidate Starts for TomSawyer\_20:  
(Start: 4 @9664 has 4 MA's), (Start: 9 @9622 has 52 MA's), (16, 9505),

Gene: Tomas\_21 Start: 10251, Stop: 9961, Start Num: 8  
Candidate Starts for Tomas\_21:  
(Start: 8 @10251 has 2 MA's), (14, 10197), (17, 10134), (20, 10050), (23, 10020), (24, 10017),

Gene: Tomas\_277 Start: 131958, Stop: 131668, Start Num: 8  
Candidate Starts for Tomas\_277:  
(Start: 8 @131958 has 2 MA's), (14, 131904), (17, 131841), (20, 131757), (23, 131727), (24, 131724),

Gene: Tribute\_19 Start: 9320, Stop: 9009, Start Num: 7  
Candidate Starts for Tribute\_19:  
(Start: 7 @9320 has 73 MA's), (10, 9302), (11, 9272), (20, 9095), (21, 9083), (22, 9071),

Gene: Tribute\_265 Start: 131864, Stop: 131553, Start Num: 7  
Candidate Starts for Tribute\_265:  
(Start: 7 @131864 has 73 MA's), (10, 131846), (11, 131816), (20, 131639), (21, 131627), (22, 131615),

Gene: Warpy\_275 Start: 131412, Stop: 131098, Start Num: 7

Candidate Starts for Warpy\_275:

(Start: 7 @131412 has 73 MA's), (10, 131391), (11, 131361), (20, 131184), (22, 131160),

Gene: Warpy\_23 Start: 9874, Stop: 9560, Start Num: 7

Candidate Starts for Warpy\_23:

(Start: 7 @9874 has 73 MA's), (10, 9853), (11, 9823), (20, 9646), (22, 9622),

Gene: Watermoore\_267 Start: 132064, Stop: 131753, Start Num: 7

Candidate Starts for Watermoore\_267:

(Start: 7 @132064 has 73 MA's), (10, 132046), (11, 132016), (13, 132001), (20, 131839), (21, 131827), (22, 131815),

Gene: Watermoore\_20 Start: 9468, Stop: 9157, Start Num: 7

Candidate Starts for Watermoore\_20:

(Start: 7 @9468 has 73 MA's), (10, 9450), (11, 9420), (13, 9405), (20, 9243), (21, 9231), (22, 9219),

Gene: WhereRU\_18 Start: 9026, Stop: 8712, Start Num: 7

Candidate Starts for WhereRU\_18:

(Start: 7 @9026 has 73 MA's), (10, 9005), (11, 8975), (20, 8798), (22, 8774),

Gene: WhereRU\_267 Start: 130171, Stop: 129857, Start Num: 7

Candidate Starts for WhereRU\_267:

(Start: 7 @130171 has 73 MA's), (10, 130150), (11, 130120), (20, 129943), (22, 129919),

Gene: Wipeout\_273 Start: 130375, Stop: 130079, Start Num: 9

Candidate Starts for Wipeout\_273:

(Start: 4 @130417 has 4 MA's), (Start: 9 @130375 has 52 MA's), (16, 130258),

Gene: Wipeout\_19 Start: 9644, Stop: 9348, Start Num: 9

Candidate Starts for Wipeout\_19:

(Start: 4 @9686 has 4 MA's), (Start: 9 @9644 has 52 MA's), (16, 9527),

Gene: Wofford\_277 Start: 130782, Stop: 130501, Start Num: 9

Candidate Starts for Wofford\_277:

(6, 130818), (Start: 9 @130782 has 52 MA's), (16, 130680), (18, 130668), (19, 130599),

Gene: Wofford\_19 Start: 8989, Stop: 8708, Start Num: 9

Candidate Starts for Wofford\_19:

(6, 9025), (Start: 9 @8989 has 52 MA's), (16, 8887), (18, 8875), (19, 8806),

Gene: Yaboi\_20 Start: 9929, Stop: 9630, Start Num: 9

Candidate Starts for Yaboi\_20:

(6, 9965), (Start: 9 @9929 has 52 MA's), (16, 9809),

Gene: Yaboi\_281 Start: 128747, Stop: 128448, Start Num: 9

Candidate Starts for Yaboi\_281:

(6, 128783), (Start: 9 @128747 has 52 MA's), (16, 128627),