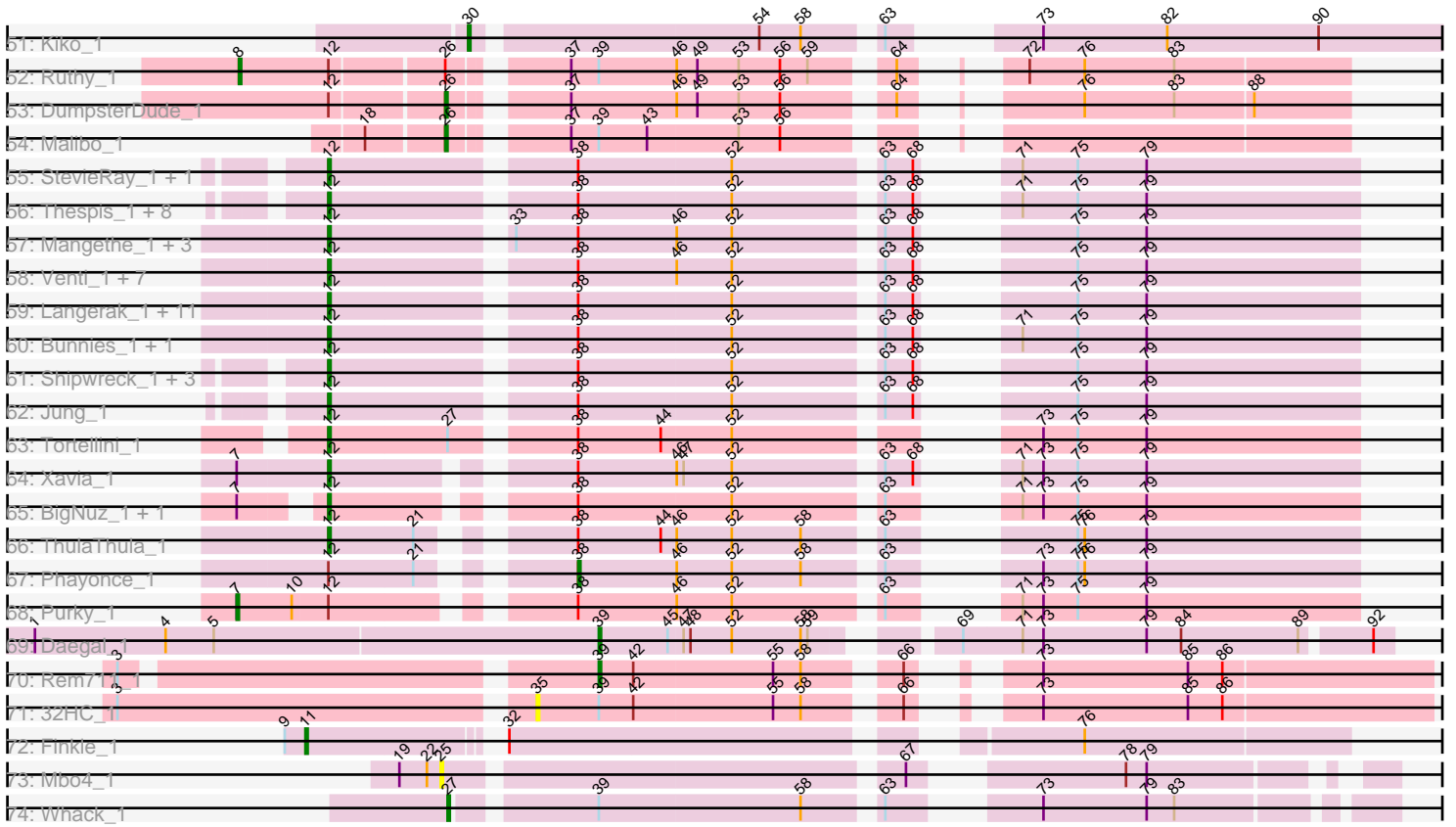




Pham 196323



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 196323 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196323 has 172 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Weirdo19\_1
- Track 2 : Utz\_1
- Track 3 : William\_1
- Track 4 : JuJu\_1
- Track 5 : Obliviate\_1, CaptainKirk2\_1, Delian\_1, Lysidious\_1, Archis\_1, Jalammah\_1, Barco\_1, Samba\_1, MintFen\_1, BlingBling\_1, Melba\_1, Hitter\_1
- Track 6 : UmaThurman\_1, Zarbodnamra\_1, Wocket\_1
- Track 7 : MissRona\_1, Walrus\_1, Azula\_1, Blueberry\_1, Petra\_1, Gambino\_1, Blino\_1
- Track 8 : Guacamole\_1, JasperJr\_1
- Track 9 : CarolAnn\_1
- Track 10 : Malachai\_1, Begonia\_1
- Track 11 : Fairfaxidum\_1, PrincePatrick\_1
- Track 12 : PCoral7\_1, Toast\_1
- Track 13 : Fenry\_1
- Track 14 : PhrostedPhlake\_1
- Track 15 : Mellie\_1
- Track 16 : ZiggyZoo\_1
- Track 17 : Frokostdame\_1
- Track 18 : Wisp\_1
- Track 19 : Murp\_1
- Track 20 : Pipp\_1
- Track 21 : KappaFarmDelta\_1
- Track 22 : Yeet412\_1, LordFarquaad\_1, Cynthia\_1, Clap\_1, GemG\_1, Whiteclaw\_1, Attis\_1, Gizermo\_1, SoilAssassin\_1, Mocha12\_1, Ebert\_1, Matteo\_1, Savage\_1, Bjanes7\_1, Sproutie\_1, Haley23\_1, TuertoX\_1
- Track 23 : Lamberg\_1, EdnaMode\_1, Nettuno\_1, Pickett\_1
- Track 24 : JCole\_1
- Track 25 : Vasanti\_1
- Track 26 : Sahara\_1
- Track 27 : Yeezy\_1, BaxterFox\_1, PantheRoc\_1, Ohgeesy\_1
- Track 28 : Easley\_2, Clark\_2, MichaelScott\_2
- Track 29 : Sekhmet\_2
- Track 30 : Shlim410\_1, Hortense\_1, Howe\_1, Twinkle\_1, Adora\_1
- Track 31 : Oregano\_1
- Track 32 : DobbysSock\_1
- Track 33 : Suerte\_1, Powerball\_1, Dorito\_1

- Track 34 : Dolores\_2, Samman98\_2, Annalisa\_2, WinkNick\_2
- Track 35 : Beenie\_2
- Track 36 : Thimann\_2
- Track 37 : PhriskyACE\_1
- Track 38 : Denise\_1
- Track 39 : Sidious\_1
- Track 40 : Doggs\_1, Coriander\_1
- Track 41 : ZAYM\_1, TaronosaurusRx\_1
- Track 42 : HannahD\_1, GEazy\_1, Bowser\_1, Eyes\_1
- Track 43 : Opie\_1
- Track 44 : Bunker\_1
- Track 45 : BBQValindra\_1, BackstagePass\_1
- Track 46 : Hedwig\_1
- Track 47 : MagicMan\_1, Schnabeltier\_1
- Track 48 : DirtyBoi\_1
- Track 49 : RayTheFireFly\_1
- Track 50 : Dmitri\_1
- Track 51 : Kiko\_1
- Track 52 : Ruthy\_1
- Track 53 : DumpsterDude\_1
- Track 54 : Malibo\_1
- Track 55 : StevieRay\_1, Atcoo\_1
- Track 56 : Thespis\_1, Glaske\_1, Brusacoram\_1, Megiddo\_1, KilKor\_1, StressBall\_1, Willsammy\_1, CactusJack\_1, Phalm\_1
- Track 57 : Mangethe\_1, Majeke\_1, Arib1\_1, Phegasus\_1
- Track 58 : Venti\_1, Donovan\_1, HUHilltop\_1, Bartholomew\_1, Sonah\_1, Techage\_1, Juniormint\_1, Jebeks\_1
- Track 59 : Langerak\_1, Malithi\_1, Polkaroo\_1, FirstPlacePfu\_1, Necropolis\_1, GreaseLightnin\_1, Camster\_1, Zilizebeth\_1, Dynamo\_1, Kari\_1, Fishburne\_1, Vidya\_1
- Track 60 : Bunnies\_1, Ksquared\_1
- Track 61 : Shipwreck\_1, Pygmy\_1, Phineas\_1, Bogie\_1
- Track 62 : Jung\_1
- Track 63 : Tortellini\_1
- Track 64 : Xavia\_1
- Track 65 : BigNuz\_1, Nazo\_1
- Track 66 : ThulaThula\_1
- Track 67 : Phayonce\_1
- Track 68 : Purky\_1
- Track 69 : Daegal\_1
- Track 70 : Rem711\_1
- Track 71 : 32HC\_1
- Track 72 : Finkle\_1
- Track 73 : Mbo4\_1
- Track 74 : Whack\_1

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

The start number called the most often in the published annotations is 30, it was called in 45 of the 158 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archis\_1, Azula\_1, Barco\_1, Begonia\_1, BlingBling\_1, Blino\_1, Blueberry\_1, CaptainKirk2\_1, CarolAnn\_1, Delian\_1, Fairfaxidum\_1, Fenry\_1, Frokostdame\_1, Gambino\_1, Guacamole\_1, Hitter\_1, Jalammah\_1, JasperJr\_1, JuJu\_1, KappaFarmDelta\_1, Kiko\_1, Lysidious\_1, MagicMan\_1, Malachai\_1, Melba\_1, Mellie\_1, MintFen\_1, MissRona\_1, Murp\_1, Obliviate\_1, Opie\_1, PCoral7\_1, Petra\_1, PhrostedPhlake\_1, Pipp\_1, PrincePatrick\_1, Samba\_1, Schnabeltier\_1, TaronosaurusRx\_1, Toast\_1, UmaThurman\_1, Walrus\_1, William\_1, Wocket\_1, ZAYM\_1, Zarbodnamra\_1, ZiggyZoo\_1,

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

- Coriander\_1, DirtyBoi\_1, Dmitri\_1, Doggs\_1, Hedwig\_1, RayTheFireFly\_1, Utz\_1, Wisp\_1,

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

- 32HC\_1, Adora\_1, Annalisa\_2, Arib1\_1, Atcoo\_1, Attis\_1, BBQValindra\_1, BackstagePass\_1, Bartholomew\_1, BaxterFox\_1, Beenie\_2, BigNuz\_1, Bjanes7\_1, Bogie\_1, Bowser\_1, Brusacoram\_1, Bunker\_1, Bunnies\_1, CactusJack\_1, Camster\_1, Clap\_1, Clark\_2, Cynthia\_1, Daegal\_1, Denise\_1, DobbysSock\_1, Dolores\_2, Donovan\_1, Dorito\_1, DumpsterDude\_1, Dynamo\_1, Easley\_2, Ebert\_1, EdnaMode\_1, Eyes\_1, Finkle\_1, FirstPlacePfu\_1, Fishburne\_1, GEazy\_1, GemG\_1, Gizermo\_1, Glaske\_1, GreaseLightnin\_1, HUHilltop\_1, Haley23\_1, HannahD\_1, Hortense\_1, Howe\_1, JCole\_1, Jebeks\_1, Jung\_1, Juniormint\_1, Kari\_1, KilKor\_1, Ksquared\_1, Lamberg\_1, Langerak\_1, LordFarquaad\_1, Majeke\_1, Malibo\_1, Malithi\_1, Mangethe\_1, Matteo\_1, Mbo4\_1, Megiddo\_1, MichaelScott\_2, Mocha12\_1, Nazo\_1, Necropolis\_1, Nettuno\_1, Ohgeesy\_1, Oregano\_1, PantheRoc\_1, Phalm\_1, Phayonce\_1, Phegasus\_1, Phineas\_1, PhriskyACE\_1, Pickett\_1, Polkaroo\_1, Powerball\_1, Purky\_1, Pygmy\_1, Rem711\_1, Ruthy\_1, Sahara\_1, Samman98\_2, Savage\_1, Sekhmet\_2, Shipwreck\_1, Shlim410\_1, Sidious\_1, SoilAssassin\_1, Sonah\_1, Sproutie\_1, StevieRay\_1, StressBall\_1, Suerte\_1, Techage\_1, Thespi\_1, Thimann\_2, ThulaThula\_1, Tortellini\_1, TuertoX\_1, Twinkle\_1, Vasanti\_1, Venti\_1, Vidya\_1, Weirdo19\_1, Whack\_1, Whiteclaw\_1, Willsammy\_1, WinkNick\_2, Xavia\_1, Yeet412\_1, Yeezy\_1, Zilizebeth\_1,

### Summary by start number:

Start 7:

- Found in 4 of 172 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Purky\_1 (P6),

Start 8:

- Found in 1 of 172 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ruthy\_1 (DW),

Start 11:

- Found in 1 of 172 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Finkle\_1 (singleton),

#### Start 12:

- Found in 51 of 172 ( 29.7% ) of genes in pham
- Manual Annotations of this start: 44 of 158
- Called 92.2% of time when present
- Phage (with cluster) where this start called: Arib1\_1 (P1), Atcoo\_1 (P1), Bartholomew\_1 (P1), BigNuz\_1 (P4), Bogie\_1 (P1), Brusacoram\_1 (P1), Bunnies\_1 (P1), CactusJack\_1 (P1), Camster\_1 (P1), Donovan\_1 (P1), Dynamo\_1 (P1), FirstPlacePfu\_1 (P1), Fishburne\_1 (P1), Glaske\_1 (P1), GreaseLightnin\_1 (P1), HUHilltop\_1 (P1), Jebeks\_1 (P1), Jung\_1 (P1), Juniormint\_1 (P1), Kari\_1 (P1), KilKor\_1 (P1), Ksqared\_1 (P1), Langerak\_1 (P1), Majeke\_1 (P1), Malithi\_1 (P1), Mangethe\_1 (P1), Megiddo\_1 (P1), Nazo\_1 (P4), Necropolis\_1 (P1), Phalm\_1 (P1), Phegasus\_1 (P1), Phineas\_1 (P1), Polkaroo\_1 (P1), Pygmy\_1 (P1), Shipwreck\_1 (P1), Sonah\_1 (P1), StevieRay\_1 (P1), StressBall\_1 (P1), Techage\_1 (P1), Thespis\_1 (P1), ThulaThula\_1 (P5), Tortellini\_1 (P2), Venti\_1 (P1), Vidya\_1 (P1), Willsammy\_1 (P1), Xavia\_1 (P3), Zilizebeth\_1 (P1),

#### Start 19:

- Found in 11 of 172 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Beenie\_2 (CZ4),

#### Start 24:

- Found in 16 of 172 ( 9.3% ) of genes in pham
- Manual Annotations of this start: 5 of 158
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Coriander\_1 (DB), DirtyBoi\_1 (DB), Dmitri\_1 (DB), Doggs\_1 (DB), Hedwig\_1 (DB), RayTheFireFly\_1 (DB),

#### Start 25:

- Found in 8 of 172 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 6 of 158
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BBQValindra\_1 (DB), BackstagePass\_1 (DB), Bowser\_1 (DB), Bunker\_1 (DB), Eyes\_1 (DB), GEazy\_1 (DB), HannahD\_1 (DB), Mbo4\_1 (singleton),

#### Start 26:

- Found in 3 of 172 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 2 of 158
- Called 66.7% of time when present
- Phage (with cluster) where this start called: DumpsterDude\_1 (DW), Malibo\_1 (DW),

#### Start 27:

- Found in 2 of 172 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Whack\_1 (singleton),

#### Start 28:

- Found in 10 of 172 ( 5.8% ) of genes in pham

- Manual Annotations of this start: 8 of 158
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Annalisa\_2 (CZ4), Clark\_2 (CZ4), Dolores\_2 (CZ4), Easley\_2 (CZ4), MichaelScott\_2 (CZ4), Samman98\_2 (CZ4), Sekhmet\_2 (CZ4), Thimann\_2 (CZ4), WinkNick\_2 (CZ4),

#### Start 29:

- Found in 40 of 172 ( 23.3% ) of genes in pham
- Manual Annotations of this start: 38 of 158
- Called 97.5% of time when present
- Phage (with cluster) where this start called: Adora\_1 (CZ4), Attis\_1 (CZ2), BaxterFox\_1 (CZ3), Bjanes7\_1 (CZ2), Clap\_1 (CZ2), Cynthia\_1 (CZ2), Denise\_1 (CZ5), DobbysSock\_1 (CZ4), Dorito\_1 (CZ4), Ebert\_1 (CZ2), EdnaMode\_1 (CZ2), GemG\_1 (CZ2), Gizermo\_1 (CZ2), Haley23\_1 (CZ2), Hortense\_1 (CZ4), Howe\_1 (CZ4), JCole\_1 (CZ2), Lamberg\_1 (CZ2), LordFarquaad\_1 (CZ2), Matteo\_1 (CZ2), Mocha12\_1 (CZ2), Nettuno\_1 (CZ2), Ohgeesy\_1 (CZ), PantheRoc\_1 (CZ3), Pickett\_1 (CZ2), Powerball\_1 (CZ4), Sahara\_1 (CZ2), Savage\_1 (CZ2), Shlim410\_1 (CZ4), Sidious\_1 (CZ7), SoilAssassin\_1 (CZ2), Sproutie\_1 (CZ2), Suerte\_1 (CZ4), TuertoX\_1 (CZ2), Twinkle\_1 (CZ4), Vasanti\_1 (CZ2), Whiteclaw\_1 (CZ2), Yeet412\_1 (CZ2), Yeezy\_1 (CZ3),

#### Start 30:

- Found in 55 of 172 ( 32.0% ) of genes in pham
- Manual Annotations of this start: 45 of 158
- Called 85.5% of time when present
- Phage (with cluster) where this start called: Archis\_1 (CV), Azula\_1 (CV), Barco\_1 (CV), Begonia\_1 (CV), BlingBling\_1 (CV), Blino\_1 (CV), Blueberry\_1 (CV), CaptainKirk2\_1 (CV), CarolAnn\_1 (CV), Delian\_1 (CV), Fairfaxidum\_1 (CV), Fenry\_1 (CV), Frokostdame\_1 (CV), Gambino\_1 (CV), Guacamole\_1 (CV), Hitter\_1 (CV), Jalammah\_1 (CV), JasperJr\_1 (CV), JuJu\_1 (CV), KappaFarmDelta\_1 (CV), Kiko\_1 (DB), Lysidious\_1 (CV), MagicMan\_1 (DB), Malachai\_1 (CV), Melba\_1 (CV), Mellie\_1 (CV), MintFen\_1 (CV), MissRona\_1 (CV), Murp\_1 (CV), Obliviate\_1 (CV), Opie\_1 (DB), PCoral7\_1 (CV), Petra\_1 (CV), PhrostedPhlake\_1 (CV), Pipp\_1 (CV), PrincePatrick\_1 (CV), Samba\_1 (CV), Schnabeltier\_1 (DB), TaronosaurusRx\_1 (DB), Toast\_1 (CV), UmaThurman\_1 (CV), Walrus\_1 (CV), William\_1 (CV), Wocket\_1 (CV), ZAYM\_1 (DB), Zarbodnamra\_1 (CV), ZiggyZoo\_1 (CV),

#### Start 34:

- Found in 45 of 172 ( 26.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Wisp\_1 (CV),

#### Start 35:

- Found in 1 of 172 ( 0.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 32HC\_1 (Z),

#### Start 36:

- Found in 41 of 172 ( 23.8% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 2.4% of time when present

- Phage (with cluster) where this start called: Utz\_1 (CV),

Start 37:

- Found in 41 of 172 ( 23.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.4% of time when present
- Phage (with cluster) where this start called: Weirido19\_1 (AH),

Start 38:

- Found in 49 of 172 ( 28.5% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Phayonce\_1 (P5),

Start 39:

- Found in 15 of 172 ( 8.7% ) of genes in pham
- Manual Annotations of this start: 2 of 158
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Daegal\_1 (Q), Rem711\_1 (Z),

Start 41:

- Found in 16 of 172 ( 9.3% ) of genes in pham
- Manual Annotations of this start: 1 of 158
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Oregano\_1 (CZ4),

Start 48:

- Found in 40 of 172 ( 23.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.5% of time when present
- Phage (with cluster) where this start called: PhriskyACE\_1 (CZ4),

### **Summary by clusters:**

There are 19 clusters represented in this pham: P2, P3, singleton, P1, P6, P4, P5, CZ2, CZ3, DB, CZ7, CZ4, CZ5, Q, CZ, AH, DW, Z, CV,

Info for manual annotations of cluster CV:

- Start number 30 was manually annotated 41 times for cluster CV.
- Start number 36 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CZ:

- Start number 29 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:

- Start number 29 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 29 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 19 was manually annotated 1 time for cluster CZ4.



- Start number 28 was manually annotated 8 times for cluster CZ4.
- Start number 29 was manually annotated 9 times for cluster CZ4.
- Start number 41 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 29 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ7:

- Start number 29 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DB:

- Start number 24 was manually annotated 5 times for cluster DB.
- Start number 25 was manually annotated 6 times for cluster DB.
- Start number 30 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DW:

- Start number 8 was manually annotated 1 time for cluster DW.
- Start number 26 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster P1:

- Start number 12 was manually annotated 39 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 12 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 12 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 12 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 12 was manually annotated 1 time for cluster P5.
- Start number 38 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 7 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:

- Start number 39 was manually annotated 1 time for cluster Q.

Info for manual annotations of cluster Z:

- Start number 39 was manually annotated 1 time for cluster Z.

### ***Gene Information:***

Gene: 32HC\_1 Start: 209, Stop: 550, Start Num: 35

Candidate Starts for 32HC\_1:

(3, 38), (35, 209), (Start: 39 @236 has 2 MA's), (42, 251), (55, 311), (58, 323), (66, 356), (73, 383), (85, 446), (86, 461),

Gene: Adora\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Adora\_1:

(Start: 29 @14 has 38 MA's), (37, 50), (Start: 39 @62 has 2 MA's), (45, 92), (46, 95), (59, 152), (73, 215), (80, 263),

Gene: Annalisa\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for Annalisa\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (46, 597), (47, 600), (48, 603), (80, 765),

Gene: Archis\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Archis\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Arib1\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Arib1\_1:

(Start: 12 @55 has 44 MA's), (33, 124), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Atcoo\_1 Start: 43, Stop: 432, Start Num: 12

Candidate Starts for Atcoo\_1:

(Start: 12 @43 has 44 MA's), (Start: 38 @139 has 1 MA's), (52, 205), (63, 262), (68, 274), (71, 286), (75, 310), (79, 340),

Gene: Attis\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Attis\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Azula\_1 Start: 57, Stop: 392, Start Num: 30

Candidate Starts for Azula\_1:

(17, 15), (21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81, 303), (83, 309),

Gene: BBQValindra\_1 Start: 176, Stop: 550, Start Num: 25

Candidate Starts for BBQValindra\_1:

(Start: 25 @176 has 6 MA's), (54, 302), (58, 320), (63, 347), (67, 356), (73, 383), (76, 401), (91, 515),

Gene: BackstagePass\_1 Start: 149, Stop: 523, Start Num: 25

Candidate Starts for BackstagePass\_1:

(Start: 25 @149 has 6 MA's), (54, 275), (58, 293), (63, 320), (67, 329), (73, 356), (76, 374), (91, 488),

Gene: Barco\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Barco\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Bartholomew\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Bartholomew\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: BaxterFox\_1 Start: 14, Stop: 346, Start Num: 29  
Candidate Starts for BaxterFox\_1:  
(Start: 29 @14 has 38 MA's), (46, 95), (58, 149), (59, 152), (80, 263),

Gene: Beenie\_2 Start: 486, Stop: 848, Start Num: 19  
Candidate Starts for Beenie\_2:  
(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's),  
(Start: 41 @573 has 1 MA's), (44, 591), (46, 597), (48, 603), (52, 621), (54, 633), (65, 684), (80, 765),

Gene: Begonia\_1 Start: 56, Stop: 397, Start Num: 30  
Candidate Starts for Begonia\_1:  
(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: BigNuz\_1 Start: 43, Stop: 423, Start Num: 12  
Candidate Starts for BigNuz\_1:  
(Start: 7 @16 has 1 MA's), (Start: 12 @43 has 44 MA's), (Start: 38 @130 has 1 MA's), (52, 196), (63, 253), (71, 277), (73, 286), (75, 301), (79, 331),

Gene: Bjaner7\_1 Start: 14, Stop: 346, Start Num: 29  
Candidate Starts for Bjaner7\_1:  
(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: BlingBling\_1 Start: 56, Stop: 397, Start Num: 30  
Candidate Starts for BlingBling\_1:  
(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Blino\_1 Start: 57, Stop: 392, Start Num: 30  
Candidate Starts for Blino\_1:  
(17, 15), (21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81, 303), (83, 309),

Gene: Blueberry\_1 Start: 57, Stop: 392, Start Num: 30  
Candidate Starts for Blueberry\_1:  
(17, 15), (21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81, 303), (83, 309),

Gene: Bogie\_1 Start: 43, Stop: 432, Start Num: 12  
Candidate Starts for Bogie\_1:  
(Start: 12 @43 has 44 MA's), (Start: 38 @139 has 1 MA's), (52, 205), (63, 262), (68, 274), (75, 310), (79, 340),

Gene: Bowser\_1 Start: 176, Stop: 550, Start Num: 25  
Candidate Starts for Bowser\_1:  
(Start: 25 @176 has 6 MA's), (44, 260), (54, 302), (58, 320), (63, 347), (67, 356), (73, 383), (76, 401), (91, 515),

Gene: Brusacoram\_1 Start: 42, Stop: 431, Start Num: 12  
Candidate Starts for Brusacoram\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: Bunker\_1 Start: 176, Stop: 550, Start Num: 25

Candidate Starts for Bunker\_1:

(Start: 25 @176 has 6 MA's), (54, 302), (58, 320), (60, 335), (63, 347), (67, 356), (73, 383), (76, 401), (91, 515),

Gene: Bunnies\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Bunnies\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (71, 298), (75, 322), (79, 352),

Gene: CactusJack\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for CactusJack\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: Camster\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Camster\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: CaptainKirk2\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for CaptainKirk2\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: CarolAnn\_1 Start: 56, Stop: 391, Start Num: 30

Candidate Starts for CarolAnn\_1:

(16, 14), (21, 35), (Start: 30 @56 has 45 MA's), (31, 62), (34, 74), (Start: 36 @89 has 1 MA's), (43, 122), (44, 128), (47, 137), (50, 149), (53, 161), (60, 203), (65, 221), (67, 224), (73, 251), (76, 269), (81, 302), (83, 308),

Gene: Clap\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Clap\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Clark\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for Clark\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (44, 591), (46, 597), (48, 603), (52, 621), (54, 633), (65, 684), (80, 765),

Gene: Coriander\_1 Start: 228, Stop: 614, Start Num: 24

Candidate Starts for Coriander\_1:

(Start: 24 @228 has 5 MA's), (Start: 30 @240 has 45 MA's), (44, 315), (51, 339), (82, 492),

Gene: Cynthia\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Cynthia\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Daegal\_1 Start: 257, Stop: 571, Start Num: 39

Candidate Starts for Daegal\_1:

(1, 14), (4, 71), (5, 92), (Start: 39 @257 has 2 MA's), (45, 287), (47, 293), (48, 296), (52, 314), (58, 344), (59, 347), (69, 392), (71, 416), (73, 425), (79, 470), (84, 485), (89, 536), (92, 563),

Gene: Delian\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Delian\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Denise\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Denise\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (59, 152), (77, 236), (79, 260), (80, 263), (86, 293),

Gene: DirtyBoi\_1 Start: 228, Stop: 614, Start Num: 24

Candidate Starts for DirtyBoi\_1:

(6, 141), (Start: 24 @228 has 5 MA's), (Start: 30 @240 has 45 MA's), (44, 315), (51, 339), (63, 402), (73, 438), (82, 492),

Gene: Dmitri\_1 Start: 228, Stop: 614, Start Num: 24

Candidate Starts for Dmitri\_1:

(Start: 24 @228 has 5 MA's), (Start: 30 @240 has 45 MA's), (34, 258), (44, 315), (51, 339), (73, 438), (82, 492),

Gene: DobbysSock\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for DobbysSock\_1:

(Start: 29 @14 has 38 MA's), (Start: 39 @62 has 2 MA's), (Start: 41 @71 has 1 MA's), (46, 95), (48, 101), (54, 131), (58, 149), (80, 263),

Gene: Doggs\_1 Start: 228, Stop: 614, Start Num: 24

Candidate Starts for Doggs\_1:

(Start: 24 @228 has 5 MA's), (Start: 30 @240 has 45 MA's), (44, 315), (51, 339), (82, 492),

Gene: Dolores\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for Dolores\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (46, 597), (47, 600), (48, 603), (80, 765),

Gene: Donovan\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Donovan\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Dorito\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Dorito\_1:

(Start: 29 @14 has 38 MA's), (Start: 41 @71 has 1 MA's), (46, 95), (48, 101), (80, 263),

Gene: DumpsterDude\_1 Start: 127, Stop: 453, Start Num: 26

Candidate Starts for DumpsterDude\_1:

(Start: 12 @82 has 44 MA's), (Start: 26 @127 has 2 MA's), (37, 166), (46, 211), (49, 220), (53, 238), (56, 256), (64, 295), (76, 340), (83, 379), (88, 412),

Gene: Dynamo\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Dynamo\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Easley\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for Easley\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (44, 591), (46, 597), (48, 603), (52, 621), (54, 633), (65, 684), (80, 765),

Gene: Ebert\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Ebert\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: EdnaMode\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for EdnaMode\_1:

(Start: 29 @14 has 38 MA's), (45, 92), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Eyes\_1 Start: 176, Stop: 550, Start Num: 25

Candidate Starts for Eyes\_1:

(Start: 25 @176 has 6 MA's), (44, 260), (54, 302), (58, 320), (63, 347), (67, 356), (73, 383), (76, 401), (91, 515),

Gene: Fairfaxidum\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Fairfaxidum\_1:

(Start: 30 @56 has 45 MA's), (31, 62), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (46, 134), (47, 137), (56, 179), (57, 185), (60, 203), (67, 224), (71, 242), (80, 299),

Gene: Fenry\_1 Start: 57, Stop: 398, Start Num: 30

Candidate Starts for Fenry\_1:

(Start: 30 @57 has 45 MA's), (34, 75), (Start: 36 @90 has 1 MA's), (37, 93), (44, 129), (46, 135), (47, 138), (53, 162), (60, 204), (67, 225), (73, 252), (76, 270),

Gene: Finkle\_1 Start: 10, Stop: 411, Start Num: 11

Candidate Starts for Finkle\_1:

(9, 1), (Start: 11 @10 has 1 MA's), (32, 82), (76, 298),

Gene: FirstPlacePfu\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for FirstPlacePfu\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Fishburne\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Fishburne\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Frokostdame\_1 Start: 57, Stop: 392, Start Num: 30

Candidate Starts for Frokostdame\_1:

(21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (76, 270), (81, 303), (83, 309),

Gene: GEazy\_1 Start: 176, Stop: 550, Start Num: 25

Candidate Starts for GEazy\_1:

(Start: 25 @176 has 6 MA's), (44, 260), (54, 302), (58, 320), (63, 347), (67, 356), (73, 383), (76, 401), (91, 515),

Gene: Gambino\_1 Start: 57, Stop: 392, Start Num: 30

Candidate Starts for Gambino\_1:

(17, 15), (21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81, 303), (83, 309),

Gene: GemG\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for GemG\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Gizermo\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Gizermo\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Glaske\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for Glaske\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: GreaseLightnin\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for GreaseLightnin\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Guacamole\_1 Start: 57, Stop: 398, Start Num: 30

Candidate Starts for Guacamole\_1:

(15, 12), (Start: 30 @57 has 45 MA's), (34, 75), (Start: 36 @90 has 1 MA's), (37, 93), (46, 135), (47, 138), (53, 162), (54, 171), (67, 225), (73, 252),

Gene: HUHilltop\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for HUHilltop\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Haley23\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Haley23\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: HannahD\_1 Start: 176, Stop: 550, Start Num: 25

Candidate Starts for HannahD\_1:

(Start: 25 @176 has 6 MA's), (44, 260), (54, 302), (58, 320), (63, 347), (67, 356), (73, 383), (76, 401), (91, 515),

Gene: Hedwig\_1 Start: 228, Stop: 614, Start Num: 24

Candidate Starts for Hedwig\_1:

(Start: 24 @228 has 5 MA's), (Start: 30 @240 has 45 MA's), (34, 258), (44, 315), (51, 339), (63, 402), (73, 438), (82, 492),

Gene: Hitter\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Hitter\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Hortense\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Hortense\_1:

(Start: 29 @14 has 38 MA's), (37, 50), (Start: 39 @62 has 2 MA's), (45, 92), (46, 95), (59, 152), (73, 215), (80, 263),

Gene: Howe\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Howe\_1:

(Start: 29 @14 has 38 MA's), (37, 50), (Start: 39 @62 has 2 MA's), (45, 92), (46, 95), (59, 152), (73, 215), (80, 263),

Gene: JCole\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for JCole\_1:

(Start: 29 @14 has 38 MA's), (40, 68), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Jalammah\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Jalammah\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: JasperJr\_1 Start: 57, Stop: 398, Start Num: 30

Candidate Starts for JasperJr\_1:

(15, 12), (Start: 30 @57 has 45 MA's), (34, 75), (Start: 36 @90 has 1 MA's), (37, 93), (46, 135), (47, 138), (53, 162), (54, 171), (67, 225), (73, 252),

Gene: Jebeks\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Jebeks\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: JuJu\_1 Start: 57, Stop: 392, Start Num: 30

Candidate Starts for JuJu\_1:

(21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81, 303), (83, 309),

Gene: Jung\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for Jung\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (75, 309), (79, 339),

Gene: Juniormint\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Juniormint\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: KappaFarmDelta\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for KappaFarmDelta\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (46, 134), (47, 137), (52, 158), (53, 161), (59, 191), (67, 224), (73, 251), (74, 257),

Gene: Kari\_1 Start: 55, Stop: 444, Start Num: 12



Candidate Starts for Kari\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Kiko\_1 Start: 64, Stop: 435, Start Num: 30

Candidate Starts for Kiko\_1:

(Start: 30 @64 has 45 MA's), (54, 181), (58, 199), (63, 226), (73, 259), (82, 313), (90, 379),

Gene: KilKor\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for KilKor\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: Ksquared\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Ksquared\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (71, 298), (75, 322), (79, 352),

Gene: Lamberg\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Lamberg\_1:

(Start: 29 @14 has 38 MA's), (45, 92), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Langerak\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Langerak\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: LordFarquaad\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for LordFarquaad\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Lysidious\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Lysidious\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: MagicMan\_1 Start: 166, Stop: 516, Start Num: 30

Candidate Starts for MagicMan\_1:

(14, 121), (23, 154), (Start: 30 @166 has 45 MA's), (Start: 39 @214 has 2 MA's), (44, 241), (63, 328), (67, 337), (73, 364), (76, 382), (82, 418), (83, 421), (91, 496),

Gene: Majeke\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Majeke\_1:

(Start: 12 @55 has 44 MA's), (33, 124), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Malachai\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Malachai\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Malibo\_1 Start: 127, Stop: 453, Start Num: 26

Candidate Starts for Malibo\_1:

(18, 97), (Start: 26 @127 has 2 MA's), (37, 166), (Start: 39 @178 has 2 MA's), (43, 199), (53, 238), (56, 256),

Gene: Malithi\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Malithi\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Mangethe\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Mangethe\_1:

(Start: 12 @55 has 44 MA's), (33, 124), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Matteo\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Matteo\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Mbo4\_1 Start: 117, Stop: 464, Start Num: 25

Candidate Starts for Mbo4\_1:

(Start: 19 @99 has 1 MA's), (22, 111), (Start: 25 @117 has 6 MA's), (67, 300), (78, 369), (79, 378),

Gene: Megiddo\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for Megiddo\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: Melba\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Melba\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Mellie\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Mellie\_1:

(20, 32), (Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: MichaelScott\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for MichaelScott\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (44, 591), (46, 597), (48, 603), (52, 621), (54, 633), (65, 684), (80, 765),

Gene: MintFen\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for MintFen\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: MissRona\_1 Start: 57, Stop: 392, Start Num: 30

Candidate Starts for MissRona\_1:

(17, 15), (21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81, 303), (83, 309),

Gene: Mocha12\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Mocha12\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Murp\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Murp\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (46, 134), (47, 137), (53, 161), (59, 191), (67, 224), (73, 251), (74, 257),

Gene: Nazo\_1 Start: 43, Stop: 423, Start Num: 12

Candidate Starts for Nazo\_1:

(Start: 7 @16 has 1 MA's), (Start: 12 @43 has 44 MA's), (Start: 38 @130 has 1 MA's), (52, 196), (63, 253), (71, 277), (73, 286), (75, 301), (79, 331),

Gene: Necropolis\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Necropolis\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Nettuno\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Nettuno\_1:

(Start: 29 @14 has 38 MA's), (45, 92), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Obliviate\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Obliviate\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Ohgeesy\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Ohgeesy\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (58, 149), (59, 152), (80, 263),

Gene: Opie\_1 Start: 166, Stop: 516, Start Num: 30

Candidate Starts for Opie\_1:

(Start: 30 @166 has 45 MA's), (Start: 39 @214 has 2 MA's), (44, 241), (63, 328), (67, 337), (73, 364), (82, 418), (83, 421), (91, 496),

Gene: Oregano\_1 Start: 101, Stop: 376, Start Num: 41

Candidate Starts for Oregano\_1:

(Start: 41 @101 has 1 MA's), (46, 125), (48, 131), (80, 293),

Gene: PCoral7\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for PCoral7\_1:

(Start: 30 @56 has 45 MA's), (31, 62), (34, 74), (37, 92), (46, 134), (47, 137), (57, 185), (60, 203), (67, 224), (71, 242), (80, 299),

Gene: PantheRoc\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for PantheRoc\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (58, 149), (59, 152), (80, 263),

Gene: Petra\_1 Start: 57, Stop: 392, Start Num: 30

Candidate Starts for Petra\_1:

(17, 15), (21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81,

303), (83, 309),

Gene: Phalm\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for Phalm\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: Phayonce\_1 Start: 139, Stop: 432, Start Num: 38

Candidate Starts for Phayonce\_1:

(Start: 12 @55 has 44 MA's), (21, 91), (Start: 38 @139 has 1 MA's), (46, 181), (52, 205), (58, 235), (63, 262), (73, 295), (75, 310), (76, 313), (79, 340),

Gene: Phegasus\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Phegasus\_1:

(Start: 12 @55 has 44 MA's), (33, 124), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Phineas\_1 Start: 43, Stop: 432, Start Num: 12

Candidate Starts for Phineas\_1:

(Start: 12 @43 has 44 MA's), (Start: 38 @139 has 1 MA's), (52, 205), (63, 262), (68, 274), (75, 310), (79, 340),

Gene: PhriskyACE\_1 Start: 101, Stop: 346, Start Num: 48

Candidate Starts for PhriskyACE\_1:

(Start: 29 @14 has 38 MA's), (Start: 41 @71 has 1 MA's), (46, 95), (48, 101), (80, 263),

Gene: PhrostedPhlake\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for PhrostedPhlake\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (46, 134), (47, 137), (53, 161), (60, 203), (67, 224), (73, 251),

Gene: Pickett\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Pickett\_1:

(Start: 29 @14 has 38 MA's), (45, 92), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Pipp\_1 Start: 55, Stop: 396, Start Num: 30

Candidate Starts for Pipp\_1:

(13, 1), (Start: 30 @55 has 45 MA's), (34, 73), (Start: 36 @88 has 1 MA's), (37, 91), (44, 127), (46, 133), (47, 136), (53, 160), (60, 202), (67, 223), (73, 250),

Gene: Polkaroo\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Polkaroo\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Powerball\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Powerball\_1:

(Start: 29 @14 has 38 MA's), (Start: 41 @71 has 1 MA's), (46, 95), (48, 101), (80, 263),

Gene: PrincePatrick\_1 Start: 57, Stop: 398, Start Num: 30

Candidate Starts for PrincePatrick\_1:

(Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (37, 93), (46, 135), (47, 138), (56, 180), (57, 186), (60, 204), (67, 225), (71, 243), (80, 300),

Gene: Purky\_1 Start: 16, Stop: 432, Start Num: 7

Candidate Starts for Purky\_1:

(Start: 7 @16 has 1 MA's), (10, 40), (Start: 12 @55 has 44 MA's), (Start: 38 @139 has 1 MA's), (46, 181), (52, 205), (63, 262), (71, 286), (73, 295), (75, 310), (79, 340),

Gene: Pygmy\_1 Start: 43, Stop: 432, Start Num: 12

Candidate Starts for Pygmy\_1:

(Start: 12 @43 has 44 MA's), (Start: 38 @139 has 1 MA's), (52, 205), (63, 262), (68, 274), (75, 310), (79, 340),

Gene: RayTheFireFly\_1 Start: 228, Stop: 614, Start Num: 24

Candidate Starts for RayTheFireFly\_1:

(Start: 24 @228 has 5 MA's), (Start: 30 @240 has 45 MA's), (44, 315), (51, 339), (73, 438), (82, 492),

Gene: Rem711\_1 Start: 226, Stop: 540, Start Num: 39

Candidate Starts for Rem711\_1:

(3, 37), (Start: 39 @226 has 2 MA's), (42, 241), (55, 301), (58, 313), (66, 346), (73, 373), (85, 436), (86, 451),

Gene: Ruthy\_1 Start: 43, Stop: 453, Start Num: 8

Candidate Starts for Ruthy\_1:

(Start: 8 @43 has 1 MA's), (Start: 12 @82 has 44 MA's), (Start: 26 @127 has 2 MA's), (37, 166), (Start: 39 @178 has 2 MA's), (46, 211), (49, 220), (53, 238), (56, 256), (59, 268), (64, 295), (72, 316), (76, 340), (83, 379),

Gene: Sahara\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Sahara\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152), (65, 182), (70, 197), (73, 215),

Gene: Samba\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Samba\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Samman98\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for Samman98\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (46, 597), (47, 600), (48, 603), (80, 765),

Gene: Savage\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Savage\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Schnabeltier\_1 Start: 167, Stop: 517, Start Num: 30

Candidate Starts for Schnabeltier\_1:

(14, 122), (23, 155), (Start: 30 @167 has 45 MA's), (Start: 39 @215 has 2 MA's), (44, 242), (63, 329), (67, 338), (73, 365), (76, 383), (82, 419), (83, 422), (91, 497),

Gene: Sekhmet\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for Sekhmet\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (46, 597), (48, 603), (58, 651), (80, 765),

Gene: Shipwreck\_1 Start: 43, Stop: 432, Start Num: 12

Candidate Starts for Shipwreck\_1:

(Start: 12 @43 has 44 MA's), (Start: 38 @139 has 1 MA's), (52, 205), (63, 262), (68, 274), (75, 310), (79, 340),

Gene: Shlim410\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Shlim410\_1:

(Start: 29 @14 has 38 MA's), (37, 50), (Start: 39 @62 has 2 MA's), (45, 92), (46, 95), (59, 152), (73, 215), (80, 263),

Gene: Sidious\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Sidious\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (59, 152), (63, 176), (70, 197), (80, 263),

Gene: SoilAssassin\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for SoilAssassin\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Sonah\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Sonah\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Sproutie\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Sproutie\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: StevieRay\_1 Start: 43, Stop: 432, Start Num: 12

Candidate Starts for StevieRay\_1:

(Start: 12 @43 has 44 MA's), (Start: 38 @139 has 1 MA's), (52, 205), (63, 262), (68, 274), (71, 286), (75, 310), (79, 340),

Gene: StressBall\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for StressBall\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: Suerte\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Suerte\_1:

(Start: 29 @14 has 38 MA's), (Start: 41 @71 has 1 MA's), (46, 95), (48, 101), (80, 263),

Gene: TaronosaurusRx\_1 Start: 167, Stop: 517, Start Num: 30

Candidate Starts for TaronosaurusRx\_1:

(14, 122), (23, 155), (Start: 30 @167 has 45 MA's), (44, 242), (63, 329), (67, 338), (73, 365), (76, 383), (82, 419), (83, 422), (91, 497),

Gene: Techage\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Techage\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Thespis\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for Thespis\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: Thimann\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for Thimann\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (46, 597), (48, 603), (54, 633), (80, 765),

Gene: ThulaThula\_1 Start: 55, Stop: 432, Start Num: 12

Candidate Starts for ThulaThula\_1:

(Start: 12 @55 has 44 MA's), (21, 91), (Start: 38 @139 has 1 MA's), (44, 175), (46, 181), (52, 205), (58, 235), (63, 262), (75, 310), (76, 313), (79, 340),

Gene: Toast\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Toast\_1:

(Start: 30 @56 has 45 MA's), (31, 62), (34, 74), (37, 92), (46, 134), (47, 137), (57, 185), (60, 203), (67, 224), (71, 242), (80, 299),

Gene: Tortellini\_1 Start: 43, Stop: 432, Start Num: 12

Candidate Starts for Tortellini\_1:

(Start: 12 @43 has 44 MA's), (Start: 27 @94 has 1 MA's), (Start: 38 @139 has 1 MA's), (44, 175), (52, 205), (73, 295), (75, 310), (79, 340),

Gene: TuertoX\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for TuertoX\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Twinkle\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Twinkle\_1:

(Start: 29 @14 has 38 MA's), (37, 50), (Start: 39 @62 has 2 MA's), (45, 92), (46, 95), (59, 152), (73, 215), (80, 263),

Gene: UmaThurman\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for UmaThurman\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (60, 203), (67, 224), (73, 251),

Gene: Utz\_1 Start: 89, Stop: 397, Start Num: 36

Candidate Starts for Utz\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (60, 203), (67, 224), (73, 251),

Gene: Vasanti\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Vasanti\_1:

(Start: 29 @14 has 38 MA's), (45, 92), (46, 95), (47, 98), (59, 152), (73, 215), (80, 263),

Gene: Venti\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Venti\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (46, 193), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Vidya\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Vidya\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),

Gene: Walrus\_1 Start: 57, Stop: 392, Start Num: 30

Candidate Starts for Walrus\_1:

(17, 15), (21, 36), (Start: 30 @57 has 45 MA's), (31, 63), (34, 75), (Start: 36 @90 has 1 MA's), (43, 123), (44, 129), (47, 138), (50, 150), (53, 162), (60, 204), (65, 222), (67, 225), (73, 252), (76, 270), (81, 303), (83, 309),

Gene: Weirido19\_1 Start: 209, Stop: 565, Start Num: 37

Candidate Starts for Weirido19\_1:

(2, 14), (4, 47), (37, 209), (52, 278), (59, 311), (61, 332), (62, 335), (76, 431), (84, 473), (87, 500),

Gene: Whack\_1 Start: 53, Stop: 403, Start Num: 27

Candidate Starts for Whack\_1:

(Start: 27 @53 has 1 MA's), (Start: 39 @107 has 2 MA's), (58, 194), (63, 221), (73, 263), (79, 308), (83, 320),

Gene: Whiteclaw\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Whiteclaw\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: William\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for William\_1:

(Start: 30 @56 has 45 MA's), (31, 62), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (46, 134), (47, 137), (56, 179), (57, 185), (58, 188), (60, 203), (71, 242), (80, 299),

Gene: Willsammy\_1 Start: 42, Stop: 431, Start Num: 12

Candidate Starts for Willsammy\_1:

(Start: 12 @42 has 44 MA's), (Start: 38 @138 has 1 MA's), (52, 204), (63, 261), (68, 273), (71, 285), (75, 309), (79, 339),

Gene: WinkNick\_2 Start: 510, Stop: 848, Start Num: 28

Candidate Starts for WinkNick\_2:

(Start: 19 @486 has 1 MA's), (21, 492), (Start: 24 @501 has 5 MA's), (Start: 28 @510 has 8 MA's), (Start: 41 @573 has 1 MA's), (46, 597), (47, 600), (48, 603), (80, 765),

Gene: Wisp\_1 Start: 74, Stop: 397, Start Num: 34

Candidate Starts for Wisp\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Wocket\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Wocket\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (60, 203), (67, 224), (73, 251),

Gene: Xavia\_1 Start: 55, Stop: 435, Start Num: 12

Candidate Starts for Xavia\_1:

(Start: 7 @16 has 1 MA's), (Start: 12 @55 has 44 MA's), (Start: 38 @142 has 1 MA's), (46, 184), (47, 187), (52, 208), (63, 265), (68, 277), (71, 289), (73, 298), (75, 313), (79, 343),



Gene: Yeet412\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Yeet412\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (47, 98), (48, 101), (59, 152),

Gene: Yeezy\_1 Start: 14, Stop: 346, Start Num: 29

Candidate Starts for Yeezy\_1:

(Start: 29 @14 has 38 MA's), (46, 95), (58, 149), (59, 152), (80, 263),

Gene: ZAYM\_1 Start: 166, Stop: 516, Start Num: 30

Candidate Starts for ZAYM\_1:

(14, 121), (23, 154), (Start: 30 @166 has 45 MA's), (44, 241), (63, 328), (67, 337), (73, 364), (76, 382), (82, 418), (83, 421), (91, 496),

Gene: Zarbodnamra\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for Zarbodnamra\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (37, 92), (44, 128), (46, 134), (47, 137), (53, 161), (60, 203), (67, 224), (73, 251),

Gene: ZiggyZoo\_1 Start: 56, Stop: 397, Start Num: 30

Candidate Starts for ZiggyZoo\_1:

(Start: 30 @56 has 45 MA's), (34, 74), (Start: 36 @89 has 1 MA's), (46, 134), (47, 137), (53, 161), (67, 224), (73, 251),

Gene: Zilizebeth\_1 Start: 55, Stop: 444, Start Num: 12

Candidate Starts for Zilizebeth\_1:

(Start: 12 @55 has 44 MA's), (Start: 38 @151 has 1 MA's), (52, 217), (63, 274), (68, 286), (75, 322), (79, 352),