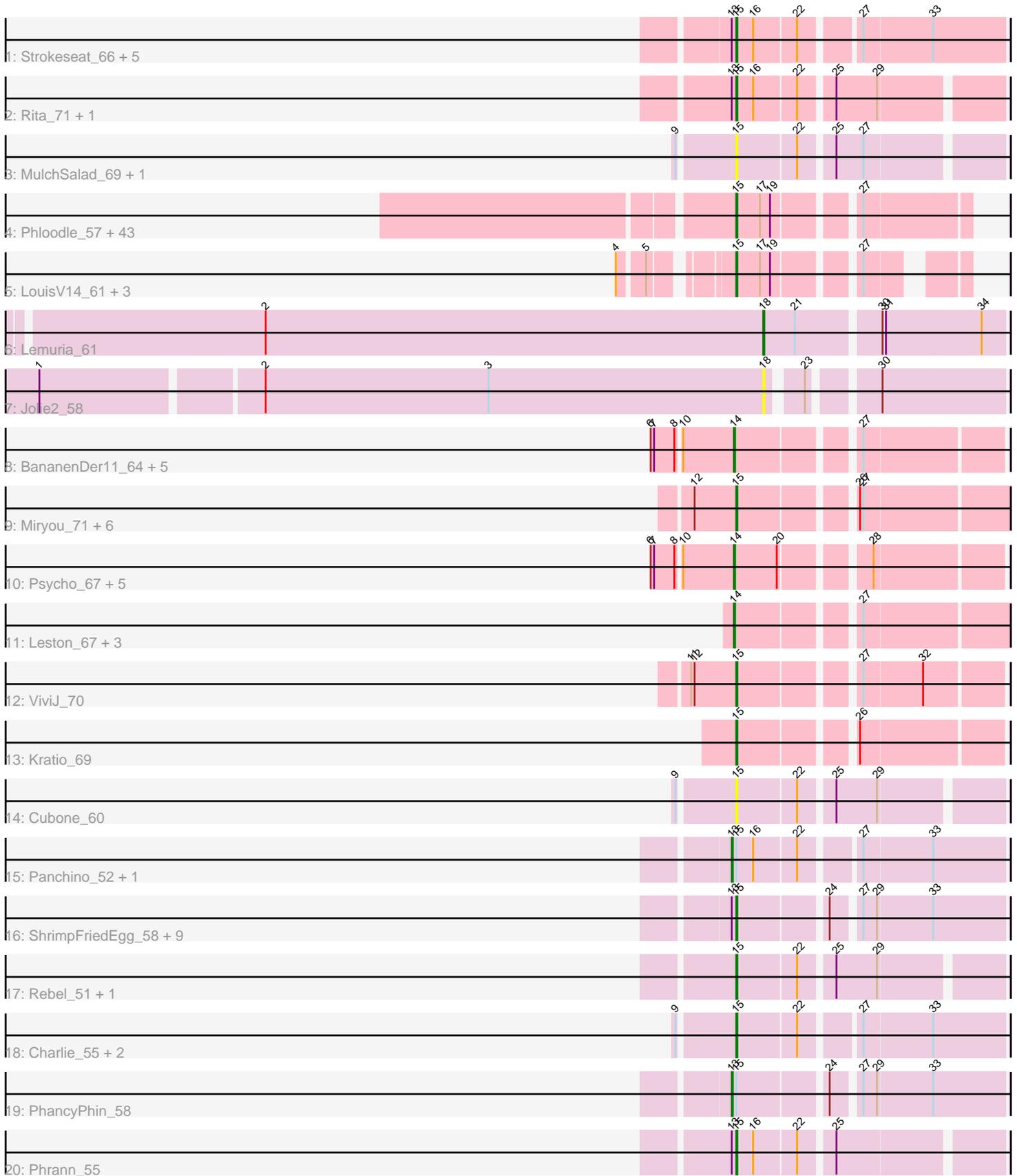


Pham 285443



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 285443 Report

This analysis was run 03/28/26 on database version 641.

Pham number 285443 has 105 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Strokeseat\_66, Mask\_73, Andies\_51, Tapioca\_55, Sejanus\_72, Mandlovu\_66
- Track 2 : Rita\_71, Doomslug\_84
- Track 3 : MulchSalad\_69, Scitech\_49
- Track 4 : Phloodle\_57, Periodt\_59, Neoh\_57, AzulaCat\_60, AizenPogi\_59, Phish\_58, Zombie\_59, Hotshotbaby7\_59, Hope\_59, JorRay\_60, Aroostook\_59, Marmie\_59, Chance64\_59, Plagueis\_59, Gideon\_59, DingDing\_57, Cedasite\_59, TinaBug\_60, Jonghyun\_57, Liefie\_56, Phreak\_59, Mowgli\_59, Remy19\_59, Darionha\_59, Crespo\_58, Frosty24\_57, ShaboiShabazz\_58, CLED96\_58, Jeilious\_59, Halo\_60, GoldenAsh\_57, Cherrybomb426\_58, Camri\_58, Ruriko\_56, Jolene\_59, Rattrick\_59, BQuat\_58, CassieYates\_59, TomBrady\_59, Coleslaw\_58, Angel\_57, ECartman\_57, Schiebel\_57, Maliketh\_57
- Track 5 : LouisV14\_61, Wendigo\_57, OctaviousRex\_58, DMoney\_58
- Track 6 : Lemuria\_61
- Track 7 : Jolie2\_58
- Track 8 : BananenDer11\_64, Collard\_65, InvictusManeo\_65, Agent47\_67, DoubleChamp\_64, LilDirt\_64
- Track 9 : Miryou\_71, Waterfoul\_69, Gengar\_67, SoSeph\_68, Heftyboy\_68, Thyatira\_70, OkiRoe\_68
- Track 10 : Psycho\_67, Edugator\_66, Dadosky\_69, AlleyCat\_69, Larva\_68, Neighly\_69
- Track 11 : Leston\_67, Feyre\_70, Paola\_67, Guillsminger\_68
- Track 12 : ViviJ\_70
- Track 13 : Kratio\_69
- Track 14 : Cubone\_60
- Track 15 : Panchino\_52, Hlubikazi\_66
- Track 16 : ShrimpFriedEgg\_58, Nenae\_58, Spinach\_58, Raymond7\_52, Purgamenstris\_58, Jamie19\_52, BabeRuth\_59, Redi\_58, SpongeBob\_52, Hanako\_58
- Track 17 : Rebel\_51, Kevin1\_57
- Track 18 : Charlie\_55, Tortellini\_62, Bosection6\_53
- Track 19 : PhancyPhin\_58
- Track 20 : Phrann\_55

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

The start number called the most often in the published annotations is 15, it was called in 71 of the 87 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AizenPogi\_59, Andies\_51, Angel\_57, Aroostook\_59, AzulaCat\_60, BQuat\_58, BabeRuth\_59, Bosection6\_53, CLÉD96\_58, Camri\_58, CassieYates\_59, Cedasite\_59, Chance64\_59, Charlie\_55, Cherrybomb426\_58, Coleslaw\_58, Crespo\_58, Cubone\_60, DMoney\_58, Darionha\_59, DingDing\_57, Doomslug\_84, ECartman\_57, Frosty24\_57, Gengar\_67, Gideon\_59, GoldenAsh\_57, Halo\_60, Hanako\_58, Heftyboy\_68, Hope\_59, Hotshotbaby7\_59, Jamie19\_52, Jeilious\_59, Jolene\_59, Jonghyun\_57, JorRay\_60, Kevin1\_57, Kratio\_69, Liefie\_56, LouisV14\_61, Maliketh\_57, Mandlovu\_66, Marmie\_59, Mask\_73, Miryou\_71, Mowgli\_59, MulchSalad\_69, Nenae\_58, Neoh\_57, OctaviousRex\_58, OkiRoe\_68, Periodt\_59, Phish\_58, Phloodle\_57, Phrann\_55, Phreak\_59, Plagueis\_59, Purgamenstris\_58, Rattrick\_59, Raymond7\_52, Rebel\_51, Redi\_58, Remy19\_59, Rita\_71, Ruriko\_56, Schiebel\_57, Scitech\_49, Sejanus\_72, ShaboiShabazz\_58, ShrimpFriedEgg\_58, SoSeph\_68, Spinach\_58, SpongeBob\_52, Strokeseat\_66, Tapioca\_55, Thyatira\_70, TinaBug\_60, TomBrady\_59, Tortellini\_62, ViviJ\_70, Waterfoul\_69, Wendigo\_57, Zombie\_59,

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

- Hlubikazi\_66, Panchino\_52, PhancyPhin\_58,

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

- Agent47\_67, AlleyCat\_69, BananenDer11\_64, Collard\_65, Dadosky\_69, DoubleChamp\_64, Edugator\_66, Feyre\_70, Guillsminger\_68, InvictusManeo\_65, Jolie2\_58, Larva\_68, Lemuria\_61, Leston\_67, LilDirt\_64, Neighly\_69, Paola\_67, Psycho\_67,

### Summary by start number:

Start 13:

- Found in 22 of 105 ( 21.0% ) of genes in pham
- Manual Annotations of this start: 3 of 87
- Called 13.6% of time when present
- Phage (with cluster) where this start called: Hlubikazi\_66 (F1), Panchino\_52 (N), PhancyPhin\_58 (N),

Start 14:

- Found in 16 of 105 ( 15.2% ) of genes in pham
- Manual Annotations of this start: 12 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agent47\_67 (K5), AlleyCat\_69 (K5), BananenDer11\_64 (K5), Collard\_65 (K5), Dadosky\_69 (K5), DoubleChamp\_64 (K5), Edugator\_66 (K5), Feyre\_70 (K5), Guillsminger\_68 (K5), InvictusManeo\_65 (K5), Larva\_68 (K5), Leston\_67 (K5), LilDirt\_64 (K5), Neighly\_69 (K3), Paola\_67 (K5), Psycho\_67 (K5),

Start 15:

- Found in 87 of 105 ( 82.9% ) of genes in pham
- Manual Annotations of this start: 71 of 87
- Called 96.6% of time when present

- Phage (with cluster) where this start called: AizenPogi\_59 (G1), Andies\_51 (N), Angel\_57 (G1), Aroostook\_59 (G1), AzulaCat\_60 (G1), BQuat\_58 (G1), BabeRuth\_59 (N), Bosection6\_53 (N), CLED96\_58 (G1), Camri\_58 (G1), CassieYates\_59 (G1), Cedasite\_59 (G1), Chance64\_59 (G1), Charlie\_55 (N), Cherrybomb426\_58 (G1), Coleslaw\_58 (G1), Crespo\_58 (G1), Cubone\_60 (N), DMoney\_58 (G1), Darionha\_59 (G1), DingDing\_57 (G1), Doomslug\_84 (F), ECartman\_57 (G1), Frosty24\_57 (G1), Gengar\_67 (K5), Gideon\_59 (G1), GoldenAsh\_57 (G1), Halo\_60 (G1), Hanako\_58 (N), Heftyboy\_68 (K5), Hope\_59 (G1), Hotshotbaby7\_59 (G1), Jamie19\_52 (N), Jeilious\_59 (G), Jolene\_59 (G1), Jonghyun\_57 (G1), JorRay\_60 (G1), Kevin1\_57 (N), Kratio\_69 (K5), Liefie\_56 (G1), LouisV14\_61 (G1), Maliketh\_57 (G1), Mandlovu\_66 (F1), Marmie\_59 (G1), Mask\_73 (AD), Miryou\_71 (K5), Mowgli\_59 (G1), MulchSalad\_69 (F7), Nenae\_58 (N), Neoh\_57 (G), OctaviousRex\_58 (G1), OkiRoe\_68 (K5), Periodt\_59 (G1), Phish\_58 (G1), Phloodle\_57 (G1), Phrann\_55 (N), Phreak\_59 (G1), Plagueis\_59 (G1), Purgamenstris\_58 (N), Rattrick\_59 (G1), Raymond7\_52 (N), Rebel\_51 (N), Redi\_58 (N), Remy19\_59 (G1), Rita\_71 (F1), Ruriko\_56 (G1), Schiebel\_57 (G1), Scitech\_49 (N), Sejanus\_72 (AD), ShaboiShabazz\_58 (G1), ShrimpFriedEgg\_58 (N), SoSeph\_68 (K5), Spinach\_58 (N), SpongeBob\_52 (N), Strokeseat\_66 (F1), Tapioca\_55 (N), Thyatira\_70 (K5), TinaBug\_60 (G1), TomBrady\_59 (G1), Tortellini\_62 (P2), ViviJ\_70 (K5), Waterfoul\_69 (K5), Wendigo\_57 (G1), Zombie\_59 (G1),

Start 18:

- Found in 2 of 105 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jolie2\_58 (G4), Lemuria\_61 (G4),

### Summary by clusters:

There are 11 clusters represented in this pham: P2, F1, G4, AD, G, F7, F, N, K3, K5, G1,

Info for manual annotations of cluster AD:

- Start number 15 was manually annotated 2 times for cluster AD.

Info for manual annotations of cluster F1:

- Start number 13 was manually annotated 1 time for cluster F1.
- Start number 15 was manually annotated 3 times for cluster F1.

Info for manual annotations of cluster G1:

- Start number 15 was manually annotated 39 times for cluster G1.

Info for manual annotations of cluster G4:

- Start number 18 was manually annotated 1 time for cluster G4.

Info for manual annotations of cluster K5:

- Start number 14 was manually annotated 12 times for cluster K5.
- Start number 15 was manually annotated 9 times for cluster K5.

Info for manual annotations of cluster N:

- Start number 13 was manually annotated 2 times for cluster N.
- Start number 15 was manually annotated 17 times for cluster N.

Info for manual annotations of cluster P2:

- Start number 15 was manually annotated 1 time for cluster P2.

**Gene Information:**

Gene: Agent47\_67 Start: 47142, Stop: 47351, Start Num: 14

Candidate Starts for Agent47\_67:

(6, 47073), (7, 47076), (8, 47094), (10, 47097), (Start: 14 @47142 has 12 MA's), (27, 47235),

Gene: AizenPogi\_59 Start: 40211, Stop: 40393, Start Num: 15

Candidate Starts for AizenPogi\_59:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: AlleyCat\_69 Start: 47473, Stop: 47682, Start Num: 14

Candidate Starts for AlleyCat\_69:

(6, 47404), (7, 47407), (8, 47425), (10, 47428), (Start: 14 @47473 has 12 MA's), (20, 47509), (28, 47575),

Gene: Andies\_51 Start: 35388, Stop: 35606, Start Num: 15

Candidate Starts for Andies\_51:

(Start: 13 @35385 has 3 MA's), (Start: 15 @35388 has 71 MA's), (16, 35403), (22, 35439), (27, 35484), (33, 35544),

Gene: Angel\_57 Start: 39751, Stop: 39933, Start Num: 15

Candidate Starts for Angel\_57:

(Start: 15 @39751 has 71 MA's), (17, 39772), (19, 39781), (27, 39844),

Gene: Aroostook\_59 Start: 40213, Stop: 40395, Start Num: 15

Candidate Starts for Aroostook\_59:

(Start: 15 @40213 has 71 MA's), (17, 40234), (19, 40243), (27, 40306),

Gene: AzulaCat\_60 Start: 40211, Stop: 40393, Start Num: 15

Candidate Starts for AzulaCat\_60:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: BQuat\_58 Start: 40203, Stop: 40385, Start Num: 15

Candidate Starts for BQuat\_58:

(Start: 15 @40203 has 71 MA's), (17, 40224), (19, 40233), (27, 40296),

Gene: BabeRuth\_59 Start: 37109, Stop: 37324, Start Num: 15

Candidate Starts for BabeRuth\_59:

(Start: 13 @37106 has 3 MA's), (Start: 15 @37109 has 71 MA's), (24, 37181), (27, 37202), (29, 37214), (33, 37262),

Gene: BananenDer11\_64 Start: 47103, Stop: 47312, Start Num: 14

Candidate Starts for BananenDer11\_64:

(6, 47034), (7, 47037), (8, 47055), (10, 47058), (Start: 14 @47103 has 12 MA's), (27, 47196),

Gene: Bosection6\_53 Start: 35094, Stop: 35312, Start Num: 15

Candidate Starts for Bosection6\_53:

(9, 35049), (Start: 15 @35094 has 71 MA's), (22, 35145), (27, 35190), (33, 35250),

Gene: CLED96\_58 Start: 39766, Stop: 39948, Start Num: 15

Candidate Starts for CLED96\_58:

(Start: 15 @39766 has 71 MA's), (17, 39787), (19, 39796), (27, 39859),

Gene: Camri\_58 Start: 39766, Stop: 39948, Start Num: 15

Candidate Starts for Camri\_58:

(Start: 15 @39766 has 71 MA's), (17, 39787), (19, 39796), (27, 39859),

Gene: CassieYates\_59 Start: 40211, Stop: 40393, Start Num: 15

Candidate Starts for CassieYates\_59:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Cedasite\_59 Start: 40211, Stop: 40393, Start Num: 15

Candidate Starts for Cedasite\_59:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Chance64\_59 Start: 40213, Stop: 40395, Start Num: 15

Candidate Starts for Chance64\_59:

(Start: 15 @40213 has 71 MA's), (17, 40234), (19, 40243), (27, 40306),

Gene: Charlie\_55 Start: 34718, Stop: 34936, Start Num: 15

Candidate Starts for Charlie\_55:

(9, 34673), (Start: 15 @34718 has 71 MA's), (22, 34769), (27, 34814), (33, 34874),

Gene: Cherrybomb426\_58 Start: 39766, Stop: 39948, Start Num: 15

Candidate Starts for Cherrybomb426\_58:

(Start: 15 @39766 has 71 MA's), (17, 39787), (19, 39796), (27, 39859),

Gene: Coleslaw\_58 Start: 40203, Stop: 40385, Start Num: 15

Candidate Starts for Coleslaw\_58:

(Start: 15 @40203 has 71 MA's), (17, 40224), (19, 40233), (27, 40296),

Gene: Collard\_65 Start: 47103, Stop: 47312, Start Num: 14

Candidate Starts for Collard\_65:

(6, 47034), (7, 47037), (8, 47055), (10, 47058), (Start: 14 @47103 has 12 MA's), (27, 47196),

Gene: Crespo\_58 Start: 40212, Stop: 40394, Start Num: 15

Candidate Starts for Crespo\_58:

(Start: 15 @40212 has 71 MA's), (17, 40233), (19, 40242), (27, 40305),

Gene: Cubone\_60 Start: 35512, Stop: 35727, Start Num: 15

Candidate Starts for Cubone\_60:

(9, 35467), (Start: 15 @35512 has 71 MA's), (22, 35563), (25, 35590), (29, 35626),

Gene: DMoney\_58 Start: 40211, Stop: 40372, Start Num: 15

Candidate Starts for DMoney\_58:

(4, 40136), (5, 40157), (Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Dadosky\_69 Start: 47475, Stop: 47684, Start Num: 14  
Candidate Starts for Dadosky\_69:  
(6, 47406), (7, 47409), (8, 47427), (10, 47430), (Start: 14 @47475 has 12 MA's), (20, 47511), (28, 47577),

Gene: Darionha\_59 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for Darionha\_59:  
(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: DingDing\_57 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for DingDing\_57:  
(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Doomslug\_84 Start: 45531, Stop: 45746, Start Num: 15  
Candidate Starts for Doomslug\_84:  
(Start: 13 @45528 has 3 MA's), (Start: 15 @45531 has 71 MA's), (16, 45546), (22, 45582), (25, 45609), (29, 45645),

Gene: DoubleChamp\_64 Start: 47103, Stop: 47312, Start Num: 14  
Candidate Starts for DoubleChamp\_64:  
(6, 47034), (7, 47037), (8, 47055), (10, 47058), (Start: 14 @47103 has 12 MA's), (27, 47196),

Gene: ECartman\_57 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for ECartman\_57:  
(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Edugator\_66 Start: 48893, Stop: 49102, Start Num: 14  
Candidate Starts for Edugator\_66:  
(6, 48824), (7, 48827), (8, 48845), (10, 48848), (Start: 14 @48893 has 12 MA's), (20, 48929), (28, 48995),

Gene: Feyre\_70 Start: 50882, Stop: 51097, Start Num: 14  
Candidate Starts for Feyre\_70:  
(Start: 14 @50882 has 12 MA's), (27, 50975),

Gene: Frosty24\_57 Start: 39766, Stop: 39948, Start Num: 15  
Candidate Starts for Frosty24\_57:  
(Start: 15 @39766 has 71 MA's), (17, 39787), (19, 39796), (27, 39859),

Gene: Gengar\_67 Start: 48864, Stop: 49079, Start Num: 15  
Candidate Starts for Gengar\_67:  
(12, 48828), (Start: 15 @48864 has 71 MA's), (26, 48954), (27, 48957),

Gene: Gideon\_59 Start: 40213, Stop: 40395, Start Num: 15  
Candidate Starts for Gideon\_59:  
(Start: 15 @40213 has 71 MA's), (17, 40234), (19, 40243), (27, 40306),

Gene: GoldenAsh\_57 Start: 39751, Stop: 39933, Start Num: 15  
Candidate Starts for GoldenAsh\_57:  
(Start: 15 @39751 has 71 MA's), (17, 39772), (19, 39781), (27, 39844),

Gene: Guillsminger\_68 Start: 48811, Stop: 49026, Start Num: 14  
Candidate Starts for Guillsminger\_68:

(Start: 14 @48811 has 12 MA's), (27, 48904),

Gene: Halo\_60 Start: 40759, Stop: 40941, Start Num: 15

Candidate Starts for Halo\_60:

(Start: 15 @40759 has 71 MA's), (17, 40780), (19, 40789), (27, 40852),

Gene: Hanako\_58 Start: 37109, Stop: 37324, Start Num: 15

Candidate Starts for Hanako\_58:

(Start: 13 @37106 has 3 MA's), (Start: 15 @37109 has 71 MA's), (24, 37181), (27, 37202), (29, 37214), (33, 37262),

Gene: Heftyboy\_68 Start: 49173, Stop: 49388, Start Num: 15

Candidate Starts for Heftyboy\_68:

(12, 49137), (Start: 15 @49173 has 71 MA's), (26, 49263), (27, 49266),

Gene: Hlubikazi\_66 Start: 41223, Stop: 41444, Start Num: 13

Candidate Starts for Hlubikazi\_66:

(Start: 13 @41223 has 3 MA's), (Start: 15 @41226 has 71 MA's), (16, 41241), (22, 41277), (27, 41322), (33, 41382),

Gene: Hope\_59 Start: 40211, Stop: 40393, Start Num: 15

Candidate Starts for Hope\_59:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Hotshotbaby7\_59 Start: 40213, Stop: 40395, Start Num: 15

Candidate Starts for Hotshotbaby7\_59:

(Start: 15 @40213 has 71 MA's), (17, 40234), (19, 40243), (27, 40306),

Gene: InvictusManeo\_65 Start: 47146, Stop: 47355, Start Num: 14

Candidate Starts for InvictusManeo\_65:

(6, 47077), (7, 47080), (8, 47098), (10, 47101), (Start: 14 @47146 has 12 MA's), (27, 47239),

Gene: Jamie19\_52 Start: 35400, Stop: 35615, Start Num: 15

Candidate Starts for Jamie19\_52:

(Start: 13 @35397 has 3 MA's), (Start: 15 @35400 has 71 MA's), (24, 35472), (27, 35493), (29, 35505), (33, 35553),

Gene: Jeilious\_59 Start: 40210, Stop: 40392, Start Num: 15

Candidate Starts for Jeilious\_59:

(Start: 15 @40210 has 71 MA's), (17, 40231), (19, 40240), (27, 40303),

Gene: Jolene\_59 Start: 40615, Stop: 40797, Start Num: 15

Candidate Starts for Jolene\_59:

(Start: 15 @40615 has 71 MA's), (17, 40636), (19, 40645), (27, 40708),

Gene: Jolie2\_58 Start: 41270, Stop: 41452, Start Num: 18

Candidate Starts for Jolie2\_58:

(1, 40643), (2, 40829), (3, 41027), (Start: 18 @41270 has 1 MA's), (23, 41294), (30, 41345),

Gene: Jonghyun\_57 Start: 40214, Stop: 40396, Start Num: 15

Candidate Starts for Jonghyun\_57:

(Start: 15 @40214 has 71 MA's), (17, 40235), (19, 40244), (27, 40307),

Gene: JorRay\_60 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for JorRay\_60:  
(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Kevin1\_57 Start: 36241, Stop: 36456, Start Num: 15  
Candidate Starts for Kevin1\_57:  
(Start: 15 @36241 has 71 MA's), (22, 36292), (25, 36319), (29, 36355),

Gene: Kratio\_69 Start: 48265, Stop: 48474, Start Num: 15  
Candidate Starts for Kratio\_69:  
(Start: 15 @48265 has 71 MA's), (26, 48355),

Gene: Larva\_68 Start: 48347, Stop: 48556, Start Num: 14  
Candidate Starts for Larva\_68:  
(6, 48278), (7, 48281), (8, 48299), (10, 48302), (Start: 14 @48347 has 12 MA's), (20, 48383), (28, 48449),

Gene: Lemuria\_61 Start: 42910, Stop: 43113, Start Num: 18  
Candidate Starts for Lemuria\_61:  
(2, 42469), (Start: 18 @42910 has 1 MA's), (21, 42937), (30, 43006), (31, 43009), (34, 43093),

Gene: Leston\_67 Start: 48928, Stop: 49143, Start Num: 14  
Candidate Starts for Leston\_67:  
(Start: 14 @48928 has 12 MA's), (27, 49021),

Gene: Liefie\_56 Start: 39850, Stop: 40032, Start Num: 15  
Candidate Starts for Liefie\_56:  
(Start: 15 @39850 has 71 MA's), (17, 39871), (19, 39880), (27, 39943),

Gene: LilDirt\_64 Start: 46904, Stop: 47113, Start Num: 14  
Candidate Starts for LilDirt\_64:  
(6, 46835), (7, 46838), (8, 46856), (10, 46859), (Start: 14 @46904 has 12 MA's), (27, 46997),

Gene: LouisV14\_61 Start: 42476, Stop: 42637, Start Num: 15  
Candidate Starts for LouisV14\_61:  
(4, 42401), (5, 42422), (Start: 15 @42476 has 71 MA's), (17, 42497), (19, 42506), (27, 42569),

Gene: Maliketh\_57 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for Maliketh\_57:  
(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Mandlovu\_66 Start: 41168, Stop: 41386, Start Num: 15  
Candidate Starts for Mandlovu\_66:  
(Start: 13 @41165 has 3 MA's), (Start: 15 @41168 has 71 MA's), (16, 41183), (22, 41219), (27, 41264), (33, 41324),

Gene: Marmie\_59 Start: 40212, Stop: 40394, Start Num: 15  
Candidate Starts for Marmie\_59:  
(Start: 15 @40212 has 71 MA's), (17, 40233), (19, 40242), (27, 40305),

Gene: Mask\_73 Start: 55063, Stop: 55281, Start Num: 15  
Candidate Starts for Mask\_73:

(Start: 13 @55060 has 3 MA's), (Start: 15 @55063 has 71 MA's), (16, 55078), (22, 55114), (27, 55159), (33, 55219),

Gene: Miryou\_71 Start: 51549, Stop: 51764, Start Num: 15  
Candidate Starts for Miryou\_71:  
(12, 51513), (Start: 15 @51549 has 71 MA's), (26, 51639), (27, 51642),

Gene: Mowgli\_59 Start: 40212, Stop: 40394, Start Num: 15  
Candidate Starts for Mowgli\_59:  
(Start: 15 @40212 has 71 MA's), (17, 40233), (19, 40242), (27, 40305),

Gene: MulchSalad\_69 Start: 41471, Stop: 41686, Start Num: 15  
Candidate Starts for MulchSalad\_69:  
(9, 41426), (Start: 15 @41471 has 71 MA's), (22, 41522), (25, 41549), (27, 41573),

Gene: Neighly\_69 Start: 48346, Stop: 48555, Start Num: 14  
Candidate Starts for Neighly\_69:  
(6, 48277), (7, 48280), (8, 48298), (10, 48301), (Start: 14 @48346 has 12 MA's), (20, 48382), (28, 48448),

Gene: Nенаe\_58 Start: 37111, Stop: 37326, Start Num: 15  
Candidate Starts for Nенаe\_58:  
(Start: 13 @37108 has 3 MA's), (Start: 15 @37111 has 71 MA's), (24, 37183), (27, 37204), (29, 37216), (33, 37264),

Gene: Neoh\_57 Start: 40204, Stop: 40386, Start Num: 15  
Candidate Starts for Neoh\_57:  
(Start: 15 @40204 has 71 MA's), (17, 40225), (19, 40234), (27, 40297),

Gene: OctaviousRex\_58 Start: 40211, Stop: 40372, Start Num: 15  
Candidate Starts for OctaviousRex\_58:  
(4, 40136), (5, 40157), (Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: OkiRoe\_68 Start: 49233, Stop: 49448, Start Num: 15  
Candidate Starts for OkiRoe\_68:  
(12, 49197), (Start: 15 @49233 has 71 MA's), (26, 49323), (27, 49326),

Gene: Panchino\_52 Start: 36826, Stop: 37047, Start Num: 13  
Candidate Starts for Panchino\_52:  
(Start: 13 @36826 has 3 MA's), (Start: 15 @36829 has 71 MA's), (16, 36844), (22, 36880), (27, 36925), (33, 36985),

Gene: Paola\_67 Start: 48811, Stop: 49026, Start Num: 14  
Candidate Starts for Paola\_67:  
(Start: 14 @48811 has 12 MA's), (27, 48904),

Gene: Periodt\_59 Start: 40604, Stop: 40786, Start Num: 15  
Candidate Starts for Periodt\_59:  
(Start: 15 @40604 has 71 MA's), (17, 40625), (19, 40634), (27, 40697),

Gene: PhancyPhin\_58 Start: 37102, Stop: 37320, Start Num: 13  
Candidate Starts for PhancyPhin\_58:

(Start: 13 @37102 has 3 MA's), (Start: 15 @37105 has 71 MA's), (24, 37177), (27, 37198), (29, 37210), (33, 37258),

Gene: Phish\_58 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for Phish\_58:  
(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Phloodle\_57 Start: 40227, Stop: 40409, Start Num: 15  
Candidate Starts for Phloodle\_57:  
(Start: 15 @40227 has 71 MA's), (17, 40248), (19, 40257), (27, 40320),

Gene: Phrann\_55 Start: 37388, Stop: 37603, Start Num: 15  
Candidate Starts for Phrann\_55:  
(Start: 13 @37385 has 3 MA's), (Start: 15 @37388 has 71 MA's), (16, 37403), (22, 37439), (25, 37466),

Gene: Phreak\_59 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for Phreak\_59:  
(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Plagueis\_59 Start: 40032, Stop: 40214, Start Num: 15  
Candidate Starts for Plagueis\_59:  
(Start: 15 @40032 has 71 MA's), (17, 40053), (19, 40062), (27, 40125),

Gene: Psycho\_67 Start: 47472, Stop: 47681, Start Num: 14  
Candidate Starts for Psycho\_67:  
(6, 47403), (7, 47406), (8, 47424), (10, 47427), (Start: 14 @47472 has 12 MA's), (20, 47508), (28, 47574),

Gene: Purgamenstris\_58 Start: 37109, Stop: 37324, Start Num: 15  
Candidate Starts for Purgamenstris\_58:  
(Start: 13 @37106 has 3 MA's), (Start: 15 @37109 has 71 MA's), (24, 37181), (27, 37202), (29, 37214), (33, 37262),

Gene: Rattrick\_59 Start: 40604, Stop: 40786, Start Num: 15  
Candidate Starts for Rattrick\_59:  
(Start: 15 @40604 has 71 MA's), (17, 40625), (19, 40634), (27, 40697),

Gene: Raymond7\_52 Start: 36897, Stop: 37112, Start Num: 15  
Candidate Starts for Raymond7\_52:  
(Start: 13 @36894 has 3 MA's), (Start: 15 @36897 has 71 MA's), (24, 36969), (27, 36990), (29, 37002), (33, 37050),

Gene: Rebel\_51 Start: 34294, Stop: 34509, Start Num: 15  
Candidate Starts for Rebel\_51:  
(Start: 15 @34294 has 71 MA's), (22, 34345), (25, 34372), (29, 34408),

Gene: Redi\_58 Start: 37108, Stop: 37323, Start Num: 15  
Candidate Starts for Redi\_58:  
(Start: 13 @37105 has 3 MA's), (Start: 15 @37108 has 71 MA's), (24, 37180), (27, 37201), (29, 37213), (33, 37261),

Gene: Remy19\_59 Start: 40211, Stop: 40393, Start Num: 15  
Candidate Starts for Remy19\_59:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Rita\_71 Start: 42011, Stop: 42226, Start Num: 15

Candidate Starts for Rita\_71:

(Start: 13 @42008 has 3 MA's), (Start: 15 @42011 has 71 MA's), (16, 42026), (22, 42062), (25, 42089), (29, 42125),

Gene: Ruriko\_56 Start: 40213, Stop: 40395, Start Num: 15

Candidate Starts for Ruriko\_56:

(Start: 15 @40213 has 71 MA's), (17, 40234), (19, 40243), (27, 40306),

Gene: Schiebel\_57 Start: 39751, Stop: 39933, Start Num: 15

Candidate Starts for Schiebel\_57:

(Start: 15 @39751 has 71 MA's), (17, 39772), (19, 39781), (27, 39844),

Gene: Scitech\_49 Start: 33551, Stop: 33766, Start Num: 15

Candidate Starts for Scitech\_49:

(9, 33506), (Start: 15 @33551 has 71 MA's), (22, 33602), (25, 33629), (27, 33653),

Gene: Sejanus\_72 Start: 53524, Stop: 53742, Start Num: 15

Candidate Starts for Sejanus\_72:

(Start: 13 @53521 has 3 MA's), (Start: 15 @53524 has 71 MA's), (16, 53539), (22, 53575), (27, 53620), (33, 53680),

Gene: ShaboiShabazz\_58 Start: 40211, Stop: 40393, Start Num: 15

Candidate Starts for ShaboiShabazz\_58:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: ShrimpFriedEgg\_58 Start: 37108, Stop: 37323, Start Num: 15

Candidate Starts for ShrimpFriedEgg\_58:

(Start: 13 @37105 has 3 MA's), (Start: 15 @37108 has 71 MA's), (24, 37180), (27, 37201), (29, 37213), (33, 37261),

Gene: SoSeph\_68 Start: 49173, Stop: 49388, Start Num: 15

Candidate Starts for SoSeph\_68:

(12, 49137), (Start: 15 @49173 has 71 MA's), (26, 49263), (27, 49266),

Gene: Spinach\_58 Start: 37108, Stop: 37323, Start Num: 15

Candidate Starts for Spinach\_58:

(Start: 13 @37105 has 3 MA's), (Start: 15 @37108 has 71 MA's), (24, 37180), (27, 37201), (29, 37213), (33, 37261),

Gene: SpongeBob\_52 Start: 35400, Stop: 35615, Start Num: 15

Candidate Starts for SpongeBob\_52:

(Start: 13 @35397 has 3 MA's), (Start: 15 @35400 has 71 MA's), (24, 35472), (27, 35493), (29, 35505), (33, 35553),

Gene: Strokeseat\_66 Start: 41225, Stop: 41443, Start Num: 15

Candidate Starts for Strokeseat\_66:

(Start: 13 @41222 has 3 MA's), (Start: 15 @41225 has 71 MA's), (16, 41240), (22, 41276), (27, 41321), (33, 41381),

Gene: Tapioca\_55 Start: 35827, Stop: 36045, Start Num: 15

Candidate Starts for Tapioca\_55:

(Start: 13 @35824 has 3 MA's), (Start: 15 @35827 has 71 MA's), (16, 35842), (22, 35878), (27, 35923), (33, 35983),

Gene: Thyatira\_70 Start: 51165, Stop: 51380, Start Num: 15

Candidate Starts for Thyatira\_70:

(12, 51129), (Start: 15 @51165 has 71 MA's), (26, 51255), (27, 51258),

Gene: TinaBug\_60 Start: 40759, Stop: 40941, Start Num: 15

Candidate Starts for TinaBug\_60:

(Start: 15 @40759 has 71 MA's), (17, 40780), (19, 40789), (27, 40852),

Gene: TomBrady\_59 Start: 40212, Stop: 40394, Start Num: 15

Candidate Starts for TomBrady\_59:

(Start: 15 @40212 has 71 MA's), (17, 40233), (19, 40242), (27, 40305),

Gene: Tortellini\_62 Start: 43141, Stop: 43347, Start Num: 15

Candidate Starts for Tortellini\_62:

(9, 43096), (Start: 15 @43141 has 71 MA's), (22, 43192), (27, 43237), (33, 43297),

Gene: ViviJ\_70 Start: 48018, Stop: 48227, Start Num: 15

Candidate Starts for ViviJ\_70:

(11, 47979), (12, 47982), (Start: 15 @48018 has 71 MA's), (27, 48111), (32, 48162),

Gene: Waterfoul\_69 Start: 49235, Stop: 49450, Start Num: 15

Candidate Starts for Waterfoul\_69:

(12, 49199), (Start: 15 @49235 has 71 MA's), (26, 49325), (27, 49328),

Gene: Wendigo\_57 Start: 40211, Stop: 40372, Start Num: 15

Candidate Starts for Wendigo\_57:

(4, 40136), (5, 40157), (Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),

Gene: Zombie\_59 Start: 40211, Stop: 40393, Start Num: 15

Candidate Starts for Zombie\_59:

(Start: 15 @40211 has 71 MA's), (17, 40232), (19, 40241), (27, 40304),