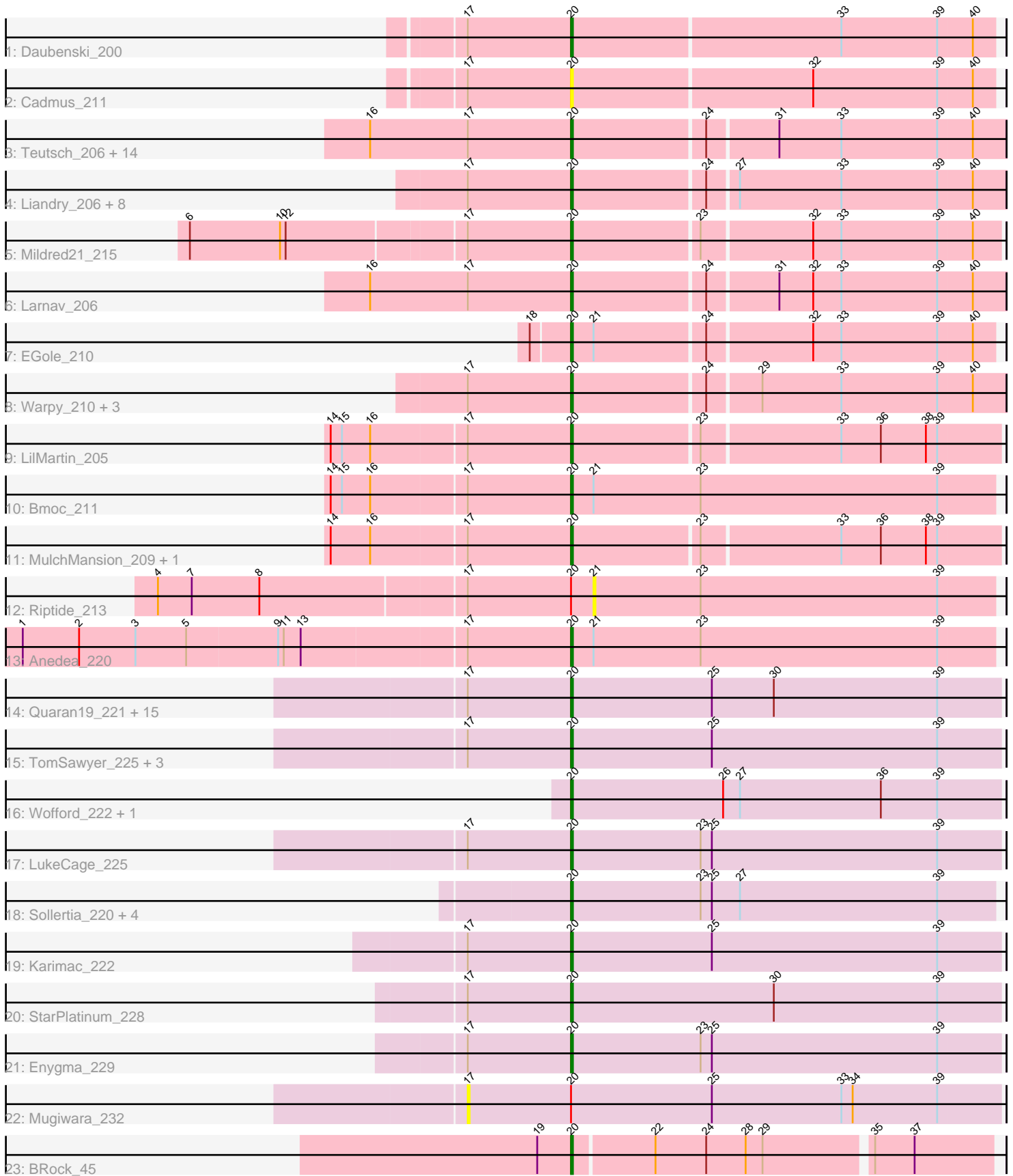


# Pham 221397



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 221397 Report

This analysis was run 03/28/25 on database version 593.

Pham number 221397 has 72 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Daubenski\_200
- Track 2 : Cadmus\_211
- Track 3 : Teutsch\_206, Samisti12\_210, Lululemon\_203, Pepperwood\_206, Scheme\_209, Cross\_205, PacManQ\_203, Leo04\_208, BlueOtter\_204, Tribute\_204, HangryHippo\_204, Peebs\_204, Watermoore\_205, Sushi23\_206, Cursive\_208
- Track 4 : Liandry\_206, Braelyn\_204, Navo\_201, NootNoot\_203, PinkiePie\_206, WhereRU\_206, Persimmon\_209, Squillium\_209, Bartholomune\_207
- Track 5 : Mildred21\_215
- Track 6 : Larnav\_206
- Track 7 : EGole\_210
- Track 8 : Warpy\_210, Evy\_199, Jay2Jay\_212, Targaryen\_206
- Track 9 : LilMartin\_205
- Track 10 : Bmoc\_211
- Track 11 : MulchMansion\_209, Angela\_208
- Track 12 : Riptide\_213
- Track 13 : Anedea\_220
- Track 14 : Quarant19\_221, Starbow\_218, Birchlyn\_220, SaltySpittoon\_221, Jollison\_218, Gibbi\_229, JimJam\_228, Spelly\_226, Rikishi\_229, Amabiko\_225, Spilled\_228, PumpkinSpice\_224, CeilingFan\_225, MindFlayer\_214, KentuckyRacer\_227, IchabodCrane\_216
- Track 15 : TomSawyer\_225, Battuta\_219, Bordeaux\_219, Wipeout\_212
- Track 16 : Wofford\_222, Elmer\_231
- Track 17 : LukeCage\_225
- Track 18 : Sollertia\_220, Genie2\_218, BoomerJR\_218, Stanimal\_219, Yaboi\_224
- Track 19 : Karimac\_222
- Track 20 : StarPlatinum\_228
- Track 21 : Enygma\_229
- Track 22 : Mugiwara\_232
- Track 23 : BRock\_45

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

The start number called the most often in the published annotations is 20, it was called in 66 of the 66 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko\_225, Anedea\_220, Angela\_208, BRock\_45, Bartholomune\_207, Battuta\_219, Birchlyn\_220, BlueOtter\_204, Bmoc\_211, BoomerJR\_218, Bordeaux\_219, Braelyn\_204, Cadmus\_211, CeilingFan\_225, Cross\_205, Cursive\_208, Daubenski\_200, EGole\_210, Elmer\_231, Enygma\_229, Evy\_199, Genie2\_218, Gibbi\_229, HangryHippo\_204, IchabodCrane\_216, Jay2Jay\_212, JimJam\_228, Jollison\_218, Karimac\_222, KentuckyRacer\_227, Larnav\_206, Leo04\_208, Liandry\_206, LilMartin\_205, LukeCage\_225, Lululemon\_203, Mildred21\_215, MindFlayer\_214, MulchMansion\_209, Navo\_201, NootNoot\_203, PacManQ\_203, Peebs\_204, Pepperwood\_206, Persimmon\_209, PinkiePie\_206, PumpkinSpice\_224, Quaran19\_221, Rikishi\_229, SaltySpittoon\_221, Samisti12\_210, Scheme\_209, Sollertia\_220, Spelly\_226, Spilled\_228, Squillium\_209, Stanimal\_219, StarPlatinum\_228, Starbow\_218, Sushi23\_206, Targaryen\_206, Teutsch\_206, TomSawyer\_225, Tribute\_204, Warpy\_210, Watermoore\_205, WhereRU\_206, Wipeout\_212, Wofford\_222, Yaboi\_224,

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

- Mugiwara\_232, Riptide\_213,

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

- 

### Summary by start number:

Start 17:

- Found in 63 of 72 ( 87.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.6% of time when present
- Phage (with cluster) where this start called: Mugiwara\_232 (BE2),

Start 20:

- Found in 72 of 72 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 66 of 66
- Called 97.2% of time when present
- Phage (with cluster) where this start called: Amabiko\_225 (BE2), Anedea\_220 (BE1), Angela\_208 (BE1), BRock\_45 (BS), Bartholomune\_207 (BE1), Battuta\_219 (BE2), Birchlyn\_220 (BE2), BlueOtter\_204 (BE1), Bmoc\_211 (BE1), BoomerJR\_218 (BE2), Bordeaux\_219 (BE2), Braelyn\_204 (BE1), Cadmus\_211 (BE1), CeilingFan\_225 (BE2), Cross\_205 (BE1), Cursive\_208 (BE1), Daubenski\_200 (BE1), EGole\_210 (BE1), Elmer\_231 (BE2), Enygma\_229 (BE2), Evy\_199 (BE1), Genie2\_218 (BE2), Gibbi\_229 (BE2), HangryHippo\_204 (BE1), IchabodCrane\_216 (BE2), Jay2Jay\_212 (BE1), JimJam\_228 (BE2), Jollison\_218 (BE2), Karimac\_222 (BE2), KentuckyRacer\_227 (BE2), Larnav\_206 (BE1), Leo04\_208 (BE1), Liandry\_206 (BE1), LilMartin\_205 (BE1), LukeCage\_225 (BE2), Lululemon\_203 (BE1), Mildred21\_215 (BE1), MindFlayer\_214 (BE2), MulchMansion\_209 (BE1), Navo\_201 (BE1), NootNoot\_203 (BE1), PacManQ\_203 (BE1), Peebs\_204 (BE1), Pepperwood\_206 (BE1), Persimmon\_209 (BE1), PinkiePie\_206 (BE1), PumpkinSpice\_224 (BE2), Quaran19\_221 (BE2), Rikishi\_229 (BE2), SaltySpittoon\_221 (BE2), Samisti12\_210 (BE1), Scheme\_209 (BE1), Sollertia\_220 (BE2), Spelly\_226 (BE2), Spilled\_228 (BE2), Squillium\_209 (BE1), Stanimal\_219 (BE2), StarPlatinum\_228 (BE2), Starbow\_218 (BE2), Sushi23\_206 (BE1), Targaryen\_206 (BE1), Teutsch\_206 (BE1), TomSawyer\_225 (BE2), Tribute\_204

(BE1), Warpy\_210 (BE1), Watermoore\_205 (BE1), WhereRU\_206 (BE1), Wipeout\_212 (BE2), Wofford\_222 (BE2), Yaboi\_224 (BE2),

Start 21:

- Found in 4 of 72 ( 5.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Riptide\_213 (BE1),

### **Summary by clusters:**

There are 3 clusters represented in this pham: BE2, BE1, BS,

Info for manual annotations of cluster BE1:

- Start number 20 was manually annotated 36 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 20 was manually annotated 29 times for cluster BE2.

Info for manual annotations of cluster BS:

- Start number 20 was manually annotated 1 time for cluster BS.

### **Gene Information:**

Gene: Amabiko\_225 Start: 106725, Stop: 106952, Start Num: 20

Candidate Starts for Amabiko\_225:

(17, 106671), (Start: 20 @106725 has 66 MA's), (25, 106800), (30, 106833), (39, 106920),

Gene: Anedea\_220 Start: 107420, Stop: 107644, Start Num: 20

Candidate Starts for Anedea\_220:

(1, 107135), (2, 107165), (3, 107195), (5, 107222), (9, 107270), (11, 107273), (13, 107282), (17, 107366), (Start: 20 @107420 has 66 MA's), (21, 107432), (23, 107489), (39, 107615),

Gene: Angela\_208 Start: 104813, Stop: 105034, Start Num: 20

Candidate Starts for Angela\_208:

(14, 104690), (16, 104711), (17, 104759), (Start: 20 @104813 has 66 MA's), (23, 104879), (33, 104951), (36, 104972), (38, 104996), (39, 105002),

Gene: BRock\_45 Start: 15607, Stop: 15822, Start Num: 20

Candidate Starts for BRock\_45:

(19, 15589), (Start: 20 @15607 has 66 MA's), (22, 15649), (24, 15676), (28, 15697), (29, 15706), (35, 15760), (37, 15781),

Gene: Bartholomune\_207 Start: 104979, Stop: 105203, Start Num: 20

Candidate Starts for Bartholomune\_207:

(17, 104925), (Start: 20 @104979 has 66 MA's), (24, 105048), (27, 105063), (33, 105117), (39, 105168), (40, 105186),

Gene: Battuta\_219 Start: 106041, Stop: 106268, Start Num: 20

Candidate Starts for Battuta\_219:

(17, 105987), (Start: 20 @106041 has 66 MA's), (25, 106116), (39, 106236),

Gene: Birchlyn\_220 Start: 103973, Stop: 104200, Start Num: 20

Candidate Starts for Birchlyn\_220:

(17, 103919), (Start: 20 @103973 has 66 MA's), (25, 104048), (30, 104081), (39, 104168),

Gene: BlueOtter\_204 Start: 105192, Stop: 105416, Start Num: 20

Candidate Starts for BlueOtter\_204:

(16, 105087), (17, 105138), (Start: 20 @105192 has 66 MA's), (24, 105261), (31, 105297), (33, 105330), (39, 105381), (40, 105399),

Gene: Bmoc\_211 Start: 105620, Stop: 105844, Start Num: 20

Candidate Starts for Bmoc\_211:

(14, 105497), (15, 105503), (16, 105518), (17, 105566), (Start: 20 @105620 has 66 MA's), (21, 105632), (23, 105689), (39, 105815),

Gene: BoomerJR\_218 Start: 106815, Stop: 107039, Start Num: 20

Candidate Starts for BoomerJR\_218:

(Start: 20 @106815 has 66 MA's), (23, 106884), (25, 106890), (27, 106905), (39, 107010),

Gene: Bordeaux\_219 Start: 106624, Stop: 106851, Start Num: 20

Candidate Starts for Bordeaux\_219:

(17, 106570), (Start: 20 @106624 has 66 MA's), (25, 106699), (39, 106819),

Gene: Braelyn\_204 Start: 104626, Stop: 104850, Start Num: 20

Candidate Starts for Braelyn\_204:

(17, 104572), (Start: 20 @104626 has 66 MA's), (24, 104695), (27, 104710), (33, 104764), (39, 104815), (40, 104833),

Gene: Cadmus\_211 Start: 106312, Stop: 106533, Start Num: 20

Candidate Starts for Cadmus\_211:

(17, 106258), (Start: 20 @106312 has 66 MA's), (32, 106438), (39, 106504), (40, 106522),

Gene: CeilingFan\_225 Start: 107418, Stop: 107645, Start Num: 20

Candidate Starts for CeilingFan\_225:

(17, 107364), (Start: 20 @107418 has 66 MA's), (25, 107493), (30, 107526), (39, 107613),

Gene: Cross\_205 Start: 105837, Stop: 106061, Start Num: 20

Candidate Starts for Cross\_205:

(16, 105732), (17, 105783), (Start: 20 @105837 has 66 MA's), (24, 105906), (31, 105942), (33, 105975), (39, 106026), (40, 106044),

Gene: Cursive\_208 Start: 105521, Stop: 105745, Start Num: 20

Candidate Starts for Cursive\_208:

(16, 105416), (17, 105467), (Start: 20 @105521 has 66 MA's), (24, 105590), (31, 105626), (33, 105659), (39, 105710), (40, 105728),

Gene: Daubenski\_200 Start: 106207, Stop: 106428, Start Num: 20

Candidate Starts for Daubenski\_200:

(17, 106153), (Start: 20 @106207 has 66 MA's), (33, 106348), (39, 106399), (40, 106417),

Gene: EGole\_210 Start: 107815, Stop: 108033, Start Num: 20

Candidate Starts for EGole\_210:

(18, 107797), (Start: 20 @107815 has 66 MA's), (21, 107827), (24, 107884), (32, 107938), (33, 107953), (39, 108004), (40, 108022),

Gene: Elmer\_231 Start: 110367, Stop: 110594, Start Num: 20

Candidate Starts for Elmer\_231:

(Start: 20 @110367 has 66 MA's), (26, 110448), (27, 110457), (36, 110532), (39, 110562),

Gene: Enygma\_229 Start: 109827, Stop: 110054, Start Num: 20

Candidate Starts for Enygma\_229:

(17, 109773), (Start: 20 @109827 has 66 MA's), (23, 109896), (25, 109902), (39, 110022),

Gene: Evy\_199 Start: 106304, Stop: 106528, Start Num: 20

Candidate Starts for Evy\_199:

(17, 106250), (Start: 20 @106304 has 66 MA's), (24, 106373), (29, 106400), (33, 106442), (39, 106493), (40, 106511),

Gene: Genie2\_218 Start: 106940, Stop: 107164, Start Num: 20

Candidate Starts for Genie2\_218:

(Start: 20 @106940 has 66 MA's), (23, 107009), (25, 107015), (27, 107030), (39, 107135),

Gene: Gibbi\_229 Start: 106911, Stop: 107138, Start Num: 20

Candidate Starts for Gibbi\_229:

(17, 106857), (Start: 20 @106911 has 66 MA's), (25, 106986), (30, 107019), (39, 107106),

Gene: HangryHippo\_204 Start: 105192, Stop: 105416, Start Num: 20

Candidate Starts for HangryHippo\_204:

(16, 105087), (17, 105138), (Start: 20 @105192 has 66 MA's), (24, 105261), (31, 105297), (33, 105330), (39, 105381), (40, 105399),

Gene: IchabodCrane\_216 Start: 106426, Stop: 106653, Start Num: 20

Candidate Starts for IchabodCrane\_216:

(17, 106372), (Start: 20 @106426 has 66 MA's), (25, 106501), (30, 106534), (39, 106621),

Gene: Jay2Jay\_212 Start: 106459, Stop: 106683, Start Num: 20

Candidate Starts for Jay2Jay\_212:

(17, 106405), (Start: 20 @106459 has 66 MA's), (24, 106528), (29, 106555), (33, 106597), (39, 106648), (40, 106666),

Gene: JimJam\_228 Start: 108347, Stop: 108574, Start Num: 20

Candidate Starts for JimJam\_228:

(17, 108293), (Start: 20 @108347 has 66 MA's), (25, 108422), (30, 108455), (39, 108542),

Gene: Jollison\_218 Start: 106557, Stop: 106784, Start Num: 20

Candidate Starts for Jollison\_218:

(17, 106503), (Start: 20 @106557 has 66 MA's), (25, 106632), (30, 106665), (39, 106752),

Gene: Karimac\_222 Start: 106742, Stop: 106969, Start Num: 20

Candidate Starts for Karimac\_222:

(17, 106688), (Start: 20 @106742 has 66 MA's), (25, 106817), (39, 106937),

Gene: KentuckyRacer\_227 Start: 108262, Stop: 108489, Start Num: 20

Candidate Starts for KentuckyRacer\_227:

(17, 108208), (Start: 20 @108262 has 66 MA's), (25, 108337), (30, 108370), (39, 108457),

Gene: Larnav\_206 Start: 105931, Stop: 106155, Start Num: 20

Candidate Starts for Larnav\_206:

(16, 105826), (17, 105877), (Start: 20 @105931 has 66 MA's), (24, 106000), (31, 106036), (32, 106054), (33, 106069), (39, 106120), (40, 106138),

Gene: Leo04\_208 Start: 106496, Stop: 106720, Start Num: 20

Candidate Starts for Leo04\_208:

(16, 106391), (17, 106442), (Start: 20 @106496 has 66 MA's), (24, 106565), (31, 106601), (33, 106634), (39, 106685), (40, 106703),

Gene: Liandry\_206 Start: 105298, Stop: 105522, Start Num: 20

Candidate Starts for Liandry\_206:

(17, 105244), (Start: 20 @105298 has 66 MA's), (24, 105367), (27, 105382), (33, 105436), (39, 105487), (40, 105505),

Gene: LilMartin\_205 Start: 104177, Stop: 104398, Start Num: 20

Candidate Starts for LilMartin\_205:

(14, 104054), (15, 104060), (16, 104075), (17, 104123), (Start: 20 @104177 has 66 MA's), (23, 104243), (33, 104315), (36, 104336), (38, 104360), (39, 104366),

Gene: LukeCage\_225 Start: 108793, Stop: 109020, Start Num: 20

Candidate Starts for LukeCage\_225:

(17, 108739), (Start: 20 @108793 has 66 MA's), (23, 108862), (25, 108868), (39, 108988),

Gene: Lululemon\_203 Start: 104573, Stop: 104797, Start Num: 20

Candidate Starts for Lululemon\_203:

(16, 104468), (17, 104519), (Start: 20 @104573 has 66 MA's), (24, 104642), (31, 104678), (33, 104711), (39, 104762), (40, 104780),

Gene: Mildred21\_215 Start: 103945, Stop: 104166, Start Num: 20

Candidate Starts for Mildred21\_215:

(6, 103750), (10, 103798), (12, 103801), (17, 103891), (Start: 20 @103945 has 66 MA's), (23, 104011), (32, 104068), (33, 104083), (39, 104134), (40, 104152),

Gene: MindFlayer\_214 Start: 105942, Stop: 106169, Start Num: 20

Candidate Starts for MindFlayer\_214:

(17, 105888), (Start: 20 @105942 has 66 MA's), (25, 106017), (30, 106050), (39, 106137),

Gene: Mugiwara\_232 Start: 109189, Stop: 109470, Start Num: 17

Candidate Starts for Mugiwara\_232:

(17, 109189), (Start: 20 @109243 has 66 MA's), (25, 109318), (33, 109387), (34, 109393), (39, 109438),

Gene: MulchMansion\_209 Start: 105811, Stop: 106032, Start Num: 20

Candidate Starts for MulchMansion\_209:

(14, 105688), (16, 105709), (17, 105757), (Start: 20 @105811 has 66 MA's), (23, 105877), (33, 105949), (36, 105970), (38, 105994), (39, 106000),

Gene: Navo\_201 Start: 103830, Stop: 104054, Start Num: 20

Candidate Starts for Navo\_201:

(17, 103776), (Start: 20 @103830 has 66 MA's), (24, 103899), (27, 103914), (33, 103968), (39, 104019), (40, 104037),

Gene: NootNoot\_203 Start: 104110, Stop: 104334, Start Num: 20  
Candidate Starts for NootNoot\_203:  
(17, 104056), (Start: 20 @104110 has 66 MA's), (24, 104179), (27, 104194), (33, 104248), (39, 104299), (40, 104317),

Gene: PacManQ\_203 Start: 104573, Stop: 104797, Start Num: 20  
Candidate Starts for PacManQ\_203:  
(16, 104468), (17, 104519), (Start: 20 @104573 has 66 MA's), (24, 104642), (31, 104678), (33, 104711), (39, 104762), (40, 104780),

Gene: Peebs\_204 Start: 105902, Stop: 106126, Start Num: 20  
Candidate Starts for Peebs\_204:  
(16, 105797), (17, 105848), (Start: 20 @105902 has 66 MA's), (24, 105971), (31, 106007), (33, 106040), (39, 106091), (40, 106109),

Gene: Pepperwood\_206 Start: 105859, Stop: 106083, Start Num: 20  
Candidate Starts for Pepperwood\_206:  
(16, 105754), (17, 105805), (Start: 20 @105859 has 66 MA's), (24, 105928), (31, 105964), (33, 105997), (39, 106048), (40, 106066),

Gene: Persimmon\_209 Start: 104848, Stop: 105072, Start Num: 20  
Candidate Starts for Persimmon\_209:  
(17, 104794), (Start: 20 @104848 has 66 MA's), (24, 104917), (27, 104932), (33, 104986), (39, 105037), (40, 105055),

Gene: PinkiePie\_206 Start: 105298, Stop: 105522, Start Num: 20  
Candidate Starts for PinkiePie\_206:  
(17, 105244), (Start: 20 @105298 has 66 MA's), (24, 105367), (27, 105382), (33, 105436), (39, 105487), (40, 105505),

Gene: PumpkinSpice\_224 Start: 107163, Stop: 107390, Start Num: 20  
Candidate Starts for PumpkinSpice\_224:  
(17, 107109), (Start: 20 @107163 has 66 MA's), (25, 107238), (30, 107271), (39, 107358),

Gene: Quaran19\_221 Start: 106604, Stop: 106831, Start Num: 20  
Candidate Starts for Quaran19\_221:  
(17, 106550), (Start: 20 @106604 has 66 MA's), (25, 106679), (30, 106712), (39, 106799),

Gene: Rikishi\_229 Start: 106885, Stop: 107112, Start Num: 20  
Candidate Starts for Rikishi\_229:  
(17, 106831), (Start: 20 @106885 has 66 MA's), (25, 106960), (30, 106993), (39, 107080),

Gene: Riptide\_213 Start: 104962, Stop: 105174, Start Num: 21  
Candidate Starts for Riptide\_213:  
(4, 104737), (7, 104755), (8, 104791), (17, 104896), (Start: 20 @104950 has 66 MA's), (21, 104962), (23, 105019), (39, 105145),

Gene: SaltySpittoon\_221 Start: 106146, Stop: 106373, Start Num: 20  
Candidate Starts for SaltySpittoon\_221:  
(17, 106092), (Start: 20 @106146 has 66 MA's), (25, 106221), (30, 106254), (39, 106341),

Gene: Samisti12\_210 Start: 107483, Stop: 107707, Start Num: 20



Candidate Starts for Samisti12\_210:

(16, 107378), (17, 107429), (Start: 20 @107483 has 66 MA's), (24, 107552), (31, 107588), (33, 107621), (39, 107672), (40, 107690),

Gene: Scheme\_209 Start: 107078, Stop: 107302, Start Num: 20

Candidate Starts for Scheme\_209:

(16, 106973), (17, 107024), (Start: 20 @107078 has 66 MA's), (24, 107147), (31, 107183), (33, 107216), (39, 107267), (40, 107285),

Gene: Sollertia\_220 Start: 106929, Stop: 107153, Start Num: 20

Candidate Starts for Sollertia\_220:

(Start: 20 @106929 has 66 MA's), (23, 106998), (25, 107004), (27, 107019), (39, 107124),

Gene: Spelly\_226 Start: 106075, Stop: 106302, Start Num: 20

Candidate Starts for Spelly\_226:

(17, 106021), (Start: 20 @106075 has 66 MA's), (25, 106150), (30, 106183), (39, 106270),

Gene: Spilled\_228 Start: 107279, Stop: 107506, Start Num: 20

Candidate Starts for Spilled\_228:

(17, 107225), (Start: 20 @107279 has 66 MA's), (25, 107354), (30, 107387), (39, 107474),

Gene: Squillium\_209 Start: 105300, Stop: 105524, Start Num: 20

Candidate Starts for Squillium\_209:

(17, 105246), (Start: 20 @105300 has 66 MA's), (24, 105369), (27, 105384), (33, 105438), (39, 105489), (40, 105507),

Gene: Stanimal\_219 Start: 107301, Stop: 107525, Start Num: 20

Candidate Starts for Stanimal\_219:

(Start: 20 @107301 has 66 MA's), (23, 107370), (25, 107376), (27, 107391), (39, 107496),

Gene: StarPlatinum\_228 Start: 109024, Stop: 109251, Start Num: 20

Candidate Starts for StarPlatinum\_228:

(17, 108970), (Start: 20 @109024 has 66 MA's), (30, 109132), (39, 109219),

Gene: Starbow\_218 Start: 106119, Stop: 106346, Start Num: 20

Candidate Starts for Starbow\_218:

(17, 106065), (Start: 20 @106119 has 66 MA's), (25, 106194), (30, 106227), (39, 106314),

Gene: Sushi23\_206 Start: 106493, Stop: 106717, Start Num: 20

Candidate Starts for Sushi23\_206:

(16, 106388), (17, 106439), (Start: 20 @106493 has 66 MA's), (24, 106562), (31, 106598), (33, 106631), (39, 106682), (40, 106700),

Gene: Targaryen\_206 Start: 106988, Stop: 107212, Start Num: 20

Candidate Starts for Targaryen\_206:

(17, 106934), (Start: 20 @106988 has 66 MA's), (24, 107057), (29, 107084), (33, 107126), (39, 107177), (40, 107195),

Gene: Teutsch\_206 Start: 106590, Stop: 106814, Start Num: 20

Candidate Starts for Teutsch\_206:

(16, 106485), (17, 106536), (Start: 20 @106590 has 66 MA's), (24, 106659), (31, 106695), (33, 106728), (39, 106779), (40, 106797),

Gene: TomSawyer\_225 Start: 108590, Stop: 108817, Start Num: 20

Candidate Starts for TomSawyer\_225:

(17, 108536), (Start: 20 @108590 has 66 MA's), (25, 108665), (39, 108785),

Gene: Tribute\_204 Start: 106430, Stop: 106654, Start Num: 20

Candidate Starts for Tribute\_204:

(16, 106325), (17, 106376), (Start: 20 @106430 has 66 MA's), (24, 106499), (31, 106535), (33, 106568), (39, 106619), (40, 106637),

Gene: Warpy\_210 Start: 105897, Stop: 106121, Start Num: 20

Candidate Starts for Warpy\_210:

(17, 105843), (Start: 20 @105897 has 66 MA's), (24, 105966), (29, 105993), (33, 106035), (39, 106086), (40, 106104),

Gene: Watermoore\_205 Start: 106835, Stop: 107059, Start Num: 20

Candidate Starts for Watermoore\_205:

(16, 106730), (17, 106781), (Start: 20 @106835 has 66 MA's), (24, 106904), (31, 106940), (33, 106973), (39, 107024), (40, 107042),

Gene: WhereRU\_206 Start: 105027, Stop: 105251, Start Num: 20

Candidate Starts for WhereRU\_206:

(17, 104973), (Start: 20 @105027 has 66 MA's), (24, 105096), (27, 105111), (33, 105165), (39, 105216), (40, 105234),

Gene: Wipeout\_212 Start: 107542, Stop: 107769, Start Num: 20

Candidate Starts for Wipeout\_212:

(17, 107488), (Start: 20 @107542 has 66 MA's), (25, 107617), (39, 107737),

Gene: Wofford\_222 Start: 110235, Stop: 110462, Start Num: 20

Candidate Starts for Wofford\_222:

(Start: 20 @110235 has 66 MA's), (26, 110316), (27, 110325), (36, 110400), (39, 110430),

Gene: Yaboi\_224 Start: 106864, Stop: 107088, Start Num: 20

Candidate Starts for Yaboi\_224:

(Start: 20 @106864 has 66 MA's), (23, 106933), (25, 106939), (27, 106954), (39, 107059),