

Pham 308457



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 308457 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308457 has 85 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Targaryen\_128, Warpy\_131, Evy\_125, Jay2Jay\_132
- Track 2 : LilSaint\_131, Riptide\_126
- Track 3 : BlueOtter\_127, Leo04\_129, Lululemon\_127, HangryHippo\_127, Coogler\_127, Teutsch\_127, Cross\_128, Cursive\_126, Watermoore\_127, ArianaSWT\_134, PacManQ\_127
- Track 4 : Bartholomune\_127
- Track 5 : NootNoot\_124, WhereRU\_126, Davielle\_127, Persimmon\_127, Braelyn\_128, Navo\_125
- Track 6 : Tribute\_127, Peebs\_126, Scheme\_129, Sushi23\_127, WashU\_131, Samisti12\_129, Larnav\_128, Pepperwood\_127
- Track 7 : EGole\_131
- Track 8 : Angela\_128, Anedea\_132, MulchMansion\_127, LilMartin\_127, Bmoc\_131, Marsus\_128
- Track 9 : Shuckle\_127
- Track 10 : Squillium\_127, FreddyDRoo\_126, Eliot67\_125, PinkiePie\_124, Liandry\_127
- Track 11 : PynkPanther\_134
- Track 12 : Cadmus\_124, Daubenski\_127
- Track 13 : Gibbi\_139, CeilingFan\_133, Jollison\_132, SaltySpitooon\_133, Spelly\_135, IchabodCrane\_128, Amabiko\_134, PumpkinSpice\_135, Daisy123\_138, TomSawyer\_134, Bordeaux\_132, AcciDwight\_139, KentuckyRacer\_135, Quaran19\_133, Birchlyn\_132, Battuta\_132, Wipeout\_127, Rikishi\_132, JimJam\_136, Starbow\_131, MindFlayer\_129
- Track 14 : Karimac\_132, Brizzy\_131, Spilled\_136
- Track 15 : BoomerJR\_133, Genie2\_133, AngryGiraffe\_130, Yaboi\_132, Stanimal\_131, Sollertia\_132
- Track 16 : Enygma\_134
- Track 17 : Wofford\_127
- Track 18 : Tomas\_133
- Track 19 : StarPlatinum\_135, LukeCage\_132
- Track 20 : Elmer\_131
- Track 21 : Mugiwara\_134

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

The start number called the most often in the published annotations is 2, it was called in 77 of the 77 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AcciDwight\_139, Amabiko\_134, Anedea\_132, Angela\_128, AngryGiraffe\_130, ArianaSWT\_134, Bartholomune\_127, Battuta\_132, Birchlyn\_132, BlueOtter\_127, Bmoc\_131, BoomerJR\_133, Bordeaux\_132, Braelyn\_128, Brizzy\_131, Cadmus\_124, CeilingFan\_133, Coogler\_127, Cross\_128, Cursive\_126, Daisy123\_138, Daubenski\_127, Davielle\_127, EGole\_131, Eliot67\_125, Elmer\_131, Enygma\_134, Evy\_125, FreddyDRoo\_126, Genie2\_133, Gibbi\_139, HangryHippo\_127, IchabodCrane\_128, Jay2Jay\_132, JimJam\_136, Jollison\_132, Karimac\_132, KentuckyRacer\_135, Larnav\_128, Leo04\_129, Liandry\_127, LilMartin\_127, LilSaint\_131, LukeCage\_132, Lululemon\_127, Marsus\_128, MindFlayer\_129, Mugiwara\_134, MulchMansion\_127, Navo\_125, NootNoot\_124, PacManQ\_127, Peebs\_126, Pepperwood\_127, Persimmon\_127, PinkiePie\_124, PumpkinSpice\_135, PynkPanther\_134, Quarant19\_133, Rikishi\_132, Riptide\_126, SaltySpitooon\_133, Samisti12\_129, Scheme\_129, Shuckle\_127, Sollertia\_132, Spelly\_135, Spilled\_136, Squillium\_127, Stanimal\_131, StarPlatinum\_135, Starbow\_131, Sushi23\_127, Targaryen\_128, Teutsch\_127, TomSawyer\_134, Tomas\_133, Tribute\_127, Warpy\_131, WashU\_131, Watermoore\_127, WhereRU\_126, Wipeout\_127, Wofford\_127, Yaboi\_132,

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

- 

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

- 

### Summary by start number:

Start 2:

- Found in 85 of 85 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 77 of 77
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AcciDwight\_139 (BE2), Amabiko\_134 (BE2), Anedea\_132 (BE1), Angela\_128 (BE1), AngryGiraffe\_130 (BE2), ArianaSWT\_134 (BE1), Bartholomune\_127 (BE1), Battuta\_132 (BE2), Birchlyn\_132 (BE2), BlueOtter\_127 (BE1), Bmoc\_131 (BE1), BoomerJR\_133 (BE2), Bordeaux\_132 (BE2), Braelyn\_128 (BE1), Brizzy\_131 (BE2), Cadmus\_124 (BE1), CeilingFan\_133 (BE2), Coogler\_127 (BE1), Cross\_128 (BE1), Cursive\_126 (BE1), Daisy123\_138 (BE2), Daubenski\_127 (BE1), Davielle\_127 (BE1), EGole\_131 (BE1), Eliot67\_125 (BE1), Elmer\_131 (BE2), Enygma\_134 (BE2), Evy\_125 (BE1), FreddyDRoo\_126 (BE1), Genie2\_133 (BE2), Gibbi\_139 (BE2), HangryHippo\_127 (BE1), IchabodCrane\_128 (BE2), Jay2Jay\_132 (BE1), JimJam\_136 (BE2), Jollison\_132 (BE2), Karimac\_132 (BE2), KentuckyRacer\_135 (BE2), Larnav\_128 (BE1), Leo04\_129 (BE1), Liandry\_127 (BE1), LilMartin\_127 (BE1), LilSaint\_131 (BE1), LukeCage\_132 (BE2), Lululemon\_127 (BE1), Marsus\_128 (BE1), MindFlayer\_129 (BE2), Mugiwara\_134 (BE2), MulchMansion\_127 (BE1), Navo\_125 (BE1), NootNoot\_124 (BE1), PacManQ\_127 (BE1), Peebs\_126 (BE1), Pepperwood\_127 (BE1), Persimmon\_127 (BE1), PinkiePie\_124 (BE1), PumpkinSpice\_135 (BE2), PynkPanther\_134 (BE1), Quarant19\_133 (BE2), Rikishi\_132 (BE2), Riptide\_126 (BE1), SaltySpitooon\_133 (BE2), Samisti12\_129 (BE1), Scheme\_129 (BE1),

Shuckle\_127 (BE1), Sollertia\_132 (BE2), Spelly\_135 (BE2), Spilled\_136 (BE2), Squillium\_127 (BE1), Stanimal\_131 (BE2), StarPlatinum\_135 (BE2), Starbow\_131 (BE2), Sushi23\_127 (BE1), Targaryen\_128 (BE1), Teutsch\_127 (BE1), TomSawyer\_134 (BE2), Tomas\_133 (BE2), Tribute\_127 (BE1), Warpy\_131 (BE1), WashU\_131 (BE1), Watermoore\_127 (BE1), WhereRU\_126 (BE1), Wipeout\_127 (BE2), Wofford\_127 (BE2), Yaboi\_132 (BE2),

### **Summary by clusters:**

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

Info for manual annotations of cluster BE1:

•Start number 2 was manually annotated 43 times for cluster BE1.

Info for manual annotations of cluster BE2:

•Start number 2 was manually annotated 34 times for cluster BE2.

### **Gene Information:**

Gene: AcciDwight\_139 Start: 82654, Stop: 82866, Start Num: 2

Candidate Starts for AcciDwight\_139:

(Start: 2 @82654 has 77 MA's), (3, 82693), (7, 82717),

Gene: Amabiko\_134 Start: 82699, Stop: 82911, Start Num: 2

Candidate Starts for Amabiko\_134:

(Start: 2 @82699 has 77 MA's), (3, 82738), (7, 82762),

Gene: Anedea\_132 Start: 82693, Stop: 82908, Start Num: 2

Candidate Starts for Anedea\_132:

(Start: 2 @82693 has 77 MA's), (19, 82858), (20, 82879),

Gene: Angela\_128 Start: 82343, Stop: 82558, Start Num: 2

Candidate Starts for Angela\_128:

(Start: 2 @82343 has 77 MA's), (19, 82508), (20, 82529),

Gene: AngryGiraffe\_130 Start: 82587, Stop: 82799, Start Num: 2

Candidate Starts for AngryGiraffe\_130:

(Start: 2 @82587 has 77 MA's), (4, 82632), (14, 82719), (20, 82770),

Gene: ArianaSWT\_134 Start: 84345, Stop: 84557, Start Num: 2

Candidate Starts for ArianaSWT\_134:

(1, 84303), (Start: 2 @84345 has 77 MA's), (5, 84402), (9, 84417), (19, 84507), (20, 84528),

Gene: Bartholomune\_127 Start: 82128, Stop: 82343, Start Num: 2

Candidate Starts for Bartholomune\_127:

(Start: 2 @82128 has 77 MA's), (4, 82176), (9, 82203), (17, 82284), (19, 82293), (20, 82314),

Gene: Battuta\_132 Start: 82672, Stop: 82884, Start Num: 2

Candidate Starts for Battuta\_132:

(Start: 2 @82672 has 77 MA's), (3, 82711), (7, 82735),

Gene: Birchlyn\_132 Start: 80559, Stop: 80771, Start Num: 2

Candidate Starts for Birchlyn\_132:

(Start: 2 @80559 has 77 MA's), (3, 80598), (7, 80622),

Gene: BlueOtter\_127 Start: 84382, Stop: 84594, Start Num: 2

Candidate Starts for BlueOtter\_127:

(1, 84340), (Start: 2 @84382 has 77 MA's), (5, 84439), (9, 84454), (19, 84544), (20, 84565),

Gene: Bmoc\_131 Start: 82638, Stop: 82853, Start Num: 2

Candidate Starts for Bmoc\_131:

(Start: 2 @82638 has 77 MA's), (19, 82803), (20, 82824),

Gene: BoomerJR\_133 Start: 83002, Stop: 83214, Start Num: 2

Candidate Starts for BoomerJR\_133:

(Start: 2 @83002 has 77 MA's), (4, 83047), (14, 83134), (20, 83185),

Gene: Bordeaux\_132 Start: 82827, Stop: 83039, Start Num: 2

Candidate Starts for Bordeaux\_132:

(Start: 2 @82827 has 77 MA's), (3, 82866), (7, 82890),

Gene: Braelyn\_128 Start: 83014, Stop: 83229, Start Num: 2

Candidate Starts for Braelyn\_128:

(Start: 2 @83014 has 77 MA's), (4, 83062), (9, 83089), (19, 83179), (20, 83200),

Gene: Brizzy\_131 Start: 82480, Stop: 82692, Start Num: 2

Candidate Starts for Brizzy\_131:

(1, 82438), (Start: 2 @82480 has 77 MA's), (3, 82519), (7, 82543), (11, 82570),

Gene: Cadmus\_124 Start: 82579, Stop: 82785, Start Num: 2

Candidate Starts for Cadmus\_124:

(1, 82537), (Start: 2 @82579 has 77 MA's), (4, 82624), (8, 82645), (10, 82663),

Gene: CeilingFan\_133 Start: 82590, Stop: 82802, Start Num: 2

Candidate Starts for CeilingFan\_133:

(Start: 2 @82590 has 77 MA's), (3, 82629), (7, 82653),

Gene: Coogler\_127 Start: 84407, Stop: 84619, Start Num: 2

Candidate Starts for Coogler\_127:

(1, 84365), (Start: 2 @84407 has 77 MA's), (5, 84464), (9, 84479), (19, 84569), (20, 84590),

Gene: Cross\_128 Start: 84383, Stop: 84595, Start Num: 2

Candidate Starts for Cross\_128:

(1, 84341), (Start: 2 @84383 has 77 MA's), (5, 84440), (9, 84455), (19, 84545), (20, 84566),

Gene: Cursive\_126 Start: 82592, Stop: 82804, Start Num: 2

Candidate Starts for Cursive\_126:

(1, 82550), (Start: 2 @82592 has 77 MA's), (5, 82649), (9, 82664), (19, 82754), (20, 82775),

Gene: Daisy123\_138 Start: 83011, Stop: 83223, Start Num: 2

Candidate Starts for Daisy123\_138:

(Start: 2 @83011 has 77 MA's), (3, 83050), (7, 83074),

Gene: Daubenski\_127 Start: 83815, Stop: 84021, Start Num: 2

Candidate Starts for Daubenski\_127:

(1, 83773), (Start: 2 @83815 has 77 MA's), (4, 83860), (8, 83881), (10, 83899),

Gene: Davielle\_127 Start: 82471, Stop: 82686, Start Num: 2

Candidate Starts for Davielle\_127:

(Start: 2 @82471 has 77 MA's), (4, 82519), (9, 82546), (19, 82636), (20, 82657),

Gene: EGole\_131 Start: 85416, Stop: 85622, Start Num: 2

Candidate Starts for EGole\_131:

(1, 85374), (Start: 2 @85416 has 77 MA's), (4, 85461), (10, 85500),

Gene: Eliot67\_125 Start: 82164, Stop: 82379, Start Num: 2

Candidate Starts for Eliot67\_125:

(Start: 2 @82164 has 77 MA's), (4, 82212), (9, 82239), (13, 82281), (17, 82320), (19, 82329), (20, 82350),

Gene: Elmer\_131 Start: 83820, Stop: 84044, Start Num: 2

Candidate Starts for Elmer\_131:

(1, 83778), (Start: 2 @83820 has 77 MA's), (11, 83919), (13, 83943), (16, 83973), (17, 83985), (20, 84015),

Gene: Enygma\_134 Start: 84511, Stop: 84723, Start Num: 2

Candidate Starts for Enygma\_134:

(1, 84469), (Start: 2 @84511 has 77 MA's), (6, 84571), (7, 84574), (20, 84694),

Gene: Evy\_125 Start: 84142, Stop: 84348, Start Num: 2

Candidate Starts for Evy\_125:

(1, 84100), (Start: 2 @84142 has 77 MA's), (4, 84187), (16, 84283), (21, 84337),

Gene: FreddyDRoo\_126 Start: 82164, Stop: 82379, Start Num: 2

Candidate Starts for FreddyDRoo\_126:

(Start: 2 @82164 has 77 MA's), (4, 82212), (9, 82239), (13, 82281), (17, 82320), (19, 82329), (20, 82350),

Gene: Genie2\_133 Start: 83116, Stop: 83328, Start Num: 2

Candidate Starts for Genie2\_133:

(Start: 2 @83116 has 77 MA's), (4, 83161), (14, 83248), (20, 83299),

Gene: Gibbi\_139 Start: 82811, Stop: 83023, Start Num: 2

Candidate Starts for Gibbi\_139:

(Start: 2 @82811 has 77 MA's), (3, 82850), (7, 82874),

Gene: HangryHippo\_127 Start: 84382, Stop: 84594, Start Num: 2

Candidate Starts for HangryHippo\_127:

(1, 84340), (Start: 2 @84382 has 77 MA's), (5, 84439), (9, 84454), (19, 84544), (20, 84565),

Gene: IchabodCrane\_128 Start: 82400, Stop: 82612, Start Num: 2

Candidate Starts for IchabodCrane\_128:

(Start: 2 @82400 has 77 MA's), (3, 82439), (7, 82463),

Gene: Jay2Jay\_132 Start: 84980, Stop: 85186, Start Num: 2

Candidate Starts for Jay2Jay\_132:

(1, 84938), (Start: 2 @84980 has 77 MA's), (4, 85025), (16, 85121), (21, 85175),

Gene: JimJam\_136 Start: 83221, Stop: 83433, Start Num: 2

Candidate Starts for JimJam\_136:

(Start: 2 @83221 has 77 MA's), (3, 83260), (7, 83284),

Gene: Jollison\_132 Start: 82655, Stop: 82867, Start Num: 2

Candidate Starts for Jollison\_132:

(Start: 2 @82655 has 77 MA's), (3, 82694), (7, 82718),

Gene: Karimac\_132 Start: 82938, Stop: 83150, Start Num: 2

Candidate Starts for Karimac\_132:

(1, 82896), (Start: 2 @82938 has 77 MA's), (3, 82977), (7, 83001), (11, 83028),

Gene: KentuckyRacer\_135 Start: 83086, Stop: 83298, Start Num: 2

Candidate Starts for KentuckyRacer\_135:

(Start: 2 @83086 has 77 MA's), (3, 83125), (7, 83149),

Gene: Larnav\_128 Start: 84366, Stop: 84578, Start Num: 2

Candidate Starts for Larnav\_128:

(1, 84324), (Start: 2 @84366 has 77 MA's), (9, 84438), (12, 84468), (15, 84504), (20, 84549),

Gene: Leo04\_129 Start: 84882, Stop: 85094, Start Num: 2

Candidate Starts for Leo04\_129:

(1, 84840), (Start: 2 @84882 has 77 MA's), (5, 84939), (9, 84954), (19, 85044), (20, 85065),

Gene: Liandry\_127 Start: 82871, Stop: 83086, Start Num: 2

Candidate Starts for Liandry\_127:

(Start: 2 @82871 has 77 MA's), (4, 82919), (9, 82946), (13, 82988), (17, 83027), (19, 83036), (20, 83057),

Gene: LilMartin\_127 Start: 82245, Stop: 82460, Start Num: 2

Candidate Starts for LilMartin\_127:

(Start: 2 @82245 has 77 MA's), (19, 82410), (20, 82431),

Gene: LilSaint\_131 Start: 82522, Stop: 82728, Start Num: 2

Candidate Starts for LilSaint\_131:

(Start: 2 @82522 has 77 MA's), (17, 82675),

Gene: LukeCage\_132 Start: 83715, Stop: 83927, Start Num: 2

Candidate Starts for LukeCage\_132:

(1, 83673), (Start: 2 @83715 has 77 MA's), (3, 83754), (7, 83778), (11, 83805), (20, 83898),

Gene: Lululemon\_127 Start: 83763, Stop: 83975, Start Num: 2

Candidate Starts for Lululemon\_127:

(1, 83721), (Start: 2 @83763 has 77 MA's), (5, 83820), (9, 83835), (19, 83925), (20, 83946),

Gene: Marsus\_128 Start: 82338, Stop: 82553, Start Num: 2

Candidate Starts for Marsus\_128:

(Start: 2 @82338 has 77 MA's), (19, 82503), (20, 82524),

Gene: MindFlayer\_129 Start: 82307, Stop: 82519, Start Num: 2

Candidate Starts for MindFlayer\_129:

(Start: 2 @82307 has 77 MA's), (3, 82346), (7, 82370),

Gene: Mugiwara\_134 Start: 83548, Stop: 83760, Start Num: 2  
Candidate Starts for Mugiwara\_134:  
(Start: 2 @83548 has 77 MA's), (3, 83587), (7, 83611), (11, 83638), (19, 83710),

Gene: MulchMansion\_127 Start: 82291, Stop: 82506, Start Num: 2  
Candidate Starts for MulchMansion\_127:  
(Start: 2 @82291 has 77 MA's), (19, 82456), (20, 82477),

Gene: Navo\_125 Start: 82676, Stop: 82891, Start Num: 2  
Candidate Starts for Navo\_125:  
(Start: 2 @82676 has 77 MA's), (4, 82724), (9, 82751), (19, 82841), (20, 82862),

Gene: NootNoot\_124 Start: 81785, Stop: 82000, Start Num: 2  
Candidate Starts for NootNoot\_124:  
(Start: 2 @81785 has 77 MA's), (4, 81833), (9, 81860), (19, 81950), (20, 81971),

Gene: PacManQ\_127 Start: 83763, Stop: 83975, Start Num: 2  
Candidate Starts for PacManQ\_127:  
(1, 83721), (Start: 2 @83763 has 77 MA's), (5, 83820), (9, 83835), (19, 83925), (20, 83946),

Gene: Peebs\_126 Start: 84179, Stop: 84391, Start Num: 2  
Candidate Starts for Peebs\_126:  
(1, 84137), (Start: 2 @84179 has 77 MA's), (9, 84251), (12, 84281), (15, 84317), (20, 84362),

Gene: Pepperwood\_127 Start: 84309, Stop: 84521, Start Num: 2  
Candidate Starts for Pepperwood\_127:  
(1, 84267), (Start: 2 @84309 has 77 MA's), (9, 84381), (12, 84411), (15, 84447), (20, 84492),

Gene: Persimmon\_127 Start: 81719, Stop: 81934, Start Num: 2  
Candidate Starts for Persimmon\_127:  
(Start: 2 @81719 has 77 MA's), (4, 81767), (9, 81794), (19, 81884), (20, 81905),

Gene: PinkiePie\_124 Start: 82871, Stop: 83086, Start Num: 2  
Candidate Starts for PinkiePie\_124:  
(Start: 2 @82871 has 77 MA's), (4, 82919), (9, 82946), (13, 82988), (17, 83027), (19, 83036), (20, 83057),

Gene: PumpkinSpice\_135 Start: 83263, Stop: 83475, Start Num: 2  
Candidate Starts for PumpkinSpice\_135:  
(Start: 2 @83263 has 77 MA's), (3, 83302), (7, 83326),

Gene: PynkPanther\_134 Start: 83408, Stop: 83623, Start Num: 2  
Candidate Starts for PynkPanther\_134:  
(Start: 2 @83408 has 77 MA's), (4, 83456), (13, 83525), (17, 83564), (19, 83573), (20, 83594),

Gene: Quaran19\_133 Start: 82689, Stop: 82901, Start Num: 2  
Candidate Starts for Quaran19\_133:  
(Start: 2 @82689 has 77 MA's), (3, 82728), (7, 82752),

Gene: Rikishi\_132 Start: 82605, Stop: 82817, Start Num: 2  
Candidate Starts for Rikishi\_132:  
(Start: 2 @82605 has 77 MA's), (3, 82644), (7, 82668),

Gene: Riptide\_126 Start: 81546, Stop: 81752, Start Num: 2

Candidate Starts for Riptide\_126:

(Start: 2 @81546 has 77 MA's), (17, 81699),

Gene: SaltySpittoon\_133 Start: 82702, Stop: 82914, Start Num: 2

Candidate Starts for SaltySpittoon\_133:

(Start: 2 @82702 has 77 MA's), (3, 82741), (7, 82765),

Gene: Samisti12\_129 Start: 85558, Stop: 85770, Start Num: 2

Candidate Starts for Samisti12\_129:

(1, 85516), (Start: 2 @85558 has 77 MA's), (9, 85630), (12, 85660), (15, 85696), (20, 85741),

Gene: Scheme\_129 Start: 84964, Stop: 85176, Start Num: 2

Candidate Starts for Scheme\_129:

(1, 84922), (Start: 2 @84964 has 77 MA's), (9, 85036), (12, 85066), (15, 85102), (20, 85147),

Gene: Shuckle\_127 Start: 83413, Stop: 83625, Start Num: 2

Candidate Starts for Shuckle\_127:

(1, 83371), (Start: 2 @83413 has 77 MA's), (4, 83458), (5, 83470), (9, 83485), (18, 83569), (19, 83575), (20, 83596),

Gene: Sollertia\_132 Start: 83116, Stop: 83328, Start Num: 2

Candidate Starts for Sollertia\_132:

(Start: 2 @83116 has 77 MA's), (4, 83161), (14, 83248), (20, 83299),

Gene: Spelly\_135 Start: 82654, Stop: 82866, Start Num: 2

Candidate Starts for Spelly\_135:

(Start: 2 @82654 has 77 MA's), (3, 82693), (7, 82717),

Gene: Spilled\_136 Start: 82772, Stop: 82984, Start Num: 2

Candidate Starts for Spilled\_136:

(1, 82730), (Start: 2 @82772 has 77 MA's), (3, 82811), (7, 82835), (11, 82862),

Gene: Squillum\_127 Start: 82873, Stop: 83088, Start Num: 2

Candidate Starts for Squillum\_127:

(Start: 2 @82873 has 77 MA's), (4, 82921), (9, 82948), (13, 82990), (17, 83029), (19, 83038), (20, 83059),

Gene: Stanimal\_131 Start: 83005, Stop: 83217, Start Num: 2

Candidate Starts for Stanimal\_131:

(Start: 2 @83005 has 77 MA's), (4, 83050), (14, 83137), (20, 83188),

Gene: StarPlatinum\_135 Start: 83969, Stop: 84181, Start Num: 2

Candidate Starts for StarPlatinum\_135:

(1, 83927), (Start: 2 @83969 has 77 MA's), (3, 84008), (7, 84032), (11, 84059), (20, 84152),

Gene: Starbow\_131 Start: 82674, Stop: 82886, Start Num: 2

Candidate Starts for Starbow\_131:

(Start: 2 @82674 has 77 MA's), (3, 82713), (7, 82737),

Gene: Sushi23\_127 Start: 84535, Stop: 84747, Start Num: 2

Candidate Starts for Sushi23\_127:

(1, 84493), (Start: 2 @84535 has 77 MA's), (9, 84607), (12, 84637), (15, 84673), (20, 84718),

Gene: Targaryen\_128 Start: 85122, Stop: 85328, Start Num: 2

Candidate Starts for Targaryen\_128:

(1, 85080), (Start: 2 @85122 has 77 MA's), (4, 85167), (16, 85263), (21, 85317),

Gene: Teutsch\_127 Start: 84740, Stop: 84952, Start Num: 2

Candidate Starts for Teutsch\_127:

(1, 84698), (Start: 2 @84740 has 77 MA's), (5, 84797), (9, 84812), (19, 84902), (20, 84923),

Gene: TomSawyer\_134 Start: 82720, Stop: 82932, Start Num: 2

Candidate Starts for TomSawyer\_134:

(Start: 2 @82720 has 77 MA's), (3, 82759), (7, 82783),

Gene: Tomas\_133 Start: 85720, Stop: 85935, Start Num: 2

Candidate Starts for Tomas\_133:

(1, 85678), (Start: 2 @85720 has 77 MA's), (13, 85834),

Gene: Tribute\_127 Start: 84727, Stop: 84939, Start Num: 2

Candidate Starts for Tribute\_127:

(1, 84685), (Start: 2 @84727 has 77 MA's), (9, 84799), (12, 84829), (15, 84865), (20, 84910),

Gene: Warpy\_131 Start: 84634, Stop: 84840, Start Num: 2

Candidate Starts for Warpy\_131:

(1, 84592), (Start: 2 @84634 has 77 MA's), (4, 84679), (16, 84775), (21, 84829),

Gene: WashU\_131 Start: 84752, Stop: 84964, Start Num: 2

Candidate Starts for WashU\_131:

(1, 84710), (Start: 2 @84752 has 77 MA's), (9, 84824), (12, 84854), (15, 84890), (20, 84935),

Gene: Watermoore\_127 Start: 84954, Stop: 85166, Start Num: 2

Candidate Starts for Watermoore\_127:

(1, 84912), (Start: 2 @84954 has 77 MA's), (5, 85011), (9, 85026), (19, 85116), (20, 85137),

Gene: WhereRU\_126 Start: 82471, Stop: 82686, Start Num: 2

Candidate Starts for WhereRU\_126:

(Start: 2 @82471 has 77 MA's), (4, 82519), (9, 82546), (19, 82636), (20, 82657),

Gene: Wipeout\_127 Start: 83044, Stop: 83256, Start Num: 2

Candidate Starts for Wipeout\_127:

(Start: 2 @83044 has 77 MA's), (3, 83083), (7, 83107),

Gene: Wofford\_127 Start: 83785, Stop: 84009, Start Num: 2

Candidate Starts for Wofford\_127:

(1, 83743), (Start: 2 @83785 has 77 MA's), (13, 83908), (16, 83938), (17, 83950), (20, 83980),

Gene: Yaboi\_132 Start: 82578, Stop: 82790, Start Num: 2

Candidate Starts for Yaboi\_132:

(Start: 2 @82578 has 77 MA's), (4, 82623), (14, 82710), (20, 82761),