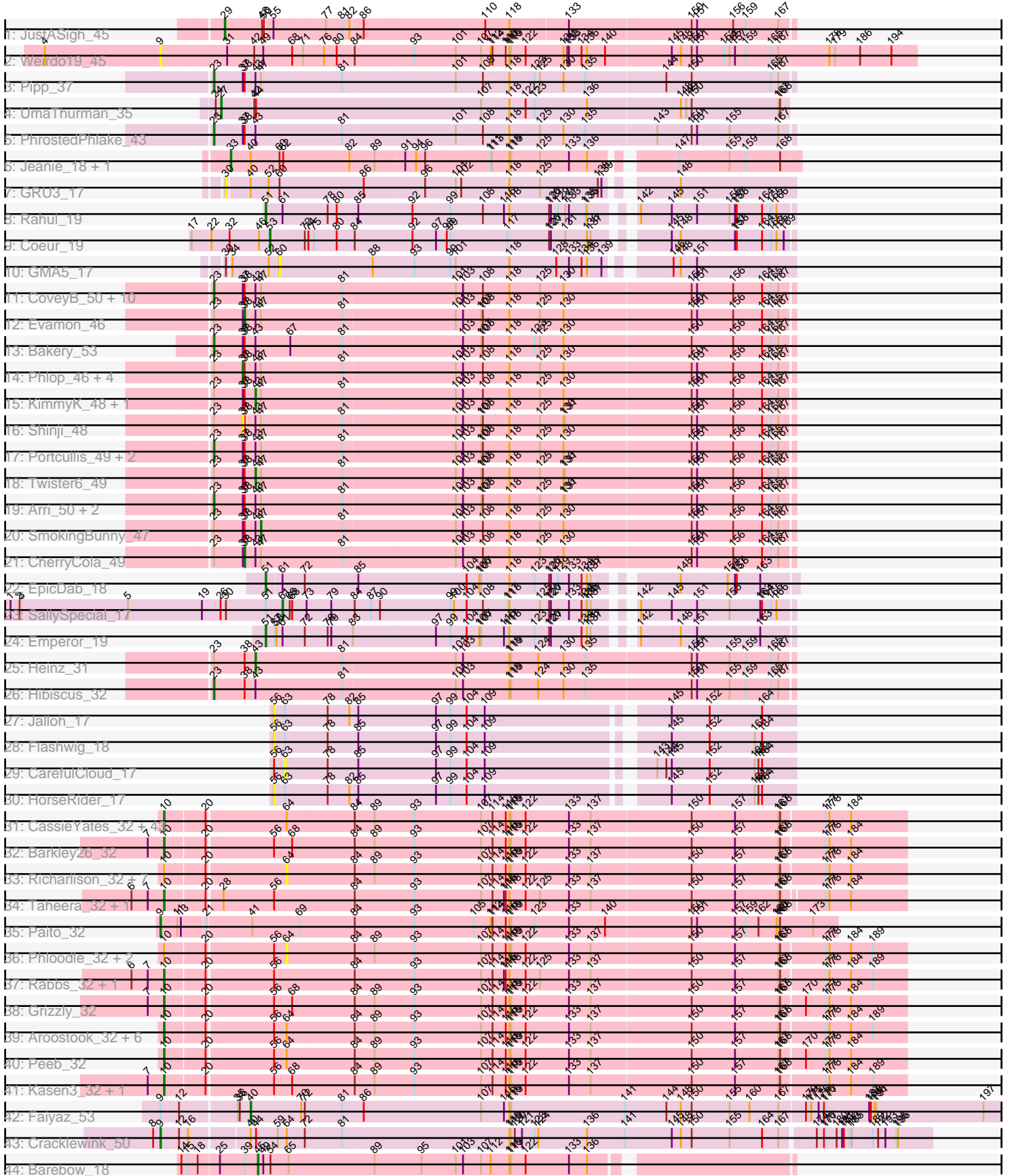


Pham 294542



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 294542 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294542 has 125 members, 19 are drafts.

Phages represented in each track:

- Track 1 : JustASigh\_45
- Track 2 : Weirdo19\_45
- Track 3 : Pipp\_37
- Track 4 : UmaThurman\_35
- Track 5 : PhrostedPhlake\_43
- Track 6 : Jeanie\_18, McGonagall\_18
- Track 7 : GRU3\_17
- Track 8 : Rahul\_19
- Track 9 : Coeur\_19
- Track 10 : GMA5\_17
- Track 11 : CoveyB\_50, Egi03\_47, Valary\_49, Jambalaya\_47, Nubi\_47, PullumCavea\_46, ClamChowder\_49, Mutzi\_47, VanDeWege\_50, Savbucketdawg\_47, Gezellig\_46
- Track 12 : Evamon\_46
- Track 13 : Bakery\_53
- Track 14 : Phlop\_46, Wizard\_46, Barb\_49, PinkCoffee\_49, Fugax\_50
- Track 15 : KimmyK\_48, Togo\_46
- Track 16 : Shinji\_48
- Track 17 : Portcullis\_49, Halo3\_48, Salvador\_46
- Track 18 : Twister6\_49
- Track 19 : Arri\_50, Danyall\_49, RogerDodger\_50
- Track 20 : SmokingBunny\_47
- Track 21 : CherryCola\_49
- Track 22 : EpicDab\_18
- Track 23 : SallySpecial\_17
- Track 24 : Emperor\_19
- Track 25 : Heinz\_31
- Track 26 : Hibiscus\_32
- Track 27 : Jalloh\_17
- Track 28 : Flashwig\_18
- Track 29 : CarefulCloud\_17
- Track 30 : HorseRider\_17
- Track 31 : CassieYates\_32, BruceB\_32, Angel\_32, TinaBug\_32, Coleslaw\_32, Sweets\_32, Halo\_32, GoldenAsh\_32, BQuat\_32, Annihilator\_32, BPs\_32, Gideon\_32, Kareem\_32, ShaboiShabazz\_32, Frosty24\_32, AzulaCat\_32, Cherrybomb426\_32, Cedasite\_32, LouisV14\_32, Plagueis\_32, Zombie\_32, Hope\_32, Darionha\_32, Crespo\_32, Mowgli\_32, TomBrady\_32, DMoney\_32, Marmie\_32,

OctaviousRex\_32, Jane\_32, Camri\_32, Renaissance\_32, JorRay\_32, Phreak\_32, Remy19\_32, CLED96\_32, Avrafan\_32, Gomashi\_32, ZoMa\_32, Schiebel\_32, PinkYoshi\_32, Hotshotbaby7\_32, Olga\_32, Phish\_32

- Track 32 : Barkley26\_32
- Track 33 : Richarlison\_32, Maliketh\_32, Jeilious\_32, Neoh\_32, DingDing\_32, MZKinsey\_32, Wendigo\_32, Ruriko\_32
- Track 34 : Taheera\_32, Terror\_32
- Track 35 : Paito\_32
- Track 36 : Phloodle\_32, AizenPogi\_32, Rattrick\_32
- Track 37 : Rabbs\_32, Sneeze\_32
- Track 38 : Grizzly\_32
- Track 39 : Aroostook\_32, Chance64\_32, ECartman\_32, Liefie\_32, Periodt\_32, Jonghyun\_32, Jolene\_32
- Track 40 : Peeb\_32
- Track 41 : Kasen3\_32, Sizemore\_32
- Track 42 : Faiyaz\_53
- Track 43 : Cracklewink\_50
- Track 44 : Barebow\_18

### ***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 60 of the 106 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Angel\_32, Annihilator\_32, Aroostook\_32, Avrafan\_32, AzulaCat\_32, BPs\_32, BQuat\_32, Barkley26\_32, BruceB\_32, CLED96\_32, Camri\_32, CassieYates\_32, Cedasite\_32, Chance64\_32, Cherrybomb426\_32, Coleslaw\_32, Crespo\_32, DMoney\_32, Darionha\_32, ECartman\_32, Frosty24\_32, Gideon\_32, GoldenAsh\_32, Gomashi\_32, Grizzly\_32, Halo\_32, Hope\_32, Hotshotbaby7\_32, Jane\_32, Jolene\_32, Jonghyun\_32, JorRay\_32, Kareem\_32, Kasen3\_32, Liefie\_32, LouisV14\_32, Marmie\_32, Mowgli\_32, OctaviousRex\_32, Olga\_32, Peeb\_32, Periodt\_32, Phish\_32, Phreak\_32, PinkYoshi\_32, Plagueis\_32, Rabbs\_32, Remy19\_32, Renaissance\_32, Schiebel\_32, ShaboiShabazz\_32, Sizemore\_32, Sneeze\_32, Sweets\_32, Taheera\_32, Terror\_32, TinaBug\_32, TomBrady\_32, ZoMa\_32, Zombie\_32,

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

- AizenPogi\_32, DingDing\_32, Jeilious\_32, MZKinsey\_32, Maliketh\_32, Neoh\_32, Phloodle\_32, Rattrick\_32, Richarlison\_32, Ruriko\_32, Wendigo\_32,

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

- Arri\_50, Bakery\_53, Barb\_49, Barebow\_18, CarefulCloud\_17, CherryCola\_49, ClamChowder\_49, Coeur\_19, CoveyB\_50, Cracklewink\_50, Danyall\_49, Egi03\_47, Emperor\_19, EpicDab\_18, Evamon\_46, Faiyaz\_53, Flashwig\_18, Fugax\_50, GMA5\_17, GRU3\_17, Gezellig\_46, Halo3\_48, Heinz\_31, Hibiscus\_32, HorseRider\_17, Jalloh\_17, Jambalaya\_47, Jeanie\_18, JustASigh\_45, KimmyK\_48, McGonagall\_18, Mutzi\_47, Nubi\_47, Paito\_32, Phlop\_46, PhrostedPhlake\_43, PinkCoffee\_49, Pipp\_37, Portcullis\_49, PullumCavea\_46, Rahul\_19, RogerDodger\_50, SallySpecial\_17, Salvador\_46, Savbucketdawg\_47, Shinji\_48,

SmokingBunny\_47, Togo\_46, Twister6\_49, UmaThurman\_35, Valary\_49, VanDeWege\_50, Weirido19\_45, Wizard\_46,

### Summary by start number:

#### Start 9:

- Found in 4 of 125 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 2 of 106
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Cracklewink\_50 (Y), Paito\_32 (G1), Weirido19\_45 (AH),

#### Start 10:

- Found in 71 of 125 ( 56.8% ) of genes in pham
- Manual Annotations of this start: 60 of 106
- Called 84.5% of time when present
- Phage (with cluster) where this start called: Angel\_32 (G1), Annihilator\_32 (G1), Aroostook\_32 (G1), Avrafan\_32 (G1), AzulaCat\_32 (G1), BPs\_32 (G1), BQuat\_32 (G1), Barkley26\_32 (G1), BruceB\_32 (G1), CLED96\_32 (G1), Camri\_32 (G1), CassieYates\_32 (G1), Cedasite\_32 (G1), Chance64\_32 (G1), Cherrybomb426\_32 (G1), Coleslaw\_32 (G1), Crespo\_32 (G1), DMoney\_32 (G1), Darionha\_32 (G1), ECartman\_32 (G1), Frosty24\_32 (G1), Gideon\_32 (G1), GoldenAsh\_32 (G1), Gomashi\_32 (G1), Grizzly\_32 (G1), Halo\_32 (G1), Hope\_32 (G1), Hotshotbaby7\_32 (G1), Jane\_32 (G1), Jolene\_32 (G1), Jonghyun\_32 (G1), JorRay\_32 (G1), Kareem\_32 (G1), Kasen3\_32 (G1), Liefie\_32 (G1), LouisV14\_32 (G1), Marmie\_32 (G1), Mowgli\_32 (G1), OctaviousRex\_32 (G1), Olga\_32 (G1), Peeb\_32 (G1), Periodt\_32 (G1), Phish\_32 (G1), Phreak\_32 (G1), PinkYoshi\_32 (G1), Plagueis\_32 (G1), Rabbs\_32 (G1), Remy19\_32 (G1), Renaissance\_32 (G1), Schiebel\_32 (G1), ShaboiShabazz\_32 (G1), Sizemore\_32 (G1), Sneeze\_32 (G1), Sweets\_32 (G1), Taheera\_32 (G1), Terror\_32 (G1), TinaBug\_32 (G1), TomBrady\_32 (G1), ZoMa\_32 (G1), Zombie\_32 (G1),

#### Start 23:

- Found in 34 of 125 ( 27.2% ) of genes in pham
- Manual Annotations of this start: 21 of 106
- Called 61.8% of time when present
- Phage (with cluster) where this start called: Arri\_50 (DC1), Bakery\_53 (DC1), ClamChowder\_49 (DC1), CoveyB\_50 (DC1), Danyall\_49 (DC1), Egi03\_47 (DC1), Gezellig\_46 (DC1), Halo3\_48 (DC1), Hibiscus\_32 (DY), Jambalaya\_47 (DC1), Mutzi\_47 (DC1), Nubi\_47 (DC1), PhrostedPhlake\_43 (CV), Pipp\_37 (CV), Portcullis\_49 (DC1), PullumCavea\_46 (DC1), RogerDodger\_50 (DC1), Salvador\_46 (DC1), Savbucketdawg\_47 (DC1), Valary\_49 (DC1), VanDeWege\_50 (DC1),

#### Start 27:

- Found in 1 of 125 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 106
- Called 100.0% of time when present
- Phage (with cluster) where this start called: UmaThurman\_35 (CV),

#### Start 29:

- Found in 1 of 125 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 106
- Called 100.0% of time when present

- Phage (with cluster) where this start called: JustASigh\_45 (AH),

Start 30:

- Found in 3 of 125 ( 2.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GRU3\_17 (CW2),

Start 33:

- Found in 2 of 125 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 106
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jeanie\_18 (CW1), McGonagall\_18 (CW1),

Start 37:

- Found in 32 of 125 ( 25.6% ) of genes in pham
- Manual Annotations of this start: 5 of 106
- Called 18.8% of time when present
- Phage (with cluster) where this start called: Barb\_49 (DC1), Fugax\_50 (DC1), Phlop\_46 (DC1), PinkCoffee\_49 (DC1), Shinji\_48 (DC1), Wizard\_46 (DC1),

Start 38:

- Found in 34 of 125 ( 27.2% ) of genes in pham
- Manual Annotations of this start: 2 of 106
- Called 5.9% of time when present
- Phage (with cluster) where this start called: CherryCola\_49 (DC1), Evamon\_46 (DC1),

Start 40:

- Found in 5 of 125 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 1 of 106
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Faiyaz\_53 (Y),

Start 43:

- Found in 34 of 125 ( 27.2% ) of genes in pham
- Manual Annotations of this start: 4 of 106
- Called 11.8% of time when present
- Phage (with cluster) where this start called: Heinz\_31 (DY), KimmyK\_48 (DC1), Togo\_46 (DC1), Twister6\_49 (DC1),

Start 45:

- Found in 1 of 125 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 106
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barebow\_18 (singleton),

Start 47:

- Found in 30 of 125 ( 24.0% ) of genes in pham
- Manual Annotations of this start: 1 of 106
- Called 3.3% of time when present
- Phage (with cluster) where this start called: SmokingBunny\_47 (DC1),

Start 51:

- Found in 4 of 125 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 3 of 106
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Emperor\_19 (DM), EpicDab\_18 (DM), Rahul\_19 (CW2),

Start 53:

- Found in 1 of 125 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 106
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Coeur\_19 (CW2),

Start 56:

- Found in 23 of 125 ( 18.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 13.0% of time when present
- Phage (with cluster) where this start called: Flashwig\_18 (ER), HorseRider\_17 (ER), Jalloh\_17 (ER),

Start 60:

- Found in 4 of 125 ( 3.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: GMA5\_17 (CW2),

Start 61:

- Found in 4 of 125 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 1 of 106
- Called 25.0% of time when present
- Phage (with cluster) where this start called: SallySpecial\_17 (DM),

Start 63:

- Found in 4 of 125 ( 3.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: CarefulCloud\_17 (ER),

Start 64:

- Found in 64 of 125 ( 51.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 17.2% of time when present
- Phage (with cluster) where this start called: AizenPogi\_32 (G1), DingDing\_32 (G1), Jeilious\_32 (G), MZKinsey\_32 (G1), Maliketh\_32 (G1), Neoh\_32 (G), Phloodle\_32 (G1), Rattrick\_32 (G1), Richarlison\_32 (G1), Ruriko\_32 (G1), Wendigo\_32 (G1),

**Summary by clusters:**

There are 12 clusters represented in this pham: singleton, DM, G, G1, CW1, AH, CW2, DY, Y, DC1, CV, ER,

Info for manual annotations of cluster AH:

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

Info for manual annotations of cluster CV:

- Start number 23 was manually annotated 2 times for cluster CV.
- Start number 27 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CW1:

- Start number 33 was manually annotated 2 times for cluster CW1.

Info for manual annotations of cluster CW2:

- Start number 51 was manually annotated 1 time for cluster CW2.
- Start number 53 was manually annotated 1 time for cluster CW2.

Info for manual annotations of cluster DC1:

- Start number 23 was manually annotated 18 times for cluster DC1.
- Start number 37 was manually annotated 5 times for cluster DC1.
- Start number 38 was manually annotated 2 times for cluster DC1.
- Start number 43 was manually annotated 3 times for cluster DC1.
- Start number 47 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster DM:

- Start number 51 was manually annotated 2 times for cluster DM.
- Start number 61 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster DY:

- Start number 23 was manually annotated 1 time for cluster DY.
- Start number 43 was manually annotated 1 time for cluster DY.

Info for manual annotations of cluster G1:

- Start number 9 was manually annotated 1 time for cluster G1.
- Start number 10 was manually annotated 60 times for cluster G1.

Info for manual annotations of cluster Y:

- Start number 9 was manually annotated 1 time for cluster Y.
- Start number 40 was manually annotated 1 time for cluster Y.

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

Gene: AizenPogi\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for AizenPogi\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813), (189, 27777),

Gene: Angel\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Angel\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137,

28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Annihilator\_32 Start: 28908, Stop: 27712, Start Num: 10

Candidate Starts for Annihilator\_32:

(Start: 10 @28908 has 60 MA's), (20, 28845), (64, 28719), (84, 28611), (89, 28578), (93, 28512), (107, 28401), (114, 28383), (116, 28362), (118, 28356), (119, 28353), (122, 28329), (133, 28257), (137, 28221), (150, 28062), (157, 27990), (167, 27918), (168, 27915), (177, 27846), (178, 27840), (184, 27804),

Gene: Aroostook\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Aroostook\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813), (189, 27777),

Gene: Arri\_50 Start: 39538, Stop: 38603, Start Num: 23

Candidate Starts for Arri\_50:

(Start: 23 @39538 has 21 MA's), (Start: 37 @39490 has 5 MA's), (Start: 38 @39487 has 2 MA's), (Start: 43 @39469 has 4 MA's), (Start: 47 @39460 has 1 MA's), (81, 39328), (101, 39145), (103, 39133), (107, 39103), (108, 39100), (118, 39058), (125, 39007), (130, 38968), (131, 38965), (150, 38764), (151, 38755), (156, 38695), (164, 38647), (165, 38632), (167, 38620),

Gene: Avrafan\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Avrafan\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: AzulaCat\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for AzulaCat\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: BPs\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for BPs\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: BQuat\_32 Start: 28908, Stop: 27712, Start Num: 10

Candidate Starts for BQuat\_32:

(Start: 10 @28908 has 60 MA's), (20, 28845), (64, 28719), (84, 28611), (89, 28578), (93, 28512), (107, 28401), (114, 28383), (116, 28362), (118, 28356), (119, 28353), (122, 28329), (133, 28257), (137, 28221), (150, 28062), (157, 27990), (167, 27918), (168, 27915), (177, 27846), (178, 27840), (184, 27804),

Gene: Bakery\_53 Start: 40679, Stop: 39744, Start Num: 23

Candidate Starts for Bakery\_53:

(Start: 23 @40679 has 21 MA's), (Start: 37 @40631 has 5 MA's), (Start: 38 @40628 has 2 MA's), (Start: 43 @40610 has 4 MA's), (67, 40553), (81, 40469), (103, 40274), (107, 40244), (108, 40241), (118, 40199), (123, 40157), (125, 40148), (130, 40109), (150, 39905), (156, 39836), (164, 39788), (165, 39773), (167, 39761),

Gene: Barb\_49 Start: 39609, Stop: 38722, Start Num: 37

Candidate Starts for Barb\_49:

(Start: 23 @39657 has 21 MA's), (Start: 37 @39609 has 5 MA's), (Start: 38 @39606 has 2 MA's), (Start: 43 @39588 has 4 MA's), (Start: 47 @39579 has 1 MA's), (81, 39447), (101, 39264), (103, 39252), (108, 39219), (118, 39177), (125, 39126), (130, 39087), (150, 38883), (151, 38874), (156, 38814), (164, 38766), (165, 38751), (167, 38739),

Gene: Barebow\_18 Start: 15231, Stop: 14389, Start Num: 45

Candidate Starts for Barebow\_18:

(14, 15354), (15, 15345), (18, 15327), (25, 15294), (39, 15252), (Start: 45 @15231 has 1 MA's), (49, 15222), (54, 15210), (65, 15180), (89, 15039), (95, 14964), (101, 14907), (103, 14895), (107, 14865), (112, 14850), (118, 14820), (119, 14817), (122, 14793), (133, 14721), (136, 14691),

Gene: Barkley26\_32 Start: 28939, Stop: 27743, Start Num: 10

Candidate Starts for Barkley26\_32:

(7, 28963), (Start: 10 @28939 has 60 MA's), (20, 28876), (56, 28771), (68, 28741), (84, 28642), (89, 28609), (93, 28543), (107, 28432), (114, 28414), (116, 28393), (118, 28387), (119, 28384), (122, 28360), (133, 28288), (137, 28252), (150, 28093), (157, 28021), (167, 27949), (168, 27946), (177, 27877), (178, 27871), (184, 27835),

Gene: BruceB\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for BruceB\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: CLED96\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for CLED96\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Camri\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Camri\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: CarefulCloud\_17 Start: 12328, Stop: 11525, Start Num: 63

Candidate Starts for CarefulCloud\_17:

(56, 12346), (63, 12328), (78, 12259), (85, 12211), (97, 12082), (99, 12058), (104, 12031), (109, 12001), (143, 11755), (144, 11740), (145, 11731), (152, 11668), (161, 11593), (162, 11587), (164, 11581),

Gene: CassieYates\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for CassieYates\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Cedasite\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Cedasite\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Chance64\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Chance64\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813), (189, 27777),

Gene: CherryCola\_49 Start: 40260, Stop: 39376, Start Num: 38

Candidate Starts for CherryCola\_49:

(Start: 23 @40311 has 21 MA's), (Start: 37 @40263 has 5 MA's), (Start: 38 @40260 has 2 MA's), (Start: 43 @40242 has 4 MA's), (Start: 47 @40233 has 1 MA's), (81, 40101), (101, 39918), (103, 39906), (108, 39873), (118, 39831), (125, 39780), (130, 39741), (150, 39537), (151, 39528), (156, 39468), (164, 39420), (165, 39405), (167, 39393),

Gene: Cherrybomb426\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Cherrybomb426\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: ClamChowder\_49 Start: 39657, Stop: 38722, Start Num: 23

Candidate Starts for ClamChowder\_49:

(Start: 23 @39657 has 21 MA's), (Start: 37 @39609 has 5 MA's), (Start: 38 @39606 has 2 MA's), (Start: 43 @39588 has 4 MA's), (Start: 47 @39579 has 1 MA's), (81, 39447), (101, 39264), (103, 39252), (108, 39219), (118, 39177), (125, 39126), (130, 39087), (150, 38883), (151, 38874), (156, 38814), (164, 38766), (165, 38751), (167, 38739),

Gene: Coeur\_19 Start: 13884, Stop: 13063, Start Num: 53

Candidate Starts for Coeur\_19:

(17, 14010), (22, 13980), (32, 13950), (46, 13902), (Start: 53 @13884 has 1 MA's), (72, 13827), (74, 13821), (75, 13812), (80, 13776), (84, 13746), (92, 13653), (97, 13614), (98, 13596), (99, 13590), (117, 13497), (126, 13428), (127, 13425), (131, 13401), (136, 13365), (137, 13359), (145, 13263), (148, 13248), (157, 13158), (158, 13155), (164, 13113), (165, 13098), (166, 13089), (169, 13077),

Gene: Coleslaw\_32 Start: 28908, Stop: 27712, Start Num: 10

Candidate Starts for Coleslaw\_32:

(Start: 10 @28908 has 60 MA's), (20, 28845), (64, 28719), (84, 28611), (89, 28578), (93, 28512), (107, 28401), (114, 28383), (116, 28362), (118, 28356), (119, 28353), (122, 28329), (133, 28257), (137,

28221), (150, 28062), (157, 27990), (167, 27918), (168, 27915), (177, 27846), (178, 27840), (184, 27804),

Gene: CoveyB\_50 Start: 39356, Stop: 38421, Start Num: 23

Candidate Starts for CoveyB\_50:

(Start: 23 @39356 has 21 MA's), (Start: 37 @39308 has 5 MA's), (Start: 38 @39305 has 2 MA's), (Start: 43 @39287 has 4 MA's), (Start: 47 @39278 has 1 MA's), (81, 39146), (101, 38963), (103, 38951), (108, 38918), (118, 38876), (125, 38825), (130, 38786), (150, 38582), (151, 38573), (156, 38513), (164, 38465), (165, 38450), (167, 38438),

Gene: Cracklewink\_50 Start: 39572, Stop: 38340, Start Num: 9

Candidate Starts for Cracklewink\_50:

(8, 39584), (Start: 9 @39572 has 2 MA's), (12, 39542), (16, 39530), (Start: 40 @39446 has 1 MA's), (44, 39437), (59, 39401), (64, 39386), (72, 39356), (81, 39296), (118, 39023), (119, 39020), (120, 39014), (121, 39002), (123, 38981), (124, 38975), (136, 38894), (141, 38831), (145, 38753), (148, 38738), (150, 38720), (155, 38657), (164, 38603), (167, 38576), (174, 38525), (176, 38513), (177, 38510), (180, 38492), (181, 38483), (182, 38480), (183, 38471), (185, 38468), (189, 38435), (192, 38426), (193, 38414), (195, 38396), (196, 38393),

Gene: Crespo\_32 Start: 28918, Stop: 27722, Start Num: 10

Candidate Starts for Crespo\_32:

(Start: 10 @28918 has 60 MA's), (20, 28855), (64, 28729), (84, 28621), (89, 28588), (93, 28522), (107, 28411), (114, 28393), (116, 28372), (118, 28366), (119, 28363), (122, 28339), (133, 28267), (137, 28231), (150, 28072), (157, 28000), (167, 27928), (168, 27925), (177, 27856), (178, 27850), (184, 27814),

Gene: DMoney\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for DMoney\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Danyall\_49 Start: 39358, Stop: 38423, Start Num: 23

Candidate Starts for Danyall\_49:

(Start: 23 @39358 has 21 MA's), (Start: 37 @39310 has 5 MA's), (Start: 38 @39307 has 2 MA's), (Start: 43 @39289 has 4 MA's), (Start: 47 @39280 has 1 MA's), (81, 39148), (101, 38965), (103, 38953), (107, 38923), (108, 38920), (118, 38878), (125, 38827), (130, 38788), (131, 38785), (150, 38584), (151, 38575), (156, 38515), (164, 38467), (165, 38452), (167, 38440),

Gene: Darionha\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Darionha\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: DingDing\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for DingDing\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: ECartman\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for ECartman\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813), (189, 27777),

Gene: Egi03\_47 Start: 39138, Stop: 38203, Start Num: 23

Candidate Starts for Egi03\_47:

(Start: 23 @39138 has 21 MA's), (Start: 37 @39090 has 5 MA's), (Start: 38 @39087 has 2 MA's), (Start: 43 @39069 has 4 MA's), (Start: 47 @39060 has 1 MA's), (81, 38928), (101, 38745), (103, 38733), (108, 38700), (118, 38658), (125, 38607), (130, 38568), (150, 38364), (151, 38355), (156, 38295), (164, 38247), (165, 38232), (167, 38220),

Gene: Emperor\_19 Start: 14339, Stop: 13512, Start Num: 51

Candidate Starts for Emperor\_19:

(Start: 51 @14339 has 3 MA's), (57, 14324), (58, 14321), (Start: 61 @14312 has 1 MA's), (72, 14276), (78, 14240), (79, 14234), (83, 14198), (97, 14063), (99, 14039), (104, 14012), (106, 13991), (107, 13988), (115, 13952), (117, 13946), (118, 13943), (123, 13901), (126, 13877), (127, 13874), (134, 13823), (136, 13814), (137, 13808), (142, 13763), (148, 13697), (151, 13670), (163, 13565),

Gene: EpicDab\_18 Start: 14205, Stop: 13375, Start Num: 51

Candidate Starts for EpicDab\_18:

(Start: 51 @14205 has 3 MA's), (Start: 61 @14181 has 1 MA's), (72, 14145), (85, 14058), (104, 13881), (106, 13860), (107, 13857), (118, 13812), (123, 13770), (126, 13746), (127, 13743), (129, 13731), (133, 13713), (134, 13692), (136, 13683), (137, 13677), (148, 13566), (154, 13488), (157, 13476), (158, 13473), (163, 13434),

Gene: Evamon\_46 Start: 39326, Stop: 38442, Start Num: 38

Candidate Starts for Evamon\_46:

(Start: 23 @39377 has 21 MA's), (Start: 37 @39329 has 5 MA's), (Start: 38 @39326 has 2 MA's), (Start: 43 @39308 has 4 MA's), (Start: 47 @39299 has 1 MA's), (81, 39167), (101, 38984), (103, 38972), (107, 38942), (108, 38939), (118, 38897), (125, 38846), (130, 38807), (150, 38603), (151, 38594), (156, 38534), (164, 38486), (165, 38471), (167, 38459),

Gene: Faiyaz\_53 Start: 40650, Stop: 39406, Start Num: 40

Candidate Starts for Faiyaz\_53:

(Start: 9 @40788 has 2 MA's), (12, 40758), (35, 40671), (36, 40668), (Start: 40 @40650 has 1 MA's), (70, 40566), (72, 40560), (81, 40500), (86, 40467), (107, 40272), (115, 40236), (118, 40227), (119, 40224), (141, 40035), (144, 39966), (148, 39942), (150, 39924), (155, 39861), (160, 39828), (167, 39780), (170, 39741), (171, 39735), (172, 39732), (175, 39720), (176, 39711), (177, 39708), (187, 39636), (188, 39633), (190, 39627), (191, 39624), (197, 39447),

Gene: Flashwig\_18 Start: 12942, Stop: 12121, Start Num: 56

Candidate Starts for Flashwig\_18:

(56, 12942), (63, 12924), (78, 12855), (85, 12807), (97, 12678), (99, 12654), (104, 12627), (109, 12597), (145, 12327), (152, 12264), (161, 12189), (164, 12177),

Gene: Frosty24\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Frosty24\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137,

28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Fugax\_50 Start: 39601, Stop: 38714, Start Num: 37

Candidate Starts for Fugax\_50:

(Start: 23 @39649 has 21 MA's), (Start: 37 @39601 has 5 MA's), (Start: 38 @39598 has 2 MA's), (Start: 43 @39580 has 4 MA's), (Start: 47 @39571 has 1 MA's), (81, 39439), (101, 39256), (103, 39244), (108, 39211), (118, 39169), (125, 39118), (130, 39079), (150, 38875), (151, 38866), (156, 38806), (164, 38758), (165, 38743), (167, 38731),

Gene: GMA5\_17 Start: 13993, Stop: 13184, Start Num: 60

Candidate Starts for GMA5\_17:

(30, 14077), (34, 14071), (52, 14011), (60, 13993), (88, 13840), (93, 13774), (99, 13714), (101, 13705), (118, 13618), (128, 13540), (133, 13519), (134, 13498), (136, 13489), (139, 13465), (146, 13384), (148, 13372), (151, 13345),

Gene: GRU3\_17 Start: 14088, Stop: 13195, Start Num: 30

Candidate Starts for GRU3\_17:

(30, 14088), (Start: 40 @14052 has 1 MA's), (52, 14022), (60, 14004), (86, 13866), (96, 13767), (101, 13716), (102, 13707), (118, 13629), (125, 13578), (138, 13482), (139, 13476), (148, 13383),

Gene: Gezellig\_46 Start: 39509, Stop: 38574, Start Num: 23

Candidate Starts for Gezellig\_46:

(Start: 23 @39509 has 21 MA's), (Start: 37 @39461 has 5 MA's), (Start: 38 @39458 has 2 MA's), (Start: 43 @39440 has 4 MA's), (Start: 47 @39431 has 1 MA's), (81, 39299), (101, 39116), (103, 39104), (108, 39071), (118, 39029), (125, 38978), (130, 38939), (150, 38735), (151, 38726), (156, 38666), (164, 38618), (165, 38603), (167, 38591),

Gene: Gideon\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Gideon\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: GoldenAsh\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for GoldenAsh\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Gomashi\_32 Start: 28918, Stop: 27722, Start Num: 10

Candidate Starts for Gomashi\_32:

(Start: 10 @28918 has 60 MA's), (20, 28855), (64, 28729), (84, 28621), (89, 28588), (93, 28522), (107, 28411), (114, 28393), (116, 28372), (118, 28366), (119, 28363), (122, 28339), (133, 28267), (137, 28231), (150, 28072), (157, 28000), (167, 27928), (168, 27925), (177, 27856), (178, 27850), (184, 27814),

Gene: Grizzly\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Grizzly\_32:

(7, 28941), (Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (68, 28719), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122,

28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (170, 27888), (177, 27855), (178, 27849), (184, 27813),

Gene: Halo\_32 Start: 28912, Stop: 27716, Start Num: 10

Candidate Starts for Halo\_32:

(Start: 10 @28912 has 60 MA's), (20, 28849), (64, 28723), (84, 28615), (89, 28582), (93, 28516), (107, 28405), (114, 28387), (116, 28366), (118, 28360), (119, 28357), (122, 28333), (133, 28261), (137, 28225), (150, 28066), (157, 27994), (167, 27922), (168, 27919), (177, 27850), (178, 27844), (184, 27808),

Gene: Halo3\_48 Start: 40094, Stop: 39159, Start Num: 23

Candidate Starts for Halo3\_48:

(Start: 23 @40094 has 21 MA's), (Start: 37 @40046 has 5 MA's), (Start: 38 @40043 has 2 MA's), (Start: 43 @40025 has 4 MA's), (Start: 47 @40016 has 1 MA's), (81, 39884), (101, 39701), (103, 39689), (107, 39659), (108, 39656), (118, 39614), (125, 39563), (130, 39524), (150, 39320), (151, 39311), (156, 39251), (164, 39203), (165, 39188), (167, 39176),

Gene: Heinz\_31 Start: 25016, Stop: 24150, Start Num: 43

Candidate Starts for Heinz\_31:

(Start: 23 @25085 has 21 MA's), (Start: 38 @25034 has 2 MA's), (Start: 43 @25016 has 4 MA's), (81, 24875), (101, 24692), (103, 24680), (118, 24605), (119, 24602), (124, 24557), (130, 24515), (135, 24479), (150, 24311), (151, 24302), (155, 24248), (159, 24221), (165, 24179), (167, 24167),

Gene: Hibiscus\_32 Start: 25034, Stop: 24099, Start Num: 23

Candidate Starts for Hibiscus\_32:

(Start: 23 @25034 has 21 MA's), (Start: 38 @24983 has 2 MA's), (Start: 43 @24965 has 4 MA's), (81, 24824), (101, 24641), (103, 24629), (118, 24554), (119, 24551), (124, 24506), (130, 24464), (135, 24428), (150, 24260), (151, 24251), (155, 24197), (159, 24170), (165, 24128), (167, 24116),

Gene: Hope\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Hope\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: HorseRider\_17 Start: 12402, Stop: 11581, Start Num: 56

Candidate Starts for HorseRider\_17:

(56, 12402), (63, 12384), (78, 12315), (82, 12279), (85, 12267), (97, 12138), (99, 12114), (104, 12087), (109, 12057), (145, 11787), (152, 11724), (161, 11649), (162, 11643), (164, 11637),

Gene: Hotshotbaby7\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Hotshotbaby7\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Jalloh\_17 Start: 12198, Stop: 11377, Start Num: 56

Candidate Starts for Jalloh\_17:

(56, 12198), (63, 12180), (78, 12111), (82, 12075), (85, 12063), (97, 11934), (99, 11910), (104, 11883), (109, 11853), (145, 11583), (152, 11520), (164, 11433),

Gene: Jambalaya\_47 Start: 39156, Stop: 38221, Start Num: 23

Candidate Starts for Jambalaya\_47:

(Start: 23 @39156 has 21 MA's), (Start: 37 @39108 has 5 MA's), (Start: 38 @39105 has 2 MA's), (Start: 43 @39087 has 4 MA's), (Start: 47 @39078 has 1 MA's), (81, 38946), (101, 38763), (103, 38751), (108, 38718), (118, 38676), (125, 38625), (130, 38586), (150, 38382), (151, 38373), (156, 38313), (164, 38265), (165, 38250), (167, 38238),

Gene: Jane\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Jane\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Jeanie\_18 Start: 13573, Stop: 12677, Start Num: 33

Candidate Starts for Jeanie\_18:

(Start: 33 @13573 has 2 MA's), (Start: 40 @13540 has 1 MA's), (60, 13492), (62, 13486), (82, 13381), (89, 13339), (91, 13291), (94, 13273), (96, 13258), (111, 13150), (113, 13147), (118, 13120), (119, 13117), (125, 13069), (133, 13021), (136, 12991), (147, 12877), (155, 12793), (159, 12766), (168, 12709),

Gene: Jeilious\_32 Start: 28727, Stop: 27720, Start Num: 64

Candidate Starts for Jeilious\_32:

(Start: 10 @28916 has 60 MA's), (20, 28853), (64, 28727), (84, 28619), (89, 28586), (93, 28520), (107, 28409), (114, 28391), (116, 28370), (118, 28364), (119, 28361), (122, 28337), (133, 28265), (137, 28229), (150, 28070), (157, 27998), (167, 27926), (168, 27923), (177, 27854), (178, 27848), (184, 27812),

Gene: Jolene\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Jolene\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813), (189, 27777),

Gene: Jonghyun\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Jonghyun\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813), (189, 27777),

Gene: JorRay\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for JorRay\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: JustASigh\_45 Start: 34059, Stop: 33148, Start Num: 29

Candidate Starts for JustASigh\_45:

(Start: 29 @34059 has 1 MA's), (48, 33999), (50, 33996), (55, 33984), (77, 33900), (81, 33873), (82, 33861), (86, 33840), (110, 33642), (118, 33603), (133, 33510), (150, 33312), (151, 33303), (156,

33243), (159, 33222), (167, 33168),

Gene: Kareem\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Kareem\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Kasen3\_32 Start: 28918, Stop: 27722, Start Num: 10

Candidate Starts for Kasen3\_32:

(7, 28942), (Start: 10 @28918 has 60 MA's), (20, 28855), (56, 28750), (68, 28720), (84, 28621), (89, 28588), (93, 28522), (107, 28411), (114, 28393), (116, 28372), (118, 28366), (119, 28363), (122, 28339), (133, 28267), (137, 28231), (150, 28072), (157, 28000), (167, 27928), (168, 27925), (177, 27856), (178, 27850), (184, 27814), (189, 27778),

Gene: KimmyK\_48 Start: 40022, Stop: 39156, Start Num: 43

Candidate Starts for KimmyK\_48:

(Start: 23 @40091 has 21 MA's), (Start: 37 @40043 has 5 MA's), (Start: 38 @40040 has 2 MA's), (Start: 43 @40022 has 4 MA's), (Start: 47 @40013 has 1 MA's), (81, 39881), (101, 39698), (103, 39686), (108, 39653), (118, 39611), (125, 39560), (130, 39521), (150, 39317), (151, 39308), (156, 39248), (164, 39200), (165, 39185), (167, 39173),

Gene: Liefie\_32 Start: 28915, Stop: 27719, Start Num: 10

Candidate Starts for Liefie\_32:

(Start: 10 @28915 has 60 MA's), (20, 28852), (56, 28747), (64, 28726), (84, 28618), (89, 28585), (93, 28519), (107, 28408), (114, 28390), (116, 28369), (118, 28363), (119, 28360), (122, 28336), (133, 28264), (137, 28228), (150, 28069), (157, 27997), (167, 27925), (168, 27922), (177, 27853), (178, 27847), (184, 27811), (189, 27775),

Gene: LouisV14\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for LouisV14\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: MZKinsey\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for MZKinsey\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Maliketh\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for Maliketh\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Marmie\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Marmie\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: McGonagall\_18 Start: 13573, Stop: 12677, Start Num: 33

Candidate Starts for McGonagall\_18:

(Start: 33 @13573 has 2 MA's), (Start: 40 @13540 has 1 MA's), (60, 13492), (62, 13486), (82, 13381), (89, 13339), (91, 13291), (94, 13273), (96, 13258), (111, 13150), (113, 13147), (118, 13120), (119, 13117), (125, 13069), (133, 13021), (136, 12991), (147, 12877), (155, 12793), (159, 12766), (168, 12709),

Gene: Mowgli\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Mowgli\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Mutzi\_47 Start: 40485, Stop: 39550, Start Num: 23

Candidate Starts for Mutzi\_47:

(Start: 23 @40485 has 21 MA's), (Start: 37 @40437 has 5 MA's), (Start: 38 @40434 has 2 MA's), (Start: 43 @40416 has 4 MA's), (Start: 47 @40407 has 1 MA's), (81, 40275), (101, 40092), (103, 40080), (108, 40047), (118, 40005), (125, 39954), (130, 39915), (150, 39711), (151, 39702), (156, 39642), (164, 39594), (165, 39579), (167, 39567),

Gene: Neoh\_32 Start: 28720, Stop: 27713, Start Num: 64

Candidate Starts for Neoh\_32:

(Start: 10 @28909 has 60 MA's), (20, 28846), (64, 28720), (84, 28612), (89, 28579), (93, 28513), (107, 28402), (114, 28384), (116, 28363), (118, 28357), (119, 28354), (122, 28330), (133, 28258), (137, 28222), (150, 28063), (157, 27991), (167, 27919), (168, 27916), (177, 27847), (178, 27841), (184, 27805),

Gene: Nubi\_47 Start: 39482, Stop: 38547, Start Num: 23

Candidate Starts for Nubi\_47:

(Start: 23 @39482 has 21 MA's), (Start: 37 @39434 has 5 MA's), (Start: 38 @39431 has 2 MA's), (Start: 43 @39413 has 4 MA's), (Start: 47 @39404 has 1 MA's), (81, 39272), (101, 39089), (103, 39077), (108, 39044), (118, 39002), (125, 38951), (130, 38912), (150, 38708), (151, 38699), (156, 38639), (164, 38591), (165, 38576), (167, 38564),

Gene: OctaviousRex\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for OctaviousRex\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Olga\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Olga\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Paito\_32 Start: 29040, Stop: 27946, Start Num: 9

Candidate Starts for Paito\_32:

(Start: 9 @29040 has 2 MA's), (11, 29013), (13, 29007), (21, 28971), (41, 28899), (69, 28821), (84, 28734), (93, 28635), (105, 28536), (112, 28509), (114, 28506), (116, 28485), (118, 28479), (119, 28476), (123, 28437), (133, 28380), (140, 28320), (150, 28185), (151, 28176), (157, 28113), (159, 28095), (162, 28074), (166, 28044), (167, 28041), (168, 28038), (173, 27984),

Gene: Peeb\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Peeb\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (170, 27888), (177, 27855), (178, 27849), (184, 27813),

Gene: Periodt\_32 Start: 28908, Stop: 27712, Start Num: 10

Candidate Starts for Periodt\_32:

(Start: 10 @28908 has 60 MA's), (20, 28845), (56, 28740), (64, 28719), (84, 28611), (89, 28578), (93, 28512), (107, 28401), (114, 28383), (116, 28362), (118, 28356), (119, 28353), (122, 28329), (133, 28257), (137, 28221), (150, 28062), (157, 27990), (167, 27918), (168, 27915), (177, 27846), (178, 27840), (184, 27804), (189, 27768),

Gene: Phish\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Phish\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Phloodle\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for Phloodle\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (56, 28749), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813), (189, 27777),

Gene: Phlop\_46 Start: 39515, Stop: 38628, Start Num: 37

Candidate Starts for Phlop\_46:

(Start: 23 @39563 has 21 MA's), (Start: 37 @39515 has 5 MA's), (Start: 38 @39512 has 2 MA's), (Start: 43 @39494 has 4 MA's), (Start: 47 @39485 has 1 MA's), (81, 39353), (101, 39170), (103, 39158), (108, 39125), (118, 39083), (125, 39032), (130, 38993), (150, 38789), (151, 38780), (156, 38720), (164, 38672), (165, 38657), (167, 38645),

Gene: Phreak\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Phreak\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: PhrostedPhlake\_43 Start: 32416, Stop: 31481, Start Num: 23

Candidate Starts for PhrostedPhlake\_43:

(Start: 23 @32416 has 21 MA's), (Start: 37 @32368 has 5 MA's), (Start: 38 @32365 has 2 MA's), (Start: 43 @32347 has 4 MA's), (81, 32206), (101, 32023), (108, 31978), (118, 31936), (125, 31885), (130, 31846), (135, 31810), (143, 31699), (150, 31642), (151, 31633), (155, 31579), (167, 31498),

Gene: PinkCoffee\_49 Start: 39618, Stop: 38731, Start Num: 37

Candidate Starts for PinkCoffee\_49:

(Start: 23 @39666 has 21 MA's), (Start: 37 @39618 has 5 MA's), (Start: 38 @39615 has 2 MA's), (Start: 43 @39597 has 4 MA's), (Start: 47 @39588 has 1 MA's), (81, 39456), (101, 39273), (103, 39261), (108, 39228), (118, 39186), (125, 39135), (130, 39096), (150, 38892), (151, 38883), (156, 38823), (164, 38775), (165, 38760), (167, 38748),

Gene: PinkYoshi\_32 Start: 28908, Stop: 27712, Start Num: 10

Candidate Starts for PinkYoshi\_32:

(Start: 10 @28908 has 60 MA's), (20, 28845), (64, 28719), (84, 28611), (89, 28578), (93, 28512), (107, 28401), (114, 28383), (116, 28362), (118, 28356), (119, 28353), (122, 28329), (133, 28257), (137, 28221), (150, 28062), (157, 27990), (167, 27918), (168, 27915), (177, 27846), (178, 27840), (184, 27804),

Gene: Pipp\_37 Start: 31000, Stop: 30065, Start Num: 23

Candidate Starts for Pipp\_37:

(Start: 23 @31000 has 21 MA's), (Start: 37 @30952 has 5 MA's), (Start: 38 @30949 has 2 MA's), (Start: 43 @30931 has 4 MA's), (Start: 47 @30922 has 1 MA's), (81, 30790), (101, 30607), (108, 30562), (118, 30520), (123, 30478), (125, 30469), (130, 30430), (135, 30394), (144, 30268), (150, 30226), (165, 30094), (167, 30082),

Gene: Plagueis\_32 Start: 28752, Stop: 27556, Start Num: 10

Candidate Starts for Plagueis\_32:

(Start: 10 @28752 has 60 MA's), (20, 28689), (64, 28563), (84, 28455), (89, 28422), (93, 28356), (107, 28245), (114, 28227), (116, 28206), (118, 28200), (119, 28197), (122, 28173), (133, 28101), (137, 28065), (150, 27906), (157, 27834), (167, 27762), (168, 27759), (177, 27690), (178, 27684), (184, 27648),

Gene: Portcullis\_49 Start: 39169, Stop: 38234, Start Num: 23

Candidate Starts for Portcullis\_49:

(Start: 23 @39169 has 21 MA's), (Start: 37 @39121 has 5 MA's), (Start: 38 @39118 has 2 MA's), (Start: 43 @39100 has 4 MA's), (Start: 47 @39091 has 1 MA's), (81, 38959), (101, 38776), (103, 38764), (107, 38734), (108, 38731), (118, 38689), (125, 38638), (130, 38599), (150, 38395), (151, 38386), (156, 38326), (164, 38278), (165, 38263), (167, 38251),

Gene: PullumCavea\_46 Start: 39563, Stop: 38628, Start Num: 23

Candidate Starts for PullumCavea\_46:

(Start: 23 @39563 has 21 MA's), (Start: 37 @39515 has 5 MA's), (Start: 38 @39512 has 2 MA's), (Start: 43 @39494 has 4 MA's), (Start: 47 @39485 has 1 MA's), (81, 39353), (101, 39170), (103, 39158), (108, 39125), (118, 39083), (125, 39032), (130, 38993), (150, 38789), (151, 38780), (156, 38720), (164, 38672), (165, 38657), (167, 38645),

Gene: Rabbs\_32 Start: 29000, Stop: 27804, Start Num: 10

Candidate Starts for Rabbs\_32:

(6, 29051), (7, 29024), (Start: 10 @29000 has 60 MA's), (20, 28937), (56, 28832), (84, 28703), (93, 28604), (107, 28493), (114, 28475), (115, 28457), (116, 28454), (118, 28448), (122, 28421), (125, 28397), (133, 28349), (137, 28313), (150, 28154), (157, 28082), (167, 28010), (168, 28007), (177, 27938), (178, 27932), (184, 27896), (189, 27860),

Gene: Rahul\_19 Start: 13941, Stop: 13114, Start Num: 51

Candidate Starts for Rahul\_19:

(Start: 51 @13941 has 3 MA's), (Start: 61 @13914 has 1 MA's), (78, 13842), (80, 13827), (85, 13791), (92, 13704), (99, 13641), (108, 13587), (115, 13554), (118, 13545), (126, 13479), (127, 13476), (129, 13464), (131, 13452), (133, 13446), (135, 13419), (136, 13416), (142, 13365), (145, 13314), (151, 13272), (155, 13218), (157, 13209), (158, 13206), (164, 13164), (165, 13149), (166, 13140),

Gene: Rattrick\_32 Start: 28719, Stop: 27712, Start Num: 64

Candidate Starts for Rattrick\_32:

(Start: 10 @28908 has 60 MA's), (20, 28845), (56, 28740), (64, 28719), (84, 28611), (89, 28578), (93, 28512), (107, 28401), (114, 28383), (116, 28362), (118, 28356), (119, 28353), (122, 28329), (133, 28257), (137, 28221), (150, 28062), (157, 27990), (167, 27918), (168, 27915), (177, 27846), (178, 27840), (184, 27804), (189, 27768),

Gene: Remy19\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Remy19\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Renaissance\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Renaissance\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Richarlison\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for Richarlison\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: RogerDodger\_50 Start: 39706, Stop: 38771, Start Num: 23

Candidate Starts for RogerDodger\_50:

(Start: 23 @39706 has 21 MA's), (Start: 37 @39658 has 5 MA's), (Start: 38 @39655 has 2 MA's), (Start: 43 @39637 has 4 MA's), (Start: 47 @39628 has 1 MA's), (81, 39496), (101, 39313), (103, 39301), (107, 39271), (108, 39268), (118, 39226), (125, 39175), (130, 39136), (131, 39133), (150, 38932), (151, 38923), (156, 38863), (164, 38815), (165, 38800), (167, 38788),

Gene: Ruriko\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for Ruriko\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: SallySpecial\_17 Start: 13669, Stop: 12869, Start Num: 61

Candidate Starts for SallySpecial\_17:

(1, 14119), (2, 14104), (3, 14101), (5, 13924), (19, 13801), (26, 13771), (30, 13762), (Start: 51 @13696 has 3 MA's), (Start: 61 @13669 has 1 MA's), (66, 13657), (68, 13654), (73, 13630), (79, 13591), (84,

13552), (87, 13525), (90, 13510), (99, 13396), (100, 13390), (104, 13369), (108, 13342), (117, 13303), (118, 13300), (125, 13249), (126, 13234), (127, 13231), (133, 13201), (134, 13180), (135, 13174), (136, 13171), (137, 13165), (142, 13120), (145, 13069), (151, 13027), (155, 12973), (163, 12922), (164, 12919), (165, 12904), (166, 12895),

Gene: Salvador\_46 Start: 39375, Stop: 38440, Start Num: 23

Candidate Starts for Salvador\_46:

(Start: 23 @39375 has 21 MA's), (Start: 37 @39327 has 5 MA's), (Start: 38 @39324 has 2 MA's), (Start: 43 @39306 has 4 MA's), (Start: 47 @39297 has 1 MA's), (81, 39165), (101, 38982), (103, 38970), (107, 38940), (108, 38937), (118, 38895), (125, 38844), (130, 38805), (150, 38601), (151, 38592), (156, 38532), (164, 38484), (165, 38469), (167, 38457),

Gene: Savbucketdawg\_47 Start: 39156, Stop: 38221, Start Num: 23

Candidate Starts for Savbucketdawg\_47:

(Start: 23 @39156 has 21 MA's), (Start: 37 @39108 has 5 MA's), (Start: 38 @39105 has 2 MA's), (Start: 43 @39087 has 4 MA's), (Start: 47 @39078 has 1 MA's), (81, 38946), (101, 38763), (103, 38751), (108, 38718), (118, 38676), (125, 38625), (130, 38586), (150, 38382), (151, 38373), (156, 38313), (164, 38265), (165, 38250), (167, 38238),

Gene: Schiebel\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Schiebel\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: ShaboiShabazz\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for ShaboiShabazz\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Shinji\_48 Start: 38871, Stop: 37984, Start Num: 37

Candidate Starts for Shinji\_48:

(Start: 23 @38919 has 21 MA's), (Start: 37 @38871 has 5 MA's), (Start: 38 @38868 has 2 MA's), (Start: 43 @38850 has 4 MA's), (Start: 47 @38841 has 1 MA's), (81, 38709), (101, 38526), (103, 38514), (107, 38484), (108, 38481), (118, 38439), (125, 38388), (130, 38349), (131, 38346), (150, 38145), (151, 38136), (156, 38076), (164, 38028), (165, 38013), (167, 38001),

Gene: Sizemore\_32 Start: 28918, Stop: 27722, Start Num: 10

Candidate Starts for Sizemore\_32:

(7, 28942), (Start: 10 @28918 has 60 MA's), (20, 28855), (56, 28750), (68, 28720), (84, 28621), (89, 28588), (93, 28522), (107, 28411), (114, 28393), (116, 28372), (118, 28366), (119, 28363), (122, 28339), (133, 28267), (137, 28231), (150, 28072), (157, 28000), (167, 27928), (168, 27925), (177, 27856), (178, 27850), (184, 27814), (189, 27778),

Gene: SmokingBunny\_47 Start: 39390, Stop: 38533, Start Num: 47

Candidate Starts for SmokingBunny\_47:

(Start: 23 @39468 has 21 MA's), (Start: 37 @39420 has 5 MA's), (Start: 38 @39417 has 2 MA's), (Start: 43 @39399 has 4 MA's), (Start: 47 @39390 has 1 MA's), (81, 39258), (101, 39075), (103, 39063), (108, 39030), (118, 38988), (125, 38937), (130, 38898), (150, 38694), (151, 38685), (156, 38625), (164, 38577), (165, 38562), (167, 38550),

Gene: Sneeze\_32 Start: 28999, Stop: 27803, Start Num: 10

Candidate Starts for Sneeze\_32:

(6, 29050), (7, 29023), (Start: 10 @28999 has 60 MA's), (20, 28936), (56, 28831), (84, 28702), (93, 28603), (107, 28492), (114, 28474), (115, 28456), (116, 28453), (118, 28447), (122, 28420), (125, 28396), (133, 28348), (137, 28312), (150, 28153), (157, 28081), (167, 28009), (168, 28006), (177, 27937), (178, 27931), (184, 27895), (189, 27859),

Gene: Sweets\_32 Start: 28912, Stop: 27716, Start Num: 10

Candidate Starts for Sweets\_32:

(Start: 10 @28912 has 60 MA's), (20, 28849), (64, 28723), (84, 28615), (89, 28582), (93, 28516), (107, 28405), (114, 28387), (116, 28366), (118, 28360), (119, 28357), (122, 28333), (133, 28261), (137, 28225), (150, 28066), (157, 27994), (167, 27922), (168, 27919), (177, 27850), (178, 27844), (184, 27808),

Gene: Taheera\_32 Start: 29035, Stop: 27845, Start Num: 10

Candidate Starts for Taheera\_32:

(6, 29086), (7, 29059), (Start: 10 @29035 has 60 MA's), (20, 28972), (28, 28951), (56, 28867), (84, 28738), (93, 28639), (107, 28528), (114, 28510), (115, 28492), (116, 28489), (118, 28483), (122, 28456), (125, 28432), (133, 28384), (137, 28348), (150, 28189), (157, 28117), (167, 28045), (168, 28042), (177, 27979), (178, 27973), (184, 27937),

Gene: Terror\_32 Start: 29035, Stop: 27845, Start Num: 10

Candidate Starts for Terror\_32:

(6, 29086), (7, 29059), (Start: 10 @29035 has 60 MA's), (20, 28972), (28, 28951), (56, 28867), (84, 28738), (93, 28639), (107, 28528), (114, 28510), (115, 28492), (116, 28489), (118, 28483), (122, 28456), (125, 28432), (133, 28384), (137, 28348), (150, 28189), (157, 28117), (167, 28045), (168, 28042), (177, 27979), (178, 27973), (184, 27937),

Gene: TinaBug\_32 Start: 28912, Stop: 27716, Start Num: 10

Candidate Starts for TinaBug\_32:

(Start: 10 @28912 has 60 MA's), (20, 28849), (64, 28723), (84, 28615), (89, 28582), (93, 28516), (107, 28405), (114, 28387), (116, 28366), (118, 28360), (119, 28357), (122, 28333), (133, 28261), (137, 28225), (150, 28066), (157, 27994), (167, 27922), (168, 27919), (177, 27850), (178, 27844), (184, 27808),

Gene: Togo\_46 Start: 39399, Stop: 38533, Start Num: 43

Candidate Starts for Togo\_46:

(Start: 23 @39468 has 21 MA's), (Start: 37 @39420 has 5 MA's), (Start: 38 @39417 has 2 MA's), (Start: 43 @39399 has 4 MA's), (Start: 47 @39390 has 1 MA's), (81, 39258), (101, 39075), (103, 39063), (108, 39030), (118, 38988), (125, 38937), (130, 38898), (150, 38694), (151, 38685), (156, 38625), (164, 38577), (165, 38562), (167, 38550),

Gene: TomBrady\_32 Start: 28918, Stop: 27722, Start Num: 10

Candidate Starts for TomBrady\_32:

(Start: 10 @28918 has 60 MA's), (20, 28855), (64, 28729), (84, 28621), (89, 28588), (93, 28522), (107, 28411), (114, 28393), (116, 28372), (118, 28366), (119, 28363), (122, 28339), (133, 28267), (137, 28231), (150, 28072), (157, 28000), (167, 27928), (168, 27925), (177, 27856), (178, 27850), (184, 27814),

Gene: Twister6\_49 Start: 39200, Stop: 38334, Start Num: 43

Candidate Starts for Twister6\_49:

(Start: 23 @39269 has 21 MA's), (Start: 37 @39221 has 5 MA's), (Start: 38 @39218 has 2 MA's), (Start: 43 @39200 has 4 MA's), (Start: 47 @39191 has 1 MA's), (81, 39059), (101, 38876), (103, 38864), (107, 38834), (108, 38831), (118, 38789), (125, 38738), (130, 38699), (131, 38696), (150, 38495), (151, 38486), (156, 38426), (164, 38378), (165, 38363), (167, 38351),

Gene: UmaThurman\_35 Start: 31152, Stop: 30235, Start Num: 27

Candidate Starts for UmaThurman\_35:

(24, 31161), (Start: 27 @31152 has 1 MA's), (42, 31101), (44, 31098), (107, 30735), (118, 30690), (122, 30663), (123, 30648), (136, 30561), (148, 30414), (149, 30405), (150, 30396), (167, 30252), (168, 30249),

Gene: Valary\_49 Start: 40311, Stop: 39376, Start Num: 23

Candidate Starts for Valary\_49:

(Start: 23 @40311 has 21 MA's), (Start: 37 @40263 has 5 MA's), (Start: 38 @40260 has 2 MA's), (Start: 43 @40242 has 4 MA's), (Start: 47 @40233 has 1 MA's), (81, 40101), (101, 39918), (103, 39906), (108, 39873), (118, 39831), (125, 39780), (130, 39741), (150, 39537), (151, 39528), (156, 39468), (164, 39420), (165, 39405), (167, 39393),

Gene: VanDeWege\_50 Start: 39603, Stop: 38668, Start Num: 23

Candidate Starts for VanDeWege\_50:

(Start: 23 @39603 has 21 MA's), (Start: 37 @39555 has 5 MA's), (Start: 38 @39552 has 2 MA's), (Start: 43 @39534 has 4 MA's), (Start: 47 @39525 has 1 MA's), (81, 39393), (101, 39210), (103, 39198), (108, 39165), (118, 39123), (125, 39072), (130, 39033), (150, 38829), (151, 38820), (156, 38760), (164, 38712), (165, 38697), (167, 38685),

Gene: Weirido19\_45 Start: 34583, Stop: 33348, Start Num: 9

Candidate Starts for Weirido19\_45:

(4, 34775), (Start: 9 @34583 has 2 MA's), (31, 34472), (42, 34427), (49, 34412), (68, 34364), (71, 34346), (76, 34313), (80, 34292), (84, 34265), (93, 34166), (101, 34097), (107, 34055), (112, 34040), (114, 34037), (116, 34016), (117, 34013), (118, 34010), (119, 34007), (122, 33983), (130, 33920), (132, 33914), (133, 33911), (134, 33890), (136, 33881), (140, 33851), (145, 33749), (148, 33734), (150, 33716), (151, 33707), (153, 33662), (155, 33653), (157, 33644), (159, 33626), (165, 33584), (167, 33572), (178, 33491), (179, 33482), (186, 33440), (194, 33389),

Gene: Wendigo\_32 Start: 28728, Stop: 27721, Start Num: 64

Candidate Starts for Wendigo\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),

Gene: Wizard\_46 Start: 39461, Stop: 38574, Start Num: 37

Candidate Starts for Wizard\_46:

(Start: 23 @39509 has 21 MA's), (Start: 37 @39461 has 5 MA's), (Start: 38 @39458 has 2 MA's), (Start: 43 @39440 has 4 MA's), (Start: 47 @39431 has 1 MA's), (81, 39299), (101, 39116), (103, 39104), (108, 39071), (118, 39029), (125, 38978), (130, 38939), (150, 38735), (151, 38726), (156, 38666), (164, 38618), (165, 38603), (167, 38591),

Gene: ZoMa\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for ZoMa\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184,

27813),

Gene: Zombie\_32 Start: 28917, Stop: 27721, Start Num: 10

Candidate Starts for Zombie\_32:

(Start: 10 @28917 has 60 MA's), (20, 28854), (64, 28728), (84, 28620), (89, 28587), (93, 28521), (107, 28410), (114, 28392), (116, 28371), (118, 28365), (119, 28362), (122, 28338), (133, 28266), (137, 28230), (150, 28071), (157, 27999), (167, 27927), (168, 27924), (177, 27855), (178, 27849), (184, 27813),