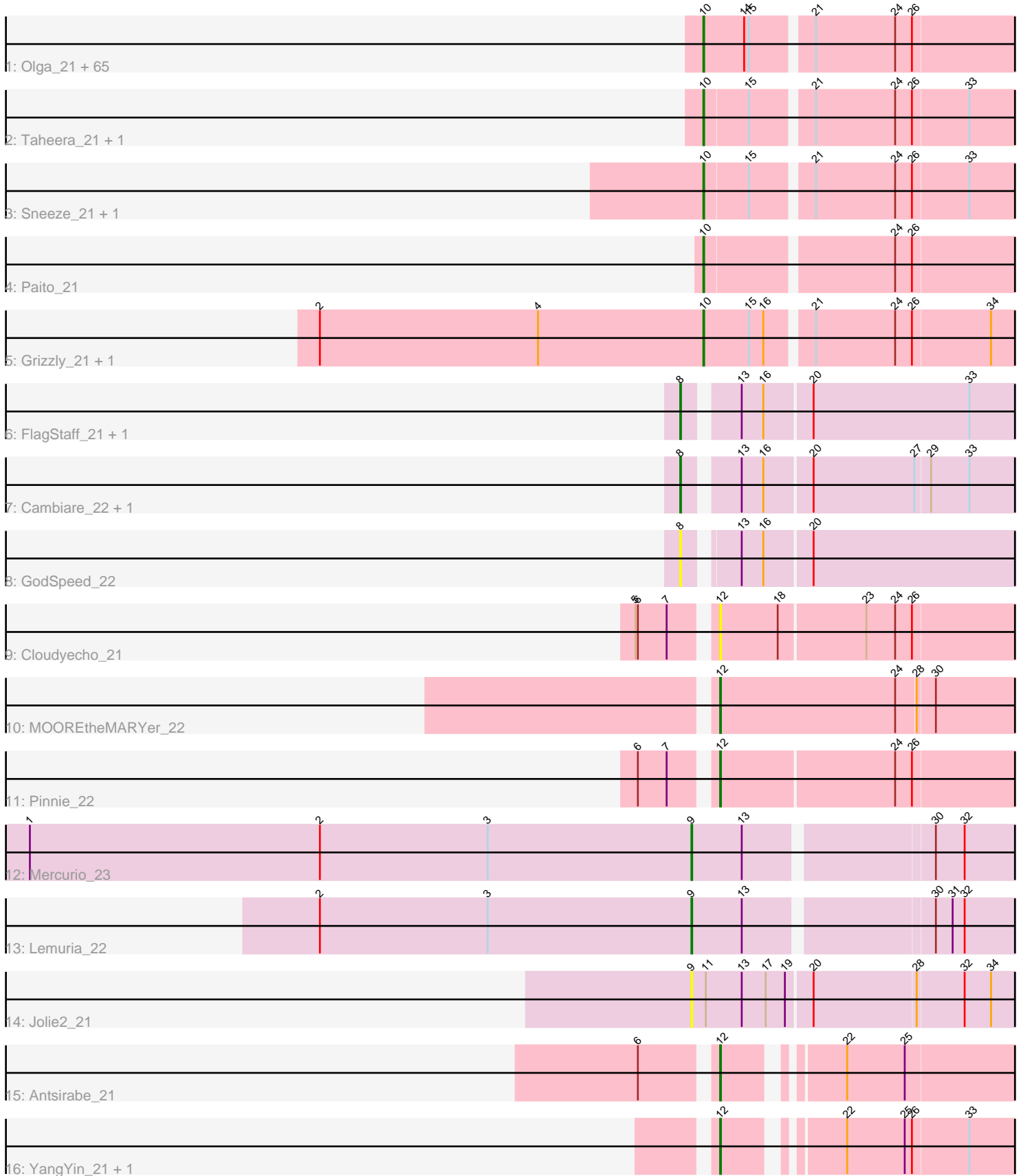


Pham 304922



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 304922 Report

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

Pham number 304922 has 87 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Olga\_21, Halo\_21, DNAll\_0021, Jolene\_21, BQuat\_21, BPs\_21, Jeilious\_21, BruceB\_21, Angel\_21, Darionha\_21, Neoh\_21, DingDing\_21, Crespo\_21, Cedasite\_21, Sweets\_21, ECartman\_21, Plagueis\_21, Gideon\_21, Annihilator\_21, AzulaCat\_21, Jane\_21, Zombie\_21, Maliketh\_21, Hope\_21, Kareem\_21, Peeb\_21, MZKinsey\_21, Frosty24\_21, Phloodle\_21, ShaboiShabazz\_21, Cherrybomb426\_21, Chance64\_21, DMoney\_21, OctaviousRex\_21, LouisV14\_21, Ruriko\_21, Camri\_21, Renaissance\_21, Aroostook\_21, Liefie\_21, GoldenAsh\_21, Mowgli\_21, AizenPogi\_21, Jonghyun\_21, Gomashi\_21, Kasen3\_21, Marmie\_21, Sizemore\_21, PinkYoshi\_21, Hotshotbaby7\_21, JorRay\_21, Phish\_21, Phreak\_21, Rattrick\_21, Schiebel\_21, Remy19\_21, Periodt\_21, CassieYates\_21, CLED96\_21, Avrafan\_21, TomBrady\_21, TinaBug\_21, ZoMa\_21, Coleslaw\_21, Richarlison\_21, Wendigo\_21
- Track 2 : Taheera\_21, Terror\_21
- Track 3 : Sneeze\_21, Rabbs\_21
- Track 4 : Paito\_21
- Track 5 : Grizzly\_21, Barkley26\_21
- Track 6 : FlagStaff\_21, Pace1224\_21
- Track 7 : Cambiare\_22, Avocado\_21
- Track 8 : GodSpeed\_22
- Track 9 : Cloudyecho\_21
- Track 10 : MOOREtheMARYer\_22
- Track 11 : Pinnie\_22
- Track 12 : Mercurio\_23
- Track 13 : Lemuria\_22
- Track 14 : Jolie2\_21
- Track 15 : Antsirabe\_21
- Track 16 : YangYin\_21, Stargaze\_21

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

The start number called the most often in the published annotations is 10, it was called in 65 of the 74 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AizenPogi\_21, Angel\_21, Annihilator\_21, Aroostook\_21, Avrafan\_21, AzulaCat\_21, BPs\_21, BQuat\_21, Barkley26\_21, BruceB\_21, CLED96\_21, Camri\_21, CassieYates\_21, Cedasite\_21, Chance64\_21, Cherrybomb426\_21, Coleslaw\_21, Crespo\_21, DMoney\_21, DNAIII\_0021, Darionha\_21, DingDing\_21, ECartman\_21, Frosty24\_21, Gideon\_21, GoldenAsh\_21, Gomashi\_21, Grizzly\_21, Halo\_21, Hope\_21, Hotshotbaby7\_21, Jane\_21, Jeilious\_21, Jolene\_21, Jonghyun\_21, JorRay\_21, Kareem\_21, Kasen3\_21, Liefie\_21, LouisV14\_21, MZKinsey\_21, Maliketh\_21, Marmie\_21, Mowgli\_21, Neoh\_21, OctaviousRex\_21, Olga\_21, Paito\_21, Peeb\_21, Periodt\_21, Phish\_21, Phloodle\_21, Phreak\_21, PinkYoshi\_21, Plagueis\_21, Rabbs\_21, Rattrick\_21, Remy19\_21, Renaissance\_21, Richarlison\_21, Ruriko\_21, Schiebel\_21, ShaboiShabazz\_21, Sizemore\_21, Sneeze\_21, Sweets\_21, Taheera\_21, Terror\_21, TinaBug\_21, TomBrady\_21, Wendigo\_21, ZoMa\_21, Zombie\_21,

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

- 

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

- Antsirabe\_21, Avocado\_21, Cambiare\_22, Cloudyecho\_21, FlagStaff\_21, GodSpeed\_22, Jolie2\_21, Lemuria\_22, MOOREtheMARYer\_22, Mercurio\_23, Pace1224\_21, Pinnie\_22, Stargaze\_21, YangYin\_21,

### Summary by start number:

Start 8:

- Found in 5 of 87 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 3 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avocado\_21 (G2), Cambiare\_22 (G2), FlagStaff\_21 (G2), GodSpeed\_22 (G2), Pace1224\_21 (G2),

Start 9:

- Found in 3 of 87 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 2 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jolie2\_21 (G4), Lemuria\_22 (G4), Mercurio\_23 (G4),

Start 10:

- Found in 73 of 87 ( 83.9% ) of genes in pham
- Manual Annotations of this start: 65 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AizenPogi\_21 (G1), Angel\_21 (G1), Annihilator\_21 (G1), Aroostook\_21 (G1), Avrafan\_21 (G1), AzulaCat\_21 (G1), BPs\_21 (G1), BQuat\_21 (G1), Barkley26\_21 (G1), BruceB\_21 (G1), CLED96\_21 (G1), Camri\_21 (G1), CassieYates\_21 (G1), Cedasite\_21 (G1), Chance64\_21 (G1), Cherrybomb426\_21 (G1), Coleslaw\_21 (G1), Crespo\_21 (G1), DMoney\_21 (G1), DNAIII\_0021 (G1), Darionha\_21 (G1), DingDing\_21 (G1), ECartman\_21 (G1), Frosty24\_21 (G1), Gideon\_21 (G1), GoldenAsh\_21 (G1), Gomashi\_21 (G1), Grizzly\_21 (G1), Halo\_21 (G1), Hope\_21 (G1), Hotshotbaby7\_21 (G1), Jane\_21 (G1), Jeilious\_21 (G), Jolene\_21 (G1), Jonghyun\_21 (G1), JorRay\_21 (G1), Kareem\_21 (G1), Kasen3\_21 (G1), Liefie\_21 (G1), LouisV14\_21 (G1), MZKinsey\_21 (G1), Maliketh\_21 (G1), Marmie\_21 (G1), Mowgli\_21 (G1), Neoh\_21 (G), OctaviousRex\_21

(G1), Olga\_21 (G1), Paito\_21 (G1), Peeb\_21 (G1), Periodt\_21 (G1), Phish\_21 (G1), Phloodle\_21 (G1), Phreak\_21 (G1), PinkYoshi\_21 (G1), Plagueis\_21 (G1), Rabbs\_21 (G1), Rattrick\_21 (G1), Remy19\_21 (G1), Renaissance\_21 (G1), Richarlison\_21 (G1), Ruriko\_21 (G1), Schiebel\_21 (G1), ShaboiShabazz\_21 (G1), Sizemore\_21 (G1), Sneeze\_21 (G1), Sweets\_21 (G1), Taheera\_21 (G1), Terror\_21 (G1), TinaBug\_21 (G1), TomBrady\_21 (G1), Wendigo\_21 (G1), ZoMa\_21 (G1), Zombie\_21 (G1),

Start 12:

- Found in 6 of 87 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 4 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antsirabe\_21 (G5), Cloudyecho\_21 (G3), MOOREtheMARYer\_22 (G3), Pinnie\_22 (G3), Stargaze\_21 (G5), YangYin\_21 (G5),

### **Summary by clusters:**

There are 6 clusters represented in this pham: G5, G4, G3, G2, G, G1,

Info for manual annotations of cluster G1:

- Start number 10 was manually annotated 65 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 8 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 12 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 9 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 12 was manually annotated 2 times for cluster G5.

### **Gene Information:**

Gene: AizenPogi\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for AizenPogi\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Angel\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Angel\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Annihilator\_21 Start: 19999, Stop: 20433, Start Num: 10

Candidate Starts for Annihilator\_21:

(Start: 10 @19999 has 65 MA's), (14, 20050), (15, 20056), (21, 20125), (24, 20224), (26, 20245),

Gene: Antsirabe\_21 Start: 20386, Stop: 20760, Start Num: 12

Candidate Starts for Antsirabe\_21:

(6, 20305), (Start: 12 @20386 has 4 MA's), (22, 20503), (25, 20575),

Gene: Aroostook\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Aroostook\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Avocado\_21 Start: 20322, Stop: 20762, Start Num: 8

Candidate Starts for Avocado\_21:

(Start: 8 @20322 has 3 MA's), (13, 20379), (16, 20406), (20, 20463), (27, 20589), (29, 20607), (33, 20655),

Gene: Avrafan\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Avrafan\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: AzulaCat\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for AzulaCat\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: BPs\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for BPs\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: BQuat\_21 Start: 19999, Stop: 20433, Start Num: 10

Candidate Starts for BQuat\_21:

(Start: 10 @19999 has 65 MA's), (14, 20050), (15, 20056), (21, 20125), (24, 20224), (26, 20245),

Gene: Barkley26\_21 Start: 20012, Stop: 20446, Start Num: 10

Candidate Starts for Barkley26\_21:

(2, 19532), (4, 19805), (Start: 10 @20012 has 65 MA's), (15, 20069), (16, 20087), (21, 20138), (24, 20237), (26, 20258), (34, 20354),

Gene: BruceB\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for BruceB\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: CLED96\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for CLED96\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Cambiare\_22 Start: 20787, Stop: 21227, Start Num: 8

Candidate Starts for Cambiare\_22:

(Start: 8 @20787 has 3 MA's), (13, 20844), (16, 20871), (20, 20928), (27, 21054), (29, 21072), (33, 21120),

Gene: Camri\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Camri\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: CassieYates\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for CassieYates\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Cedasite\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Cedasite\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Chance64\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Chance64\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Cherrybomb426\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Cherrybomb426\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Cloudyecho\_21 Start: 20244, Stop: 20645, Start Num: 12  
Candidate Starts for Cloudyecho\_21:  
(5, 20160), (6, 20163), (7, 20199), (Start: 12 @20244 has 4 MA's), (18, 20316), (23, 20421), (24, 20457), (26, 20478),

Gene: Coleslaw\_21 Start: 19999, Stop: 20433, Start Num: 10  
Candidate Starts for Coleslaw\_21:  
(Start: 10 @19999 has 65 MA's), (14, 20050), (15, 20056), (21, 20125), (24, 20224), (26, 20245),

Gene: Crespo\_21 Start: 20009, Stop: 20443, Start Num: 10  
Candidate Starts for Crespo\_21:  
(Start: 10 @20009 has 65 MA's), (14, 20060), (15, 20066), (21, 20135), (24, 20234), (26, 20255),

Gene: DMoney\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for DMoney\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: DNAllI\_0021 Start: 20017, Stop: 20451, Start Num: 10  
Candidate Starts for DNAllI\_0021:  
(Start: 10 @20017 has 65 MA's), (14, 20068), (15, 20074), (21, 20143), (24, 20242), (26, 20263),

Gene: Darionha\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Darionha\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: DingDing\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for DingDing\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: ECartman\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for ECartman\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: FlagStaff\_21 Start: 20199, Stop: 20639, Start Num: 8  
Candidate Starts for FlagStaff\_21:  
(Start: 8 @20199 has 3 MA's), (13, 20256), (16, 20283), (20, 20340), (33, 20535),

Gene: Frosty24\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Frosty24\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Gideon\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Gideon\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: GodSpeed\_22 Start: 20232, Stop: 20675, Start Num: 8

Candidate Starts for GodSpeed\_22:

(Start: 8 @20232 has 3 MA's), (13, 20286), (16, 20313), (20, 20370),

Gene: GoldenAsh\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for GoldenAsh\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Gomashi\_21 Start: 20009, Stop: 20443, Start Num: 10

Candidate Starts for Gomashi\_21:

(Start: 10 @20009 has 65 MA's), (14, 20060), (15, 20066), (21, 20135), (24, 20234), (26, 20255),

Gene: Grizzly\_21 Start: 20012, Stop: 20446, Start Num: 10

Candidate Starts for Grizzly\_21:

(2, 19532), (4, 19805), (Start: 10 @20012 has 65 MA's), (15, 20069), (16, 20087), (21, 20138), (24, 20237), (26, 20258), (34, 20354),

Gene: Halo\_21 Start: 20003, Stop: 20437, Start Num: 10

Candidate Starts for Halo\_21:

(Start: 10 @20003 has 65 MA's), (14, 20054), (15, 20060), (21, 20129), (24, 20228), (26, 20249),

Gene: Hope\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Hope\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Hotshotbaby7\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Hotshotbaby7\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Jane\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Jane\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Jeilious\_21 Start: 20007, Stop: 20441, Start Num: 10

Candidate Starts for Jeilious\_21:

(Start: 10 @20007 has 65 MA's), (14, 20058), (15, 20064), (21, 20133), (24, 20232), (26, 20253),

Gene: Jolene\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Jolene\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Jolie2\_21 Start: 19327, Stop: 19776, Start Num: 9

Candidate Starts for Jolie2\_21:

(Start: 9 @19327 has 2 MA's), (11, 19345), (13, 19390), (17, 19420), (19, 19444), (20, 19474), (28, 19600), (32, 19657), (34, 19690),

Gene: Jonghyun\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Jonghyun\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: JorRay\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for JorRay\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Kareem\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Kareem\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Kasen3\_21 Start: 20009, Stop: 20443, Start Num: 10

Candidate Starts for Kasen3\_21:

(Start: 10 @20009 has 65 MA's), (14, 20060), (15, 20066), (21, 20135), (24, 20234), (26, 20255),

Gene: Lemuria\_22 Start: 20141, Stop: 20578, Start Num: 9

Candidate Starts for Lemuria\_22:

(2, 19676), (3, 19886), (Start: 9 @20141 has 2 MA's), (13, 20204), (30, 20423), (31, 20444), (32, 20459),

Gene: Liefie\_21 Start: 20007, Stop: 20441, Start Num: 10

Candidate Starts for Liefie\_21:

(Start: 10 @20007 has 65 MA's), (14, 20058), (15, 20064), (21, 20133), (24, 20232), (26, 20253),

Gene: LouisV14\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for LouisV14\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: MOOREtheMARYer\_22 Start: 20362, Stop: 20802, Start Num: 12

Candidate Starts for MOOREtheMARYer\_22:

(Start: 12 @20362 has 4 MA's), (24, 20581), (28, 20605), (30, 20626),

Gene: MZKinsey\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for MZKinsey\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Maliketh\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Maliketh\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Marmie\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Marmie\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Mercurio\_23 Start: 20757, Stop: 21194, Start Num: 9

Candidate Starts for Mercurio\_23:

(1, 19929), (2, 20292), (3, 20502), (Start: 9 @20757 has 2 MA's), (13, 20820), (30, 21039), (32, 21075),

Gene: Mowgli\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Mowgli\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Neoh\_21 Start: 20000, Stop: 20434, Start Num: 10

Candidate Starts for Neoh\_21:

(Start: 10 @20000 has 65 MA's), (14, 20051), (15, 20057), (21, 20126), (24, 20225), (26, 20246),

Gene: OctaviousRex\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for OctaviousRex\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Olga\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Olga\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Pace1224\_21 Start: 20199, Stop: 20639, Start Num: 8

Candidate Starts for Pace1224\_21:

(Start: 8 @20199 has 3 MA's), (13, 20256), (16, 20283), (20, 20340), (33, 20535),

Gene: Paito\_21 Start: 20209, Stop: 20643, Start Num: 10

Candidate Starts for Paito\_21:

(Start: 10 @20209 has 65 MA's), (24, 20431), (26, 20452),

Gene: Peeb\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Peeb\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Periodt\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Periodt\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Phish\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Phish\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Phloodle\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Phloodle\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Phreak\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Phreak\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: PinkYoshi\_21 Start: 19999, Stop: 20433, Start Num: 10

Candidate Starts for PinkYoshi\_21:

(Start: 10 @19999 has 65 MA's), (14, 20050), (15, 20056), (21, 20125), (24, 20224), (26, 20245),

Gene: Pinnie\_22 Start: 20768, Stop: 21181, Start Num: 12

Candidate Starts for Pinnie\_22:

(6, 20687), (7, 20723), (Start: 12 @20768 has 4 MA's), (24, 20981), (26, 21002),

Gene: Plagueis\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Plagueis\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Rabbs\_21 Start: 20095, Stop: 20526, Start Num: 10

Candidate Starts for Rabbs\_21:

(Start: 10 @20095 has 65 MA's), (15, 20149), (21, 20218), (24, 20317), (26, 20338), (33, 20407),

Gene: Rattrick\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Rattrick\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Remy19\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Remy19\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Renaissance\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Renaissance\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Richarlison\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Richarlison\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Ruriko\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Ruriko\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Schiebel\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for Schiebel\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: ShaboiShabazz\_21 Start: 20008, Stop: 20442, Start Num: 10  
Candidate Starts for ShaboiShabazz\_21:  
(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Sizemore\_21 Start: 20009, Stop: 20443, Start Num: 10  
Candidate Starts for Sizemore\_21:  
(Start: 10 @20009 has 65 MA's), (14, 20060), (15, 20066), (21, 20135), (24, 20234), (26, 20255),

Gene: Sneeze\_21 Start: 20094, Stop: 20525, Start Num: 10  
Candidate Starts for Sneeze\_21:  
(Start: 10 @20094 has 65 MA's), (15, 20148), (21, 20217), (24, 20316), (26, 20337), (33, 20406),

Gene: Stargaze\_21 Start: 20451, Stop: 20828, Start Num: 12  
Candidate Starts for Stargaze\_21:  
(Start: 12 @20451 has 4 MA's), (22, 20568), (25, 20640), (26, 20649), (33, 20718),

Gene: Sweets\_21 Start: 20003, Stop: 20437, Start Num: 10  
Candidate Starts for Sweets\_21:  
(Start: 10 @20003 has 65 MA's), (14, 20054), (15, 20060), (21, 20129), (24, 20228), (26, 20249),

Gene: Taheera\_21 Start: 20103, Stop: 20534, Start Num: 10  
Candidate Starts for Taheera\_21:  
(Start: 10 @20103 has 65 MA's), (15, 20157), (21, 20226), (24, 20325), (26, 20346), (33, 20415),

Gene: Terror\_21 Start: 20103, Stop: 20534, Start Num: 10  
Candidate Starts for Terror\_21:  
(Start: 10 @20103 has 65 MA's), (15, 20157), (21, 20226), (24, 20325), (26, 20346), (33, 20415),

Gene: TinaBug\_21 Start: 20003, Stop: 20437, Start Num: 10

Candidate Starts for TinaBug\_21:

(Start: 10 @20003 has 65 MA's), (14, 20054), (15, 20060), (21, 20129), (24, 20228), (26, 20249),

Gene: TomBrady\_21 Start: 20009, Stop: 20443, Start Num: 10

Candidate Starts for TomBrady\_21:

(Start: 10 @20009 has 65 MA's), (14, 20060), (15, 20066), (21, 20135), (24, 20234), (26, 20255),

Gene: Wendigo\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Wendigo\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: YangYin\_21 Start: 20475, Stop: 20852, Start Num: 12

Candidate Starts for YangYin\_21:

(Start: 12 @20475 has 4 MA's), (22, 20592), (25, 20664), (26, 20673), (33, 20742),

Gene: ZoMa\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for ZoMa\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),

Gene: Zombie\_21 Start: 20008, Stop: 20442, Start Num: 10

Candidate Starts for Zombie\_21:

(Start: 10 @20008 has 65 MA's), (14, 20059), (15, 20065), (21, 20134), (24, 20233), (26, 20254),