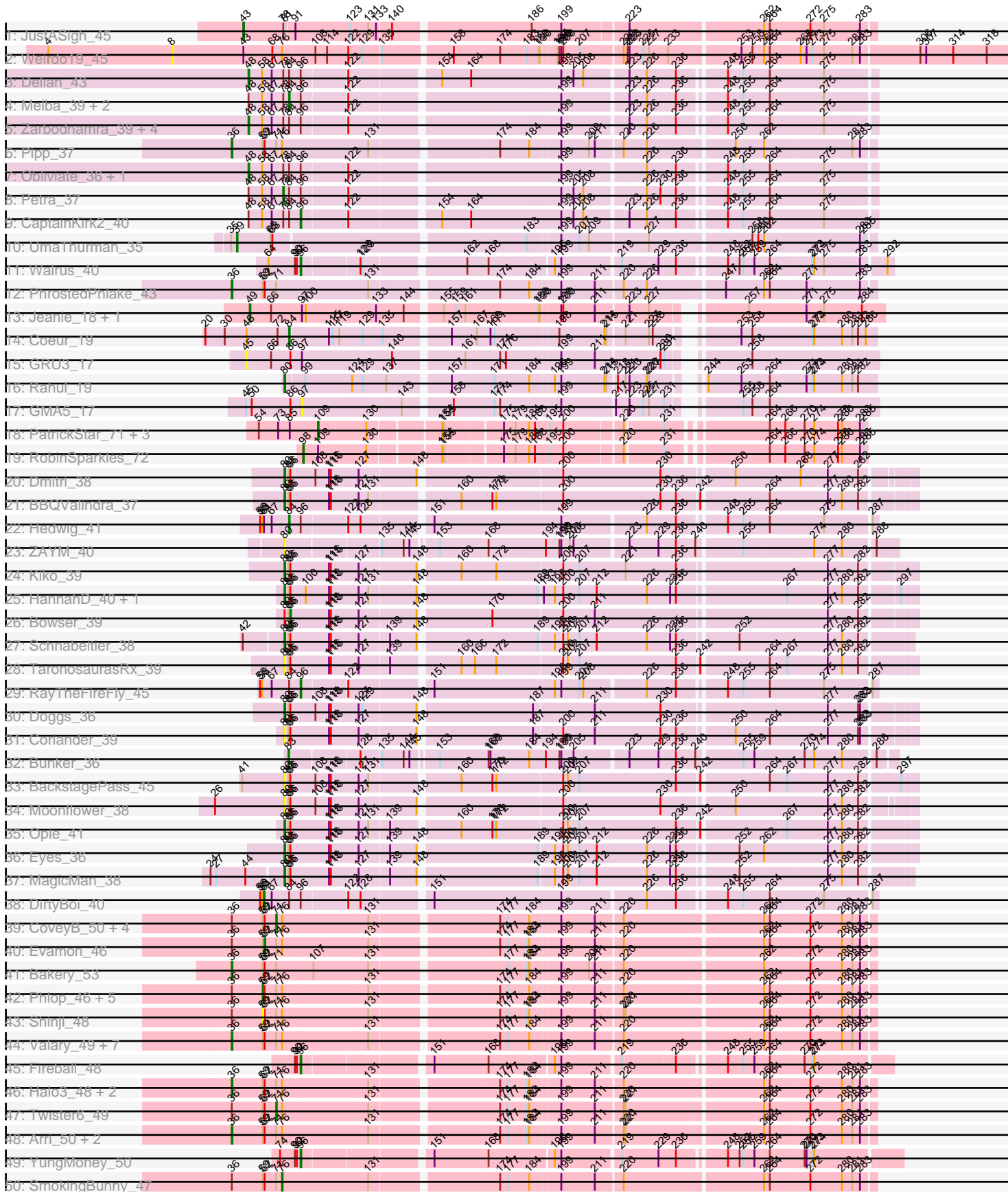
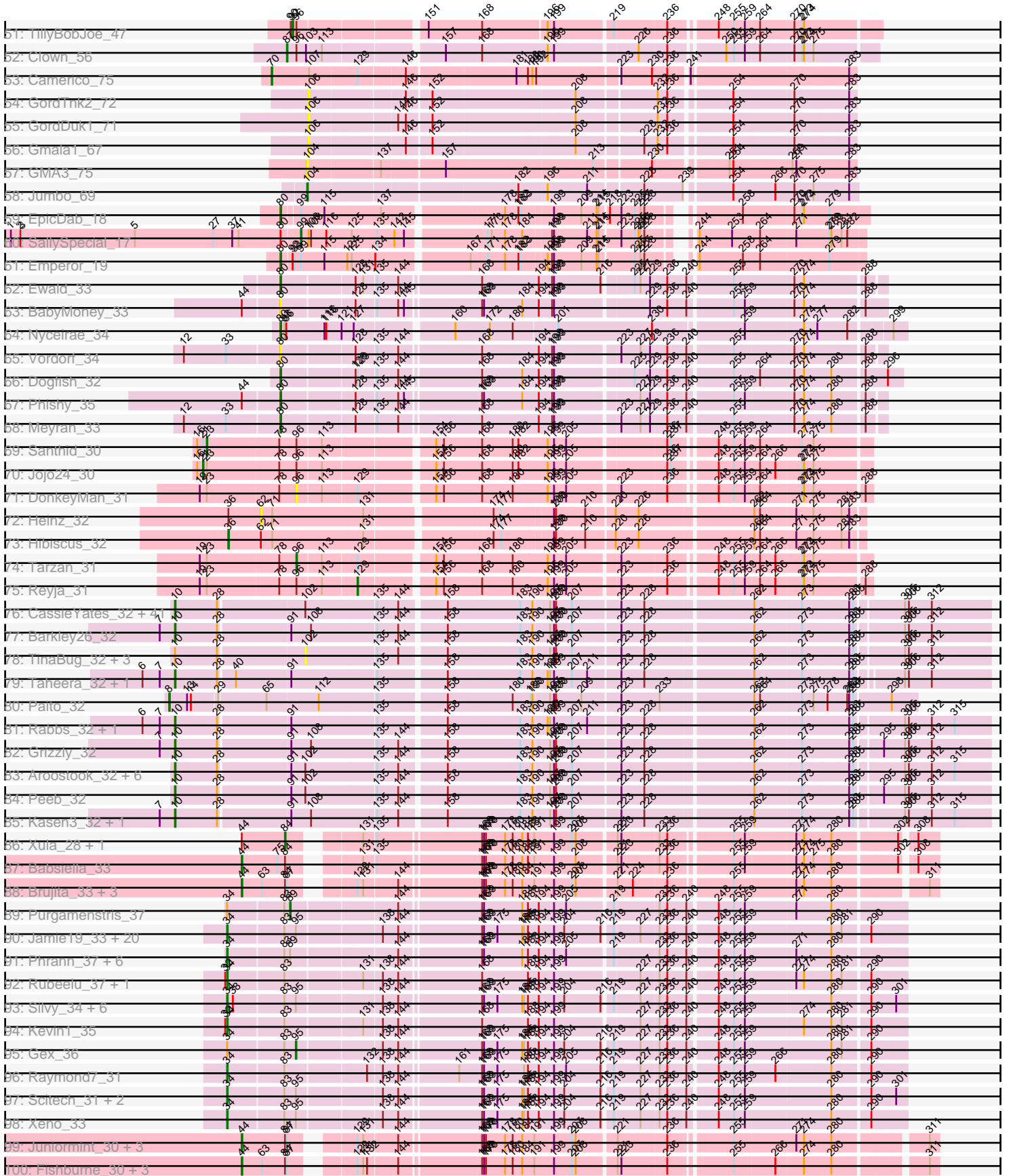


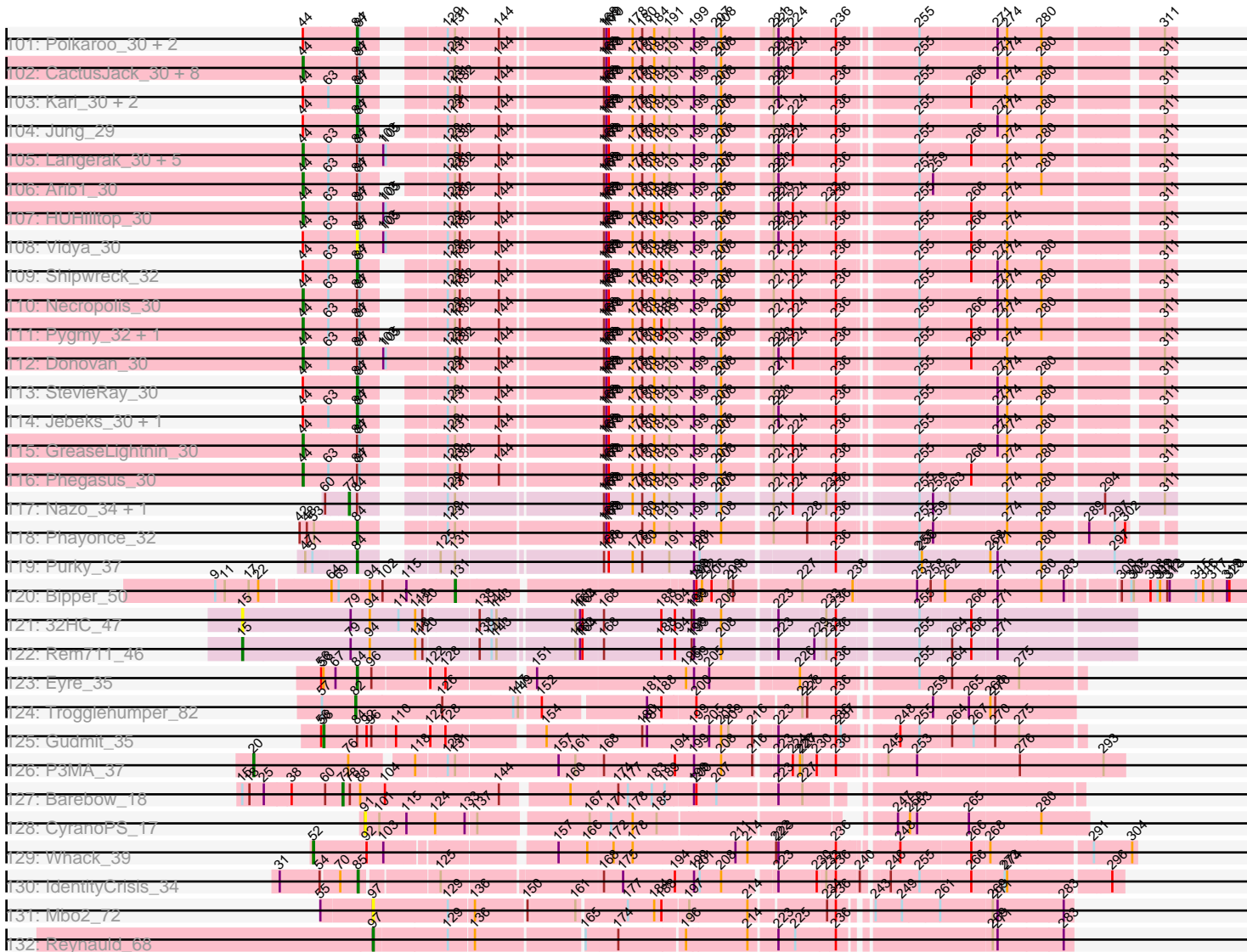
Pham 224236



Pham 224236



Pham 224236



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 224236 Report

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

Pham number 224236 has 282 members, 36 are drafts.

Phages represented in each track:

- Track 1 : JustASigh\_45
- Track 2 : Weirido19\_45
- Track 3 : Delian\_43
- Track 4 : Melba\_39, Barco\_38, BlingBling\_37
- Track 5 : Zarbodnamra\_39, JasperJr\_38, Archis\_43, MintFen\_40, Guacamole\_38
- Track 6 : Pipp\_37
- Track 7 : Obliviate\_36, Hitter\_41
- Track 8 : Petra\_37
- Track 9 : CaptainKirk2\_40
- Track 10 : UmaThurman\_35
- Track 11 : Walrus\_40
- Track 12 : PhrostedPhlake\_43
- Track 13 : Jeanie\_18, McGonagall\_18
- Track 14 : Coeur\_19
- Track 15 : GRU3\_17
- Track 16 : Rahul\_19
- Track 17 : GMA5\_17
- Track 18 : PatrickStar\_71, Gibbles\_68, Orchid\_70, Kampe\_71
- Track 19 : RobinSparkles\_72
- Track 20 : Dmitri\_38
- Track 21 : BBQValindra\_37
- Track 22 : Hedwig\_41
- Track 23 : ZAYM\_40
- Track 24 : Kiko\_39
- Track 25 : HannahD\_40, GEazy\_42
- Track 26 : Bowser\_39
- Track 27 : Schnabeltier\_38
- Track 28 : TaronosaurusRx\_39
- Track 29 : RayTheFireFly\_45
- Track 30 : Doggs\_36
- Track 31 : Coriander\_39
- Track 32 : Bunker\_36
- Track 33 : BackstagePass\_45
- Track 34 : Moonflower\_38
- Track 35 : Opie\_41
- Track 36 : Eyes\_36
- Track 37 : MagicMan\_38

- Track 38 : DirtyBoi\_40
- Track 39 : CoveyB\_50, Togo\_46, Egi03\_50, KimmyK\_48, CherryCola\_51
- Track 40 : Evamon\_46
- Track 41 : Bakery\_53
- Track 42 : Phlop\_46, Wizard\_46, Gezellig\_49, Barb\_49, PinkCoffee\_49, Fugax\_50
- Track 43 : Shinji\_48
- Track 44 : Valary\_49, Mutzi\_47, Jambalaya\_47, PullumCavea\_46, ClamChowder\_49, VanDeWege\_50, Savbucketdawg\_47, Nubi\_47
- Track 45 : Fireball\_48
- Track 46 : Halo3\_48, Salvador\_46, Portcullis\_49
- Track 47 : Twister6\_49
- Track 48 : Arri\_50, Danyall\_49, RogerDodger\_50
- Track 49 : YungMoney\_50
- Track 50 : SmokingBunny\_47
- Track 51 : TillyBobJoe\_47
- Track 52 : Clown\_56
- Track 53 : Camerico\_75
- Track 54 : GordTnk2\_72
- Track 55 : GordDuk1\_71
- Track 56 : Gmala1\_67
- Track 57 : GMA3\_75
- Track 58 : Jumbo\_69
- Track 59 : EpicDab\_18
- Track 60 : SallySpecial\_17
- Track 61 : Emperor\_19
- Track 62 : Ewald\_33
- Track 63 : BabyMoney\_33
- Track 64 : Nyceirae\_34
- Track 65 : Vordorf\_34
- Track 66 : Dogfish\_32
- Track 67 : Phishy\_35
- Track 68 : Meyran\_33
- Track 69 : Santhid\_30
- Track 70 : Jojo24\_30
- Track 71 : DonkeyMan\_31
- Track 72 : Heinz\_32
- Track 73 : Hibiscus\_32
- Track 74 : Tarzan\_31
- Track 75 : Reyja\_31
- Track 76 : CassieYates\_32, BruceB\_32, Angel\_32, Coleslaw\_32, Sweets\_32, Halo\_32, GoldenAsh\_32, Annihilator\_32, BPs\_32, Gideon\_32, Kareem\_32, ShaboiShabazz\_32, Frosty24\_32, Hotshotbaby7\_32, Cherrybomb426\_32, Cedasite\_32, Plagueis\_32, Hope\_32, Darionha\_32, Crespo\_32, Mowgli\_32, TomBrady\_32, DMoney\_32, OctaviousRex\_32, Jane\_32, Camri\_32, LouisV14\_32, Renaissance\_32, Remy19\_32, JorRay\_32, CLED96\_32, Avrafan\_32, Gomashi\_32, ZoMa\_32, Schiebel\_32, Zombie\_32, PinkYoshi\_32, Phish\_32, Olga\_32, Phreak\_32, Marmie\_32, BQuat\_32
- Track 77 : Barkley26\_32
- Track 78 : TinaBug\_32, Maliketh\_32, AzulaCat\_32, Wendigo\_32
- Track 79 : Taheera\_32, Terror\_32
- Track 80 : Paito\_32
- Track 81 : Rabbs\_32, Sneeze\_32
- Track 82 : Grizzly\_32

- Track 83 : Aroostook\_32, Chance64\_32, ECartman\_32, Liefie\_32, Periodt\_32, Jonghyun\_32, Jolene\_32
- Track 84 : Peeb\_32
- Track 85 : Kasen3\_32, Sizemore\_32
- Track 86 : Xula\_28, QueenHazel\_29
- Track 87 : Babsiella\_33
- Track 88 : Brujita\_33, Malithi\_30, Island3\_33, Sonah\_30
- Track 89 : Purgamenstris\_37
- Track 90 : Jamie19\_33, Duplicity\_36, Phloss\_34, Carcharodon\_36, Parmesanjohn\_36, Chewbacca\_37, Xerxes\_36, Tapioca\_37, Melville\_38, Andies\_33, Smurph\_36, Panchino\_32, Shweta\_33, SpongeBob\_33, MichelleMyBell\_34, Schnauzer\_36, Pipsqueaks\_36, Fulbright\_35, Snekmaggon\_33, Silvafighter\_37, Magsby\_36
- Track 91 : Phrann\_37, Redi\_37, PhancyPhin\_37, BabeRuth\_38, Hanako\_37, Nenae\_37, ShrimpFriedEgg\_37
- Track 92 : Rubeelu\_37, Butters\_37
- Track 93 : Silvy\_34, Charlie\_34, Philonius\_34, Aggie\_34, Journey\_34, Tortoise12\_34, Bosection6\_34
- Track 94 : Kevin1\_35
- Track 95 : Gex\_36
- Track 96 : Raymond7\_31
- Track 97 : Scitech\_31, SkinnyPete\_31, EGUicorn\_35
- Track 98 : Xeno\_33
- Track 99 : Juniomint\_30, Bunnies\_30, Bhagsy\_30, Ksquared\_30
- Track 100 : Fishburne\_30, Venti\_30, Dynamo\_30, Phineas\_30
- Track 101 : Polkaroo\_30, Brusacoram\_30, Thespis\_30
- Track 102 : CactusJack\_30, Atcoo\_30, Phalm\_30, Megiddo\_30, Willsammy\_29, KilKor\_30, Glaske\_30, Gavriela\_30, StressBall\_30
- Track 103 : Kari\_30, Bartholomew\_29, Etoile\_30
- Track 104 : Jung\_29
- Track 105 : Langerak\_30, Majeke\_30, Mangethe\_30, FirstPlacePfu\_30, Techage\_30, Zilizebeth\_30
- Track 106 : Arib1\_30
- Track 107 : HUHilltop\_30
- Track 108 : Vidya\_30
- Track 109 : Shipwreck\_32
- Track 110 : Necropolis\_30
- Track 111 : Pygmy\_32, Bogie\_32
- Track 112 : Donovan\_30
- Track 113 : StevieRay\_30
- Track 114 : Jebeks\_30, Camster\_30
- Track 115 : GreaseLightnin\_30
- Track 116 : Pegasus\_30
- Track 117 : Nazo\_34, BigNuz\_33
- Track 118 : Phayonce\_32
- Track 119 : Purky\_37
- Track 120 : Bipper\_50
- Track 121 : 32HC\_47
- Track 122 : Rem711\_46
- Track 123 : Eyre\_35
- Track 124 : Trogglehumper\_82
- Track 125 : Gudmit\_35
- Track 126 : P3MA\_37

- Track 127 : Barebow\_18
- Track 128 : CyranoPS\_17
- Track 129 : Whack\_39
- Track 130 : IdentityCrisis\_34
- Track 131 : Mbo2\_72
- Track 132 : Reynauld\_68

**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 58 of the 246 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Angel\_32, Annihilator\_32, Aroostook\_32, Avrafan\_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, TomBrady\_32, ZoMa\_32, Zombie\_32,

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

- AzulaCat\_32, Maliketh\_32, TinaBug\_32, Wendigo\_32,

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

- 32HC\_47, Aggie\_34, Andies\_33, Archis\_43, Arib1\_30, Arri\_50, Atcoo\_30, BBQValindra\_37, BabeRuth\_38, Babsiella\_33, BabyMoney\_33, BackstagePass\_45, Bakery\_53, Barb\_49, Barco\_38, Barebow\_18, Bartholomew\_29, Bhagsy\_30, BigNuz\_33, Bipper\_50, BlingBling\_37, Bogie\_32, Bosection6\_34, Bowser\_39, Brujita\_33, Brusacoram\_30, Bunker\_36, Bunnies\_30, Butters\_37, CactusJack\_30, Camerico\_75, Camster\_30, CaptainKirk2\_40, Carcharodon\_36, Charlie\_34, CherryCola\_51, Chewbacca\_37, ClamChowder\_49, Clown\_56, Coeur\_19, Coriander\_39, CoveyB\_50, CyranoPS\_17, Danyall\_49, Delian\_43, DirtyBoi\_40, Dmitri\_38, Dogfish\_32, Doggs\_36, DonkeyMan\_31, Donovan\_30, Duplicity\_36, Dynamo\_30, EGUnicorn\_35, Egi03\_50, Emperor\_19, EpicDab\_18, Etoile\_30, Evamon\_46, Ewald\_33, Eyes\_36, Eyre\_35, Fireball\_48, FirstPlacePfu\_30, Fishburne\_30, Fugax\_50, Fulbright\_35, GEazy\_42, GMA3\_75, GMA5\_17, GRU3\_17, Gavriela\_30, Gex\_36, Gezellig\_49, Gibbles\_68, Glaske\_30, Gmala1\_67, GordDuk1\_71, GordTnk2\_72, GreaseLightnin\_30, Guacamole\_38, Gudmit\_35, HUHilltop\_30, Halo3\_48, Hanako\_37, HannahD\_40, Hedwig\_41, Heinz\_32, Hibiscus\_32, Hitter\_41, IdentityCrisis\_34, Island3\_33, Jambalaya\_47, Jamie19\_33, JasperJr\_38, Jeanie\_18, Jebeks\_30, Jojo24\_30, Journey\_34, Jumbo\_69, Jung\_29, Juniormint\_30, JustASigh\_45, Kampe\_71, Kari\_30, Kevin1\_35, Kiko\_39, KillKor\_30, KimmyK\_48, Ksquared\_30, Langerak\_30, MagicMan\_38, Magsby\_36, Majeke\_30, Malithi\_30, Mangethe\_30, Mbo2\_72, McGonagall\_18, Megiddo\_30, Melba\_39, Melville\_38, Meyran\_33, MichelleMyBell\_34, MintFen\_40, Moonflower\_38, Mutzi\_47, Nazo\_34, Necropolis\_30, Nenae\_37, Nubi\_47, Nyceirae\_34, Obliviate\_36, Opie\_41,

Orchid\_70, P3MA\_37, Paito\_32, Panchino\_32, Parmesanjohn\_36, PatrickStar\_71, Petra\_37, Phalm\_30, PhancyPhin\_37, Phayonce\_32, Phegasus\_30, Philonius\_34, Phineas\_30, Phishy\_35, Phlop\_46, Phloss\_34, Phrann\_37, PhrostedPhlake\_43, PinkCoffee\_49, Pipp\_37, Pipsqueaks\_36, Polkaroo\_30, Portcullis\_49, PullumCavea\_46, Purgamenstris\_37, Purky\_37, Pygmy\_32, QueenHazel\_29, Rahul\_19, RayTheFireFly\_45, Raymond7\_31, Redi\_37, Rem711\_46, Reyja\_31, Reynauld\_68, RobinSparkles\_72, RogerDodger\_50, Rubeelu\_37, SallySpecial\_17, Salvador\_46, Santhid\_30, Savbucketdawg\_47, Schnabeltier\_38, Schnauzer\_36, Scitech\_31, Shinji\_48, Shipwreck\_32, ShrimpFriedEgg\_37, Shweta\_33, Silvafighter\_37, Silvy\_34, SkinnyPete\_31, SmokingBunny\_47, Smurph\_36, Snekmaggon\_33, Sonah\_30, SpongeBob\_33, StevieRay\_30, StressBall\_30, Tapioca\_37, TaronosaurusRx\_39, Tarzan\_31, Techage\_30, Thespis\_30, TillyBobJoe\_47, Togo\_46, Tortoise12\_34, Trogglehumper\_82, Twister6\_49, UmaThurman\_35, Valary\_49, VanDeWege\_50, Venti\_30, Vidya\_30, Vordorf\_34, Walrus\_40, Weirido19\_45, Whack\_39, Willsammy\_29, Wizard\_46, Xeno\_33, Xerxes\_36, Xula\_28, YungMoney\_50, ZAYM\_40, Zarbodnamra\_39, Zilizebeth\_30,

### Summary by start number:

#### Start 8:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Paito\_32 (G1), Weirido19\_45 (AH),

#### Start 10:

- Found in 62 of 282 ( 22.0% ) of genes in pham
- Manual Annotations of this start: 58 of 246
- Called 93.5% of time when present
- Phage (with cluster) where this start called: Angel\_32 (G1), Annihilator\_32 (G1), Aroostook\_32 (G1), Avrafan\_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), TomBrady\_32 (G1), ZoMa\_32 (G1), Zombie\_32 (G1),

#### Start 15:

- Found in 3 of 282 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 66.7% of time when present
- Phage (with cluster) where this start called: 32HC\_47 (Z), Rem711\_46 (Z),

#### Start 20:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246



- Called 50.0% of time when present
- Phage (with cluster) where this start called: P3MA\_37 (singleton),

#### Start 21:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jojo24\_30 (DY),

#### Start 23:

- Found in 5 of 282 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Santhid\_30 (DY),

#### Start 34:

- Found in 45 of 282 ( 16.0% ) of genes in pham
- Manual Annotations of this start: 40 of 246
- Called 95.6% of time when present
- Phage (with cluster) where this start called: Aggie\_34 (N), Andies\_33 (N), BabeRuth\_38 (N), Bosection6\_34 (N), Butters\_37 (N), Carcharodon\_36 (N), Charlie\_34 (N), Chewbacca\_37 (N), Duplicity\_36 (N), EGUnicorn\_35 (N), Fulbright\_35 (N), Hanako\_37 (N), Jamie19\_33 (N), Journey\_34 (N), Kevin1\_35 (N), Magsby\_36 (N), Melville\_38 (N), MichelleMyBell\_34 (N), Nenae\_37 (N), Panchino\_32 (N), Parmesanjohn\_36 (N), PhancyPhin\_37 (N), Philonius\_34 (N), Phloss\_34 (N), Phrann\_37 (N), Pipsqueaks\_36 (N), Raymond7\_31 (N), Redi\_37 (N), Rubeelu\_37 (N), Schnauzer\_36 (N), Scitech\_31 (N), ShrimpFriedEgg\_37 (N), Shweta\_33 (N), Silvafighter\_37 (N), Silvy\_34 (N), SkinnyPete\_31 (N), Smurph\_36 (N), Snekmaggedon\_33 (N), SpongeBob\_33 (N), Tapioca\_37 (N), Tortoise12\_34 (N), Xeno\_33 (N), Xerxes\_36 (N),

#### Start 36:

- Found in 34 of 282 ( 12.1% ) of genes in pham
- Manual Annotations of this start: 18 of 246
- Called 52.9% of time when present
- Phage (with cluster) where this start called: Arri\_50 (DC1), Bakery\_53 (DC1), ClamChowder\_49 (DC1), Danyall\_49 (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 39:

- Found in 1 of 282 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 100.0% of time when present
- Phage (with cluster) where this start called: UmaThurman\_35 (CV),

#### Start 43:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 50.0% of time when present
- Phage (with cluster) where this start called: JustASigh\_45 (AH),

Start 44:

- Found in 53 of 282 ( 18.8% ) of genes in pham
- Manual Annotations of this start: 35 of 246
- Called 67.9% of time when present
- Phage (with cluster) where this start called: Arib1\_30 (P1), Atcoo\_30 (P1), Babsiella\_33 (I1), Bhagsy\_30 (P1), Bogie\_32 (P1), Brujita\_33 (I1), Bunnies\_30 (P1), CactusJack\_30 (P1), Donovan\_30 (P1), Dynamo\_30 (P1), FirstPlacePfu\_30 (P1), Fishburne\_30 (P1), Gavriela\_30 (P1), Glaske\_30 (P1), GreaseLightnin\_30 (P1), HUHilltop\_30 (P1), Island3\_33 (I1), Juniormint\_30 (P1), KilKor\_30 (P1), Ksqared\_30 (P1), Langerak\_30 (P1), Majeke\_30 (P1), Malithi\_30 (P1), Mangethe\_30 (P1), Megiddo\_30 (P1), Necropolis\_30 (P1), Phalm\_30 (P1), Phegasus\_30 (P1), Phineas\_30 (P1), Pygmy\_32 (P1), Sonah\_30 (P1), StressBall\_30 (P1), Techage\_30 (P1), Venti\_30 (P1), Willsammy\_29 (P1), Zilizebeth\_30 (P1),

Start 45:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: GRU3\_17 (CW2),

Start 48:

- Found in 14 of 282 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 8 of 246
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Archis\_43 (CV), Delian\_43 (CV), Guacamole\_38 (CV), Hitter\_41 (CV), JasperJr\_38 (CV), MintFen\_40 (CV), Obliviate\_36 (CV), Zarbodnamra\_39 (CV),

Start 49:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 246
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jeanie\_18 (CW1), McGonagall\_18 (CW1),

Start 52:

- Found in 1 of 282 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Whack\_39 (singleton),

Start 58:

- Found in 18 of 282 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Gudmit\_35 (singleton),

Start 59:

- Found in 32 of 282 ( 11.3% ) of genes in pham
- Manual Annotations of this start: 5 of 246
- Called 21.9% of time when present

- Phage (with cluster) where this start called: Barb\_49 (DC1), Fugax\_50 (DC1), Gezellig\_49 (DC1), Phlop\_46 (DC1), PinkCoffee\_49 (DC1), Shinji\_48 (DC1), Wizard\_46 (DC1),

Start 61:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 50.0% of time when present
- Phage (with cluster) where this start called: DirtyBoi\_40 (DB),

Start 62:

- Found in 34 of 282 ( 12.1% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Evamon\_46 (DC1), Heinz\_32 (DY),

Start 70:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Camerico\_75 (DF),

Start 71:

- Found in 34 of 282 ( 12.1% ) of genes in pham
- Manual Annotations of this start: 3 of 246
- Called 17.6% of time when present
- Phage (with cluster) where this start called: CherryCola\_51 (DC1), CoveyB\_50 (DC1), Egi03\_50 (DC1), KimmyK\_48 (DC1), Togo\_46 (DC1), Twister6\_49 (DC1),

Start 72:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Barebow\_18 (singleton),

Start 76:

- Found in 32 of 282 ( 11.3% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 3.1% of time when present
- Phage (with cluster) where this start called: SmokingBunny\_47 (DC1),

Start 77:

- Found in 2 of 282 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 246
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigNuz\_33 (P4), Nazo\_34 (P4),

Start 78:

- Found in 20 of 282 ( 7.1% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Petra\_37 (CV),

Start 80:

- Found in 27 of 282 ( 9.6% ) of genes in pham
- Manual Annotations of this start: 18 of 246
- Called 92.6% of time when present
- Phage (with cluster) where this start called: BBQValindra\_37 (DB), BabyMoney\_33 (DT), BackstagePass\_45 (DB), Coriander\_39 (DB), Dmitri\_38 (DB), Dogfish\_32 (DT), Doggs\_36 (DB), Emperor\_19 (DM), EpicDab\_18 (DM), Ewald\_33 (DT), Eyes\_36 (DB), GEazy\_42 (DB), HannahD\_40 (DB), Kiko\_39 (DB), MagicMan\_38 (DB), Meyran\_33 (DT), Moonflower\_38 (DB), Nyceirae\_34 (DT), Opie\_41 (DB), Phishy\_35 (DT), Rahul\_19 (CW2), Schnabeltier\_38 (DB), TaronosaurusRx\_39 (DB), Vordorf\_34 (DT), ZAYM\_40 (DB),

Start 82:

- Found in 1 of 282 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trogglehumper\_82 (singleton),

Start 83:

- Found in 62 of 282 ( 22.0% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 1.6% of time when present
- Phage (with cluster) where this start called: Bunker\_36 (DB),

Start 84:

- Found in 73 of 282 ( 25.9% ) of genes in pham
- Manual Annotations of this start: 18 of 246
- Called 30.1% of time when present
- Phage (with cluster) where this start called: Barco\_38 (CV), Bartholomew\_29 (P1), BlingBling\_37 (CV), Brusacoram\_30 (P1), Camster\_30 (P1), Coeur\_19 (CW2), Etoile\_30 (P1), Eyre\_35 (singleton), Hedwig\_41 (DB), Jebeks\_30 (P1), Jung\_29 (P1), Kari\_30 (P1), Melba\_39 (CV), Phayonce\_32 (P5), Polkaroo\_30 (P1), Purky\_37 (P6), QueenHazel\_29 (I1), Shipwreck\_32 (P1), StevieRay\_30 (P1), Thespis\_30 (P1), Vidya\_30 (P1), Xula\_28 (I1),

Start 85:

- Found in 5 of 282 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 20.0% of time when present
- Phage (with cluster) where this start called: IdentityCrisis\_34 (singleton),

Start 86:

- Found in 18 of 282 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Bowser\_39 (DB),

Start 87:

- Found in 48 of 282 ( 17.0% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 2.1% of time when present
- Phage (with cluster) where this start called: Clown\_56 (DC2),

Start 89:

- Found in 8 of 282 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Purgamenstris\_37 (N),

Start 91:

- Found in 18 of 282 ( 6.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.6% of time when present
- Phage (with cluster) where this start called: CyranoPS\_17 (singleton),

Start 92:

- Found in 7 of 282 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 14.3% of time when present
- Phage (with cluster) where this start called: TillyBobJoe\_47 (DC1),

Start 95:

- Found in 33 of 282 ( 11.7% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 3.0% of time when present
- Phage (with cluster) where this start called: Gex\_36 (N),

Start 96:

- Found in 28 of 282 ( 9.9% ) of genes in pham
- Manual Annotations of this start: 6 of 246
- Called 25.0% of time when present
- Phage (with cluster) where this start called: CaptainKirk2\_40 (CV), DonkeyMan\_31 (DY), Fireball\_48 (DC1), RayTheFireFly\_45 (DB), Tarzan\_31 (DY), Walrus\_40 (CV), YungMoney\_50 (DC1),

Start 97:

- Found in 6 of 282 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 50.0% of time when present
- Phage (with cluster) where this start called: GMA5\_17 (CW2), Mbo2\_72 (singleton), Reynauld\_68 (singleton),

Start 98:

- Found in 1 of 282 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RobinSparkles\_72 (CX),

Start 99:

- Found in 4 of 282 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 25.0% of time when present
- Phage (with cluster) where this start called: SallySpecial\_17 (DM),

Start 102:

- Found in 55 of 282 ( 19.5% ) of genes in pham

- No Manual Annotations of this start.
- Called 7.3% of time when present
- Phage (with cluster) where this start called: AzulaCat\_32 (G1), Maliketh\_32 (G1), TinaBug\_32 (G1), Wendigo\_32 (G1),

Start 104:

- Found in 3 of 282 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 66.7% of time when present
- Phage (with cluster) where this start called: GMA3\_75 (DF2), Jumbo\_69 (DF3),

Start 106:

- Found in 4 of 282 ( 1.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Gmala1\_67 (DF1), GordDuk1\_71 (DF1), GordTnk2\_72 (DF1),

Start 109:

- Found in 5 of 282 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 4 of 246
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Gibbles\_68 (CX), Kampe\_71 (CX), Orchid\_70 (CX), PatrickStar\_71 (CX),

Start 129:

- Found in 63 of 282 ( 22.3% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 1.6% of time when present
- Phage (with cluster) where this start called: Reyja\_31 (DY),

Start 131:

- Found in 100 of 282 ( 35.5% ) of genes in pham
- Manual Annotations of this start: 1 of 246
- Called 1.0% of time when present
- Phage (with cluster) where this start called: Bipper\_50 (Y),

### **Summary by clusters:**

There are 25 clusters represented in this pham: singleton, DM, DF, DB, DY, DT, G1, I1, CW2, DF1, DF3, DF2, P1, P6, P4, P5, AH, N, CX, Y, Z, DC2, CV, DC1, CW1,

Info for manual annotations of cluster AH:

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

Info for manual annotations of cluster CV:

- Start number 36 was manually annotated 2 times for cluster CV.
- Start number 39 was manually annotated 1 time for cluster CV.
- Start number 48 was manually annotated 8 times for cluster CV.
- Start number 78 was manually annotated 1 time for cluster CV.
- Start number 84 was manually annotated 3 times for cluster CV.
- Start number 96 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CW1:

- Start number 49 was manually annotated 2 times for cluster CW1.

Info for manual annotations of cluster CW2:

- Start number 80 was manually annotated 1 time for cluster CW2.
- Start number 84 was manually annotated 1 time for cluster CW2.

Info for manual annotations of cluster CX:

- Start number 98 was manually annotated 1 time for cluster CX.
- Start number 109 was manually annotated 4 times for cluster CX.

Info for manual annotations of cluster DB:

- Start number 61 was manually annotated 1 time for cluster DB.
- Start number 80 was manually annotated 10 times for cluster DB.
- Start number 83 was manually annotated 1 time for cluster DB.
- Start number 84 was manually annotated 1 time for cluster DB.
- Start number 86 was manually annotated 1 time for cluster DB.
- Start number 96 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DC1:

- Start number 36 was manually annotated 15 times for cluster DC1.
- Start number 59 was manually annotated 5 times for cluster DC1.
- Start number 62 was manually annotated 1 time for cluster DC1.
- Start number 71 was manually annotated 3 times for cluster DC1.
- Start number 76 was manually annotated 1 time for cluster DC1.
- Start number 92 was manually annotated 1 time for cluster DC1.
- Start number 96 was manually annotated 2 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 87 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DF:

- Start number 70 was manually annotated 1 time for cluster DF.

Info for manual annotations of cluster DF3:

- Start number 104 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DM:

- Start number 80 was manually annotated 2 times for cluster DM.
- Start number 99 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster DT:

- Start number 80 was manually annotated 5 times for cluster DT.

Info for manual annotations of cluster DY:

- Start number 21 was manually annotated 1 time for cluster DY.
- Start number 23 was manually annotated 1 time for cluster DY.
- Start number 36 was manually annotated 1 time for cluster DY.
- Start number 96 was manually annotated 1 time for cluster DY.
- Start number 129 was manually annotated 1 time for cluster DY.

Info for manual annotations of cluster G1:

- Start number 8 was manually annotated 1 time for cluster G1.
- Start number 10 was manually annotated 58 times for cluster G1.

Info for manual annotations of cluster I1:

- Start number 44 was manually annotated 3 times for cluster I1.
- Start number 84 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster N:

- Start number 34 was manually annotated 40 times for cluster N.
- Start number 89 was manually annotated 1 time for cluster N.
- Start number 95 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster P1:

- Start number 44 was manually annotated 32 times for cluster P1.
- Start number 84 was manually annotated 8 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 77 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 84 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 84 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Y:

- Start number 131 was manually annotated 1 time for cluster Y.

Info for manual annotations of cluster Z:

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

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

Gene: 32HC\_47 Start: 33699, Stop: 32656, Start Num: 15

Candidate Starts for 32HC\_47:

(Start: 15 @33699 has 1 MA's), (79, 33564), (94, 33540), (111, 33504), (118, 33483), (120, 33474), (138, 33411), (141, 33396), (143, 33390), (161, 33303), (163, 33297), (164, 33294), (168, 33270), (188, 33198), (194, 33183), (198, 33165), (199, 33162), (208, 33129), (223, 33069), (233, 33012), (236, 33000), (255, 32907), (266, 32847), (271, 32817),

Gene: Aggie\_34 Start: 27389, Stop: 26418, Start Num: 34

Candidate Starts for Aggie\_34:

(Start: 34 @27389 has 40 MA's), (38, 27380), (Start: 83 @27305 has 1 MA's), (Start: 95 @27290 has 1 MA's), (138, 27167), (144, 27143), (168, 27026), (169, 27023), (175, 27002), (184, 26963), (185, 26960), (188, 26954), (194, 26939), (199, 26918), (204, 26903), (216, 26846), (219, 26834), (227, 26795), (233, 26768), (236, 26756), (240, 26729), (248, 26690), (255, 26666), (259, 26651), (280, 26522), (290, 26468), (301, 26435),

Gene: Andies\_33 Start: 27907, Stop: 26936, Start Num: 34

Candidate Starts for Andies\_33:



(Start: 34 @27907 has 40 MA's), (Start: 83 @27823 has 1 MA's), (Start: 95 @27808 has 1 MA's), (138, 27685), (144, 27661), (168, 27544), (169, 27541), (175, 27520), (184, 27481), (185, 27478), (188, 27472), (194, 27457), (199, 27436), (204, 27421), (216, 27364), (219, 27352), (227, 27313), (233, 27286), (236, 27274), (240, 27247), (248, 27208), (255, 27184), (259, 27169), (280, 27040), (281, 27025), (290, 26986),

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

Candidate Starts for Angel\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for Annihilator\_32:

(Start: 10 @28908 has 58 MA's), (28, 28845), (102, 28719), (135, 28611), (144, 28578), (158, 28512), (183, 28401), (190, 28383), (197, 28362), (199, 28356), (200, 28353), (207, 28329), (223, 28257), (228, 28221), (262, 28062), (273, 27990), (283, 27918), (285, 27915), (305, 27846), (306, 27840), (312, 27804),

Gene: Archis\_43 Start: 32279, Stop: 31389, Start Num: 48

Candidate Starts for Archis\_43:

(Start: 48 @32279 has 8 MA's), (Start: 58 @32258 has 1 MA's), (67, 32243), (Start: 78 @32225 has 1 MA's), (Start: 84 @32216 has 18 MA's), (Start: 96 @32198 has 6 MA's), (122, 32132), (199, 31826), (223, 31733), (226, 31706), (236, 31664), (248, 31604), (255, 31580), (264, 31544), (275, 31463),

Gene: Arib1\_30 Start: 26880, Stop: 25924, Start Num: 44

Candidate Starts for Arib1\_30:

(Start: 44 @26880 has 35 MA's), (63, 26850), (Start: 84 @26817 has 18 MA's), (Start: 87 @26814 has 1 MA's), (Start: 129 @26742 has 1 MA's), (Start: 131 @26733 has 1 MA's), (132, 26727), (144, 26682), (168, 26565), (169, 26562), (170, 26559), (178, 26529), (180, 26517), (184, 26502), (191, 26484), (199, 26457), (207, 26430), (208, 26424), (221, 26370), (223, 26364), (236, 26295), (255, 26211), (259, 26196), (274, 26109), (280, 26067), (311, 25938),

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

Candidate Starts for Aroostook\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (91, 28749), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813), (315, 27777),

Gene: Arri\_50 Start: 39538, Stop: 38603, Start Num: 36

Candidate Starts for Arri\_50:

(Start: 36 @39538 has 18 MA's), (Start: 59 @39490 has 5 MA's), (Start: 62 @39487 has 1 MA's), (Start: 71 @39469 has 3 MA's), (Start: 76 @39460 has 1 MA's), (Start: 131 @39328 has 1 MA's), (174, 39145), (177, 39133), (183, 39103), (184, 39100), (199, 39058), (211, 39007), (220, 38968), (221, 38965), (262, 38764), (264, 38755), (272, 38695), (280, 38647), (281, 38632), (283, 38620),

Gene: Atcoo\_30 Start: 27362, Stop: 26406, Start Num: 44

Candidate Starts for Atcoo\_30:

(Start: 44 @27362 has 35 MA's), (Start: 84 @27299 has 18 MA's), (Start: 87 @27296 has 1 MA's), (Start: 129 @27224 has 1 MA's), (Start: 131 @27215 has 1 MA's), (144, 27164), (168, 27047), (169, 27044), (170, 27041), (178, 27011), (180, 26999), (184, 26984), (191, 26966), (199, 26939), (207,

26912), (208, 26906), (221, 26852), (223, 26846), (224, 26828), (236, 26777), (255, 26693), (271, 26603), (274, 26591), (280, 26549), (311, 26420),

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

Candidate Starts for Avrafan\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: AzulaCat\_32 Start: 28728, Stop: 27721, Start Num: 102

Candidate Starts for AzulaCat\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: BBQValindra\_37 Start: 32011, Stop: 31118, Start Num: 80

Candidate Starts for BBQValindra\_37:

(Start: 80 @32011 has 18 MA's), (Start: 83 @32005 has 1 MA's), (Start: 86 @32002 has 1 MA's), (115, 31945), (116, 31942), (127, 31900), (Start: 131 @31885 has 1 MA's), (160, 31765), (170, 31720), (172, 31714), (200, 31618), (230, 31471), (236, 31447), (242, 31417), (264, 31324), (277, 31237), (280, 31216), (282, 31192),

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

Candidate Starts for BPs\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for BQuat\_32:

(Start: 10 @28908 has 58 MA's), (28, 28845), (102, 28719), (135, 28611), (144, 28578), (158, 28512), (183, 28401), (190, 28383), (197, 28362), (199, 28356), (200, 28353), (207, 28329), (223, 28257), (228, 28221), (262, 28062), (273, 27990), (283, 27918), (285, 27915), (305, 27846), (306, 27840), (312, 27804),

Gene: BabeRuth\_38 Start: 29036, Stop: 28065, Start Num: 34

Candidate Starts for BabeRuth\_38:

(Start: 34 @29036 has 40 MA's), (Start: 83 @28952 has 1 MA's), (Start: 89 @28943 has 1 MA's), (144, 28790), (168, 28673), (169, 28670), (184, 28610), (188, 28601), (194, 28586), (199, 28565), (205, 28547), (219, 28481), (233, 28415), (236, 28403), (240, 28376), (248, 28337), (255, 28313), (259, 28298), (271, 28223), (280, 28169),

Gene: Babsiella\_33 Start: 28104, Stop: 27151, Start Num: 44

Candidate Starts for Babsiella\_33:

(Start: 44 @28104 has 35 MA's), (75, 28053), (Start: 84 @28041 has 18 MA's), (Start: 131 @27957 has 1 MA's), (135, 27939), (168, 27789), (169, 27786), (170, 27783), (178, 27753), (180, 27741), (184, 27726), (188, 27717), (191, 27708), (199, 27681), (208, 27648), (221, 27594), (223, 27588), (233, 27531), (236, 27519), (255, 27435), (259, 27420), (271, 27345), (274, 27333), (275, 27318), (280, 27291), (302, 27198), (308, 27183),

Gene: BabyMoney\_33 Start: 29420, Stop: 28557, Start Num: 80

Candidate Starts for BabyMoney\_33:

(Start: 44 @29471 has 35 MA's), (Start: 80 @29420 has 18 MA's), (128, 29315), (135, 29285), (144, 29252), (145, 29243), (168, 29135), (169, 29132), (184, 29072), (194, 29048), (198, 29030), (199, 29027), (229, 28889), (236, 28865), (240, 28838), (255, 28775), (259, 28760), (270, 28688), (274, 28673), (288, 28586),

Gene: BackstagePass\_45 Start: 32457, Stop: 31561, Start Num: 80

Candidate Starts for BackstagePass\_45:

(41, 32523), (Start: 80 @32457 has 18 MA's), (Start: 83 @32451 has 1 MA's), (Start: 86 @32448 has 1 MA's), (108, 32412), (115, 32391), (116, 32388), (127, 32346), (Start: 131 @32331 has 1 MA's), (160, 32211), (170, 32166), (172, 32160), (200, 32064), (202, 32058), (207, 32040), (236, 31893), (242, 31863), (264, 31770), (267, 31743), (277, 31683), (282, 31638), (297, 31581),

Gene: Bakery\_53 Start: 40679, Stop: 39744, Start Num: 36

Candidate Starts for Bakery\_53:

(Start: 36 @40679 has 18 MA's), (Start: 59 @40631 has 5 MA's), (Start: 62 @40628 has 1 MA's), (Start: 71 @40610 has 3 MA's), (107, 40553), (Start: 131 @40469 has 1 MA's), (177, 40274), (183, 40244), (184, 40241), (199, 40199), (209, 40157), (211, 40148), (220, 40109), (262, 39905), (272, 39836), (280, 39788), (281, 39773), (283, 39761),

Gene: Barb\_49 Start: 39609, Stop: 38722, Start Num: 59

Candidate Starts for Barb\_49:

(Start: 36 @39657 has 18 MA's), (Start: 59 @39609 has 5 MA's), (Start: 62 @39606 has 1 MA's), (Start: 71 @39588 has 3 MA's), (Start: 76 @39579 has 1 MA's), (Start: 131 @39447 has 1 MA's), (174, 39264), (177, 39252), (184, 39219), (199, 39177), (211, 39126), (220, 39087), (262, 38883), (264, 38874), (272, 38814), (280, 38766), (281, 38751), (283, 38739),

Gene: Barco\_38 Start: 31266, Stop: 30439, Start Num: 84

Candidate Starts for Barco\_38:

(Start: 48 @31329 has 8 MA's), (Start: 58 @31308 has 1 MA's), (67, 31293), (Start: 78 @31275 has 1 MA's), (Start: 84 @31266 has 18 MA's), (Start: 96 @31248 has 6 MA's), (122, 31182), (199, 30876), (223, 30783), (226, 30756), (236, 30714), (248, 30654), (255, 30630), (264, 30594), (275, 30513),

Gene: Barebow\_18 Start: 15231, Stop: 14389, Start Num: 72

Candidate Starts for Barebow\_18:

(Start: 15 @15354 has 1 MA's), (18, 15345), (25, 15327), (38, 15294), (60, 15252), (Start: 72 @15231 has 1 MA's), (Start: 78 @15222 has 1 MA's), (88, 15210), (Start: 104 @15180 has 1 MA's), (144, 15039), (160, 14964), (174, 14907), (177, 14895), (183, 14865), (189, 14850), (199, 14820), (200, 14817), (207, 14793), (223, 14721), (227, 14691),

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

Candidate Starts for Barkley26\_32:

(7, 28963), (Start: 10 @28939 has 58 MA's), (28, 28876), (91, 28771), (108, 28741), (135, 28642), (144, 28609), (158, 28543), (183, 28432), (190, 28414), (197, 28393), (199, 28387), (200, 28384), (207, 28360), (223, 28288), (228, 28252), (262, 28093), (273, 28021), (283, 27949), (285, 27946), (305, 27877), (306, 27871), (312, 27835),

Gene: Bartholomew\_29 Start: 26812, Stop: 25919, Start Num: 84

Candidate Starts for Bartholomew\_29:

(Start: 44 @26875 has 35 MA's), (63, 26845), (Start: 84 @26812 has 18 MA's), (Start: 87 @26809 has 1 MA's), (Start: 129 @26737 has 1 MA's), (Start: 131 @26728 has 1 MA's), (132, 26722), (144, 26677), (168, 26560), (169, 26557), (170, 26554), (178, 26524), (180, 26512), (184, 26497), (191, 26479),

(199, 26452), (207, 26425), (208, 26419), (221, 26365), (223, 26359), (236, 26290), (255, 26206), (266, 26146), (274, 26104), (280, 26062), (311, 25933),

Gene: Bhagsy\_30 Start: 26871, Stop: 25915, Start Num: 44

Candidate Starts for Bhagsy\_30:

(Start: 44 @26871 has 35 MA's), (Start: 84 @26808 has 18 MA's), (Start: 87 @26805 has 1 MA's), (Start: 129 @26733 has 1 MA's), (Start: 131 @26724 has 1 MA's), (144, 26673), (168, 26556), (169, 26553), (170, 26550), (178, 26520), (180, 26508), (184, 26493), (191, 26475), (199, 26448), (207, 26421), (208, 26415), (221, 26361), (236, 26286), (255, 26202), (271, 26112), (274, 26100), (280, 26058), (311, 25929),

Gene: BigNuz\_33 Start: 28934, Stop: 28032, Start Num: 77

Candidate Starts for BigNuz\_33:

(60, 28961), (Start: 77 @28934 has 2 MA's), (Start: 84 @28925 has 18 MA's), (Start: 129 @28850 has 1 MA's), (Start: 131 @28841 has 1 MA's), (168, 28673), (169, 28670), (170, 28667), (178, 28637), (180, 28625), (184, 28610), (191, 28592), (199, 28565), (207, 28538), (208, 28532), (221, 28478), (224, 28454), (233, 28415), (236, 28403), (255, 28319), (259, 28304), (263, 28286), (274, 28217), (280, 28175), (294, 28106), (311, 28046),

Gene: Bipper\_50 Start: 39303, Stop: 38347, Start Num: 131

Candidate Starts for Bipper\_50:

(9, 39591), (11, 39579), (17, 39549), (22, 39537), (64, 39453), (69, 39444), (94, 39408), (102, 39393), (115, 39363), (Start: 131 @39303 has 1 MA's), (199, 39030), (200, 39027), (202, 39021), (206, 39009), (209, 38988), (210, 38982), (227, 38901), (238, 38838), (253, 38760), (258, 38745), (262, 38727), (271, 38664), (280, 38610), (283, 38583), (300, 38532), (303, 38520), (305, 38517), (308, 38499), (309, 38490), (310, 38487), (312, 38478), (313, 38475), (315, 38442), (316, 38433), (317, 38421), (319, 38403), (320, 38400),

Gene: BlingBling\_37 Start: 32229, Stop: 31402, Start Num: 84

Candidate Starts for BlingBling\_37:

(Start: 48 @32292 has 8 MA's), (Start: 58 @32271 has 1 MA's), (67, 32256), (Start: 78 @32238 has 1 MA's), (Start: 84 @32229 has 18 MA's), (Start: 96 @32211 has 6 MA's), (122, 32145), (199, 31839), (223, 31746), (226, 31719), (236, 31677), (248, 31617), (255, 31593), (264, 31557), (275, 31476),

Gene: Bogie\_32 Start: 28658, Stop: 27702, Start Num: 44

Candidate Starts for Bogie\_32:

(Start: 44 @28658 has 35 MA's), (63, 28628), (Start: 84 @28595 has 18 MA's), (Start: 87 @28592 has 1 MA's), (Start: 129 @28520 has 1 MA's), (Start: 131 @28511 has 1 MA's), (132, 28505), (144, 28460), (168, 28343), (169, 28340), (170, 28337), (178, 28307), (180, 28295), (184, 28280), (188, 28271), (191, 28262), (199, 28235), (207, 28208), (208, 28202), (221, 28148), (224, 28124), (236, 28073), (255, 27989), (266, 27929), (271, 27899), (274, 27887), (280, 27845), (311, 27716),

Gene: Bosection6\_34 Start: 27410, Stop: 26439, Start Num: 34

Candidate Starts for Bosection6\_34:

(Start: 34 @27410 has 40 MA's), (38, 27401), (Start: 83 @27326 has 1 MA's), (Start: 95 @27311 has 1 MA's), (138, 27188), (144, 27164), (168, 27047), (169, 27044), (175, 27023), (184, 26984), (185, 26981), (188, 26975), (194, 26960), (199, 26939), (204, 26924), (216, 26867), (219, 26855), (227, 26816), (233, 26789), (236, 26777), (240, 26750), (248, 26711), (255, 26687), (259, 26672), (280, 26543), (290, 26489), (301, 26456),

Gene: Bowser\_39 Start: 31647, Stop: 30763, Start Num: 86

Candidate Starts for Bowser\_39:

(Start: 80 @31656 has 18 MA's), (Start: 83 @31650 has 1 MA's), (Start: 86 @31647 has 1 MA's), (115, 31590), (116, 31587), (127, 31545), (148, 31461), (170, 31365), (200, 31263), (211, 31215), (277, 30882), (282, 30837),

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

Candidate Starts for BruceB\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Brujita\_33 Start: 29011, Stop: 28055, Start Num: 44

Candidate Starts for Brujita\_33:

(Start: 44 @29011 has 35 MA's), (63, 28981), (Start: 84 @28948 has 18 MA's), (Start: 87 @28945 has 1 MA's), (Start: 129 @28873 has 1 MA's), (Start: 131 @28864 has 1 MA's), (144, 28813), (168, 28696), (169, 28693), (170, 28690), (178, 28660), (180, 28648), (184, 28633), (191, 28615), (199, 28588), (207, 28561), (208, 28555), (221, 28501), (224, 28477), (236, 28426), (255, 28342), (271, 28252), (274, 28240), (280, 28198), (311, 28069),

Gene: Brusacoram\_30 Start: 26805, Stop: 25912, Start Num: 84

Candidate Starts for Brusacoram\_30:

(Start: 44 @26868 has 35 MA's), (Start: 84 @26805 has 18 MA's), (Start: 87 @26802 has 1 MA's), (Start: 129 @26730 has 1 MA's), (Start: 131 @26721 has 1 MA's), (144, 26670), (168, 26553), (169, 26550), (170, 26547), (178, 26517), (180, 26505), (184, 26490), (191, 26472), (199, 26445), (207, 26418), (208, 26412), (221, 26358), (223, 26352), (224, 26334), (236, 26283), (255, 26199), (271, 26109), (274, 26097), (280, 26055), (311, 25926),

Gene: Bunker\_36 Start: 30985, Stop: 30131, Start Num: 83

Candidate Starts for Bunker\_36:

(Start: 83 @30985 has 1 MA's), (128, 30886), (135, 30856), (144, 30823), (145, 30814), (153, 30778), (168, 30706), (169, 30703), (184, 30643), (194, 30619), (198, 30601), (199, 30598), (205, 30580), (223, 30505), (229, 30460), (236, 30436), (240, 30409), (255, 30346), (259, 30331), (270, 30259), (274, 30244), (280, 30202), (288, 30157),

Gene: Bunnies\_30 Start: 26889, Stop: 25933, Start Num: 44

Candidate Starts for Bunnies\_30:

(Start: 44 @26889 has 35 MA's), (Start: 84 @26826 has 18 MA's), (Start: 87 @26823 has 1 MA's), (Start: 129 @26751 has 1 MA's), (Start: 131 @26742 has 1 MA's), (144, 26691), (168, 26574), (169, 26571), (170, 26568), (178, 26538), (180, 26526), (184, 26511), (191, 26493), (199, 26466), (207, 26439), (208, 26433), (221, 26379), (236, 26304), (255, 26220), (271, 26130), (274, 26118), (280, 26076), (311, 25947),

Gene: Butters\_37 Start: 29461, Stop: 28490, Start Num: 34

Candidate Starts for Butters\_37:

(32, 29464), (Start: 34 @29461 has 40 MA's), (Start: 83 @29377 has 1 MA's), (Start: 131 @29266 has 1 MA's), (138, 29239), (144, 29215), (168, 29098), (188, 29026), (194, 29011), (199, 28990), (227, 28867), (233, 28840), (236, 28828), (240, 28801), (248, 28762), (255, 28738), (259, 28723), (271, 28648), (274, 28636), (280, 28594), (281, 28579), (290, 28540),

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

Candidate Starts for CLED96\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266),

(228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: CactusJack\_30 Start: 27132, Stop: 26176, Start Num: 44

Candidate Starts for CactusJack\_30:

(Start: 44 @27132 has 35 MA's), (Start: 84 @27069 has 18 MA's), (Start: 87 @27066 has 1 MA's), (Start: 129 @26994 has 1 MA's), (Start: 131 @26985 has 1 MA's), (144, 26934), (168, 26817), (169, 26814), (170, 26811), (178, 26781), (180, 26769), (184, 26754), (191, 26736), (199, 26709), (207, 26682), (208, 26676), (221, 26622), (223, 26616), (224, 26598), (236, 26547), (255, 26463), (271, 26373), (274, 26361), (280, 26319), (311, 26190),

Gene: Camerico\_75 Start: 60592, Stop: 59744, Start Num: 70

Candidate Starts for Camerico\_75:

(Start: 70 @60592 has 1 MA's), (107, 60535), (Start: 129 @60466 has 1 MA's), (146, 60397), (181, 60232), (188, 60214), (190, 60208), (192, 60202), (223, 60085), (230, 60037), (236, 60013), (241, 59989), (283, 59755),

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

Candidate Starts for Camri\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Camster\_30 Start: 26842, Stop: 25949, Start Num: 84

Candidate Starts for Camster\_30:

(Start: 44 @26905 has 35 MA's), (63, 26875), (Start: 84 @26842 has 18 MA's), (Start: 87 @26839 has 1 MA's), (Start: 129 @26767 has 1 MA's), (Start: 131 @26758 has 1 MA's), (144, 26707), (168, 26590), (169, 26587), (170, 26584), (178, 26554), (180, 26542), (184, 26527), (191, 26509), (199, 26482), (207, 26455), (208, 26449), (221, 26395), (223, 26389), (236, 26320), (255, 26236), (271, 26146), (274, 26134), (280, 26092), (311, 25963),

Gene: CaptainKirk2\_40 Start: 31496, Stop: 30687, Start Num: 96

Candidate Starts for CaptainKirk2\_40:

(Start: 48 @31577 has 8 MA's), (Start: 58 @31556 has 1 MA's), (67, 31541), (Start: 78 @31523 has 1 MA's), (Start: 84 @31514 has 18 MA's), (Start: 96 @31496 has 6 MA's), (122, 31430), (154, 31304), (164, 31259), (199, 31124), (205, 31106), (208, 31091), (223, 31031), (226, 31004), (236, 30962), (248, 30902), (255, 30878), (264, 30842), (275, 30761),

Gene: Carcharodon\_36 Start: 28718, Stop: 27747, Start Num: 34

Candidate Starts for Carcharodon\_36:

(Start: 34 @28718 has 40 MA's), (Start: 83 @28634 has 1 MA's), (Start: 95 @28619 has 1 MA's), (138, 28496), (144, 28472), (168, 28355), (169, 28352), (175, 28331), (184, 28292), (185, 28289), (188, 28283), (194, 28268), (199, 28247), (204, 28232), (216, 28175), (219, 28163), (227, 28124), (233, 28097), (236, 28085), (240, 28058), (248, 28019), (255, 27995), (259, 27980), (280, 27851), (281, 27836), (290, 27797),

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

Candidate Starts for CassieYates\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for Cedasite\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for Chance64\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (91, 28749), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813), (315, 27777),

Gene: Charlie\_34 Start: 27409, Stop: 26438, Start Num: 34

Candidate Starts for Charlie\_34:

(Start: 34 @27409 has 40 MA's), (38, 27400), (Start: 83 @27325 has 1 MA's), (Start: 95 @27310 has 1 MA's), (138, 27187), (144, 27163), (168, 27046), (169, 27043), (175, 27022), (184, 26983), (185, 26980), (188, 26974), (194, 26959), (199, 26938), (204, 26923), (216, 26866), (219, 26854), (227, 26815), (233, 26788), (236, 26776), (240, 26749), (248, 26710), (255, 26686), (259, 26671), (280, 26542), (290, 26488), (301, 26455),

Gene: CherryCola\_51 Start: 40242, Stop: 39376, Start Num: 71

Candidate Starts for CherryCola\_51:

(Start: 36 @40311 has 18 MA's), (Start: 59 @40263 has 5 MA's), (Start: 62 @40260 has 1 MA's), (Start: 71 @40242 has 3 MA's), (Start: 76 @40233 has 1 MA's), (Start: 131 @40101 has 1 MA's), (174, 39918), (177, 39906), (184, 39873), (199, 39831), (211, 39780), (220, 39741), (262, 39537), (264, 39528), (272, 39468), (280, 39420), (281, 39405), (283, 39393),

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

Candidate Starts for Cherrybomb426\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Chewbacca\_37 Start: 28718, Stop: 27747, Start Num: 34

Candidate Starts for Chewbacca\_37:

(Start: 34 @28718 has 40 MA's), (Start: 83 @28634 has 1 MA's), (Start: 95 @28619 has 1 MA's), (138, 28496), (144, 28472), (168, 28355), (169, 28352), (175, 28331), (184, 28292), (185, 28289), (188, 28283), (194, 28268), (199, 28247), (204, 28232), (216, 28175), (219, 28163), (227, 28124), (233, 28097), (236, 28085), (240, 28058), (248, 28019), (255, 27995), (259, 27980), (280, 27851), (281, 27836), (290, 27797),

Gene: ClamChowder\_49 Start: 39657, Stop: 38722, Start Num: 36

Candidate Starts for ClamChowder\_49:

(Start: 36 @39657 has 18 MA's), (Start: 59 @39609 has 5 MA's), (Start: 62 @39606 has 1 MA's), (Start: 71 @39588 has 3 MA's), (Start: 76 @39579 has 1 MA's), (Start: 131 @39447 has 1 MA's), (174, 39264), (177, 39252), (184, 39219), (199, 39177), (211, 39126), (220, 39087), (262, 38883), (264, 38874), (272, 38814), (280, 38766), (281, 38751), (283, 38739),

Gene: Clown\_56 Start: 42611, Stop: 41772, Start Num: 87

Candidate Starts for Clown\_56:

(Start: 87 @42611 has 1 MA's), (Start: 96 @42596 has 6 MA's), (103, 42581), (113, 42560), (157, 42389), (168, 42335), (196, 42233), (199, 42224), (226, 42104), (236, 42062), (250, 41993), (255, 41981), (259, 41966), (264, 41945), (270, 41894), (273, 41882), (274, 41879), (275, 41864),

Gene: Coeur\_19 Start: 13884, Stop: 13063, Start Num: 84

Candidate Starts for Coeur\_19:

(Start: 20 @14010 has 1 MA's), (30, 13980), (46, 13950), (Start: 72 @13902 has 1 MA's), (Start: 84 @13884 has 18 MA's), (115, 13827), (117, 13821), (119, 13812), (Start: 129 @13776 has 1 MA's), (135, 13746), (157, 13653), (167, 13614), (169, 13596), (171, 13590), (198, 13497), (214, 13428), (215, 13425), (221, 13401), (227, 13365), (228, 13359), (253, 13263), (258, 13248), (273, 13158), (274, 13155), (280, 13113), (281, 13098), (282, 13089), (286, 13077),

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

Candidate Starts for Coleslaw\_32:

(Start: 10 @28908 has 58 MA's), (28, 28845), (102, 28719), (135, 28611), (144, 28578), (158, 28512), (183, 28401), (190, 28383), (197, 28362), (199, 28356), (200, 28353), (207, 28329), (223, 28257), (228, 28221), (262, 28062), (273, 27990), (283, 27918), (285, 27915), (305, 27846), (306, 27840), (312, 27804),

Gene: Coriander\_39 Start: 31214, Stop: 30324, Start Num: 80

Candidate Starts for Coriander\_39:

(Start: 80 @31214 has 18 MA's), (Start: 83 @31208 has 1 MA's), (Start: 86 @31205 has 1 MA's), (115, 31148), (116, 31145), (127, 31103), (148, 31019), (187, 30860), (200, 30821), (211, 30773), (230, 30674), (236, 30650), (250, 30575), (264, 30527), (277, 30440), (282, 30395), (283, 30392),

Gene: CoveyB\_50 Start: 39287, Stop: 38421, Start Num: 71

Candidate Starts for CoveyB\_50:

(Start: 36 @39356 has 18 MA's), (Start: 59 @39308 has 5 MA's), (Start: 62 @39305 has 1 MA's), (Start: 71 @39287 has 3 MA's), (Start: 76 @39278 has 1 MA's), (Start: 131 @39146 has 1 MA's), (174, 38963), (177, 38951), (184, 38918), (199, 38876), (211, 38825), (220, 38786), (262, 38582), (264, 38573), (272, 38513), (280, 38465), (281, 38450), (283, 38438),

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

Candidate Starts for Crespo\_32:

(Start: 10 @28918 has 58 MA's), (28, 28855), (102, 28729), (135, 28621), (144, 28588), (158, 28522), (183, 28411), (190, 28393), (197, 28372), (199, 28366), (200, 28363), (207, 28339), (223, 28267), (228, 28231), (262, 28072), (273, 28000), (283, 27928), (285, 27925), (305, 27856), (306, 27850), (312, 27814),

Gene: CyranoPS\_17 Start: 12355, Stop: 11534, Start Num: 91

Candidate Starts for CyranoPS\_17:

(91, 12355), (101, 12337), (115, 12304), (124, 12268), (133, 12232), (137, 12220), (167, 12091), (171, 12067), (178, 12040), (185, 12010), (247, 11764), (250, 11749), (253, 11740), (265, 11677), (280, 11590),

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

Candidate Starts for DMoney\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),



Gene: Danyall\_49 Start: 39358, Stop: 38423, Start Num: 36

Candidate Starts for Danyall\_49:

(Start: 36 @39358 has 18 MA's), (Start: 59 @39310 has 5 MA's), (Start: 62 @39307 has 1 MA's), (Start: 71 @39289 has 3 MA's), (Start: 76 @39280 has 1 MA's), (Start: 131 @39148 has 1 MA's), (174, 38965), (177, 38953), (183, 38923), (184, 38920), (199, 38878), (211, 38827), (220, 38788), (221, 38785), (262, 38584), (264, 38575), (272, 38515), (280, 38467), (281, 38452), (283, 38440),

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

Candidate Starts for Darionha\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Delian\_43 Start: 31575, Stop: 30685, Start Num: 48

Candidate Starts for Delian\_43:

(Start: 48 @31575 has 8 MA's), (Start: 58 @31554 has 1 MA's), (67, 31539), (Start: 78 @31521 has 1 MA's), (Start: 84 @31512 has 18 MA's), (Start: 96 @31494 has 6 MA's), (122, 31428), (154, 31302), (164, 31257), (199, 31122), (205, 31104), (208, 31089), (223, 31029), (226, 31002), (236, 30960), (248, 30900), (255, 30876), (264, 30840), (275, 30759),

Gene: DirtyBoi\_40 Start: 31075, Stop: 30209, Start Num: 61

Candidate Starts for DirtyBoi\_40:

(56, 31081), (Start: 58 @31078 has 1 MA's), (Start: 61 @31075 has 1 MA's), (67, 31063), (Start: 84 @31036 has 18 MA's), (Start: 96 @31018 has 6 MA's), (122, 30952), (128, 30934), (151, 30838), (199, 30646), (226, 30526), (236, 30484), (248, 30424), (255, 30400), (264, 30364), (275, 30283), (287, 30217),

Gene: Dmitri\_38 Start: 32615, Stop: 31725, Start Num: 80

Candidate Starts for Dmitri\_38:

(Start: 80 @32615 has 18 MA's), (Start: 83 @32609 has 1 MA's), (Start: 86 @32606 has 1 MA's), (108, 32570), (115, 32549), (116, 32546), (127, 32504), (148, 32420), (200, 32222), (230, 32075), (250, 31976), (268, 31883), (277, 31841), (282, 31796),

Gene: Dogfish\_32 Start: 28978, Stop: 28088, Start Num: 80

Candidate Starts for Dogfish\_32:

(Start: 80 @28978 has 18 MA's), (128, 28873), (Start: 129 @28870 has 1 MA's), (135, 28843), (144, 28810), (168, 28693), (184, 28630), (194, 28606), (198, 28588), (199, 28585), (225, 28471), (229, 28447), (236, 28423), (240, 28396), (255, 28333), (264, 28297), (270, 28246), (274, 28231), (280, 28189), (288, 28144), (296, 28111),

Gene: Doggs\_36 Start: 31939, Stop: 31049, Start Num: 80

Candidate Starts for Doggs\_36:

(Start: 80 @31939 has 18 MA's), (Start: 83 @31933 has 1 MA's), (Start: 86 @31930 has 1 MA's), (108, 31894), (115, 31873), (116, 31870), (127, 31828), (Start: 129 @31822 has 1 MA's), (148, 31744), (187, 31585), (211, 31498), (230, 31399), (277, 31165), (282, 31120), (283, 31117),

Gene: DonkeyMan\_31 Start: 27041, Stop: 26220, Start Num: 96

Candidate Starts for DonkeyMan\_31:

(19, 27188), (Start: 23 @27179 has 1 MA's), (Start: 78 @27068 has 1 MA's), (Start: 96 @27041 has 6 MA's), (113, 27005), (Start: 129 @26954 has 1 MA's), (154, 26849), (156, 26837), (168, 26777), (180, 26729), (196, 26675), (199, 26666), (205, 26648), (223, 26573), (236, 26504), (248, 26444), (255, 26420), (259, 26405), (264, 26384), (273, 26321), (274, 26318), (275, 26303), (288, 26231),

Gene: Donovan\_30 Start: 26897, Stop: 25908, Start Num: 44

Candidate Starts for Donovan\_30:

(Start: 44 @26897 has 35 MA's), (63, 26867), (Start: 84 @26834 has 18 MA's), (Start: 87 @26831 has 1 MA's), (103, 26801), (105, 26798), (Start: 129 @26726 has 1 MA's), (Start: 131 @26717 has 1 MA's), (132, 26711), (144, 26666), (168, 26549), (169, 26546), (170, 26543), (178, 26513), (180, 26501), (184, 26486), (191, 26468), (199, 26441), (207, 26414), (208, 26408), (221, 26354), (223, 26348), (224, 26330), (236, 26279), (255, 26195), (266, 26135), (274, 26093), (311, 25922),

Gene: Duplicity\_36 Start: 28727, Stop: 27756, Start Num: 34

Candidate Starts for Duplicity\_36:

(Start: 34 @28727 has 40 MA's), (Start: 83 @28643 has 1 MA's), (Start: 95 @28628 has 1 MA's), (138, 28505), (144, 28481), (168, 28364), (169, 28361), (175, 28340), (184, 28301), (185, 28298), (188, 28292), (194, 28277), (199, 28256), (204, 28241), (216, 28184), (219, 28172), (227, 28133), (233, 28106), (236, 28094), (240, 28067), (248, 28028), (255, 28004), (259, 27989), (280, 27860), (281, 27845), (290, 27806),

Gene: Dynamo\_30 Start: 27286, Stop: 26330, Start Num: 44

Candidate Starts for Dynamo\_30:

(Start: 44 @27286 has 35 MA's), (63, 27256), (Start: 84 @27223 has 18 MA's), (Start: 87 @27220 has 1 MA's), (Start: 129 @27148 has 1 MA's), (Start: 131 @27139 has 1 MA's), (132, 27133), (144, 27088), (168, 26971), (169, 26968), (170, 26965), (178, 26935), (180, 26923), (184, 26908), (191, 26890), (199, 26863), (207, 26836), (208, 26830), (221, 26776), (223, 26770), (236, 26701), (255, 26617), (266, 26557), (274, 26515), (280, 26473), (311, 26344),

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

Candidate Starts for ECartman\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (91, 28749), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813), (315, 27777),

Gene: EGUunicorn\_35 Start: 27409, Stop: 26438, Start Num: 34

Candidate Starts for EGUunicorn\_35:

(Start: 34 @27409 has 40 MA's), (Start: 83 @27325 has 1 MA's), (Start: 95 @27310 has 1 MA's), (138, 27187), (144, 27163), (168, 27046), (169, 27043), (175, 27022), (184, 26983), (185, 26980), (188, 26974), (194, 26959), (199, 26938), (204, 26923), (216, 26866), (219, 26854), (227, 26815), (233, 26788), (236, 26776), (240, 26749), (248, 26710), (255, 26686), (259, 26671), (280, 26542), (290, 26488), (301, 26455),

Gene: Egi03\_50 Start: 39069, Stop: 38203, Start Num: 71

Candidate Starts for Egi03\_50:

(Start: 36 @39138 has 18 MA's), (Start: 59 @39090 has 5 MA's), (Start: 62 @39087 has 1 MA's), (Start: 71 @39069 has 3 MA's), (Start: 76 @39060 has 1 MA's), (Start: 131 @38928 has 1 MA's), (174, 38745), (177, 38733), (184, 38700), (199, 38658), (211, 38607), (220, 38568), (262, 38364), (264, 38355), (272, 38295), (280, 38247), (281, 38232), (283, 38220),

Gene: Emperor\_19 Start: 14339, Stop: 13512, Start Num: 80

Candidate Starts for Emperor\_19:

(Start: 80 @14339 has 18 MA's), (Start: 92 @14324 has 1 MA's), (93, 14321), (Start: 99 @14312 has 1 MA's), (115, 14276), (124, 14240), (125, 14234), (134, 14198), (167, 14063), (171, 14039), (178, 14012), (182, 13991), (183, 13988), (196, 13952), (198, 13946), (199, 13943), (209, 13901), (214, 13877), (215, 13874), (225, 13823), (227, 13814), (228, 13808), (244, 13763), (258, 13697), (264,

13670), (279, 13565),

Gene: EpicDab\_18 Start: 14205, Stop: 13375, Start Num: 80

Candidate Starts for EpicDab\_18:

(Start: 80 @14205 has 18 MA's), (Start: 99 @14181 has 1 MA's), (115, 14145), (137, 14058), (178, 13881), (182, 13860), (183, 13857), (199, 13812), (209, 13770), (214, 13746), (215, 13743), (218, 13731), (223, 13713), (225, 13692), (227, 13683), (228, 13677), (258, 13566), (270, 13488), (273, 13476), (274, 13473), (279, 13434),

Gene: Etoile\_30 Start: 26812, Stop: 25919, Start Num: 84

Candidate Starts for Etoile\_30:

(Start: 44 @26875 has 35 MA's), (63, 26845), (Start: 84 @26812 has 18 MA's), (Start: 87 @26809 has 1 MA's), (Start: 129 @26737 has 1 MA's), (Start: 131 @26728 has 1 MA's), (132, 26722), (144, 26677), (168, 26560), (169, 26557), (170, 26554), (178, 26524), (180, 26512), (184, 26497), (191, 26479), (199, 26452), (207, 26425), (208, 26419), (221, 26365), (223, 26359), (236, 26290), (255, 26206), (266, 26146), (274, 26104), (280, 26062), (311, 25933),

Gene: Evamon\_46 Start: 39326, Stop: 38442, Start Num: 62

Candidate Starts for Evamon\_46:

(Start: 36 @39377 has 18 MA's), (Start: 59 @39329 has 5 MA's), (Start: 62 @39326 has 1 MA's), (Start: 71 @39308 has 3 MA's), (Start: 76 @39299 has 1 MA's), (Start: 131 @39167 has 1 MA's), (174, 38984), (177, 38972), (183, 38942), (184, 38939), (199, 38897), (211, 38846), (220, 38807), (262, 38603), (264, 38594), (272, 38534), (280, 38486), (281, 38471), (283, 38459),

Gene: Ewald\_33 Start: 29356, Stop: 28496, Start Num: 80

Candidate Starts for Ewald\_33:

(Start: 80 @29356 has 18 MA's), (128, 29251), (Start: 131 @29239 has 1 MA's), (135, 29221), (144, 29188), (168, 29071), (194, 28984), (198, 28966), (199, 28963), (216, 28891), (225, 28849), (227, 28840), (229, 28825), (236, 28801), (240, 28774), (255, 28711), (270, 28624), (274, 28609), (288, 28522),

Gene: Eyes\_36 Start: 31424, Stop: 30528, Start Num: 80

Candidate Starts for Eyes\_36:

(Start: 80 @31424 has 18 MA's), (Start: 83 @31418 has 1 MA's), (Start: 86 @31415 has 1 MA's), (115, 31358), (116, 31355), (127, 31313), (139, 31268), (148, 31229), (189, 31064), (196, 31043), (200, 31031), (202, 31025), (207, 31007), (212, 30980), (226, 30905), (235, 30869), (236, 30860), (252, 30779), (262, 30746), (277, 30650), (280, 30629), (282, 30605),

Gene: Eyre\_35 Start: 27388, Stop: 26561, Start Num: 84

Candidate Starts for Eyre\_35:

(56, 27433), (Start: 58 @27430 has 1 MA's), (67, 27415), (Start: 84 @27388 has 18 MA's), (Start: 96 @27370 has 6 MA's), (122, 27304), (128, 27286), (151, 27190), (196, 27007), (199, 26998), (205, 26980), (226, 26878), (236, 26836), (255, 26752), (264, 26716), (275, 26635),

Gene: Fireball\_48 Start: 39639, Stop: 38821, Start Num: 96

Candidate Starts for Fireball\_48:

(90, 39648), (Start: 92 @39645 has 1 MA's), (Start: 96 @39639 has 6 MA's), (151, 39462), (168, 39381), (196, 39285), (199, 39276), (219, 39192), (236, 39114), (248, 39057), (255, 39033), (259, 39018), (264, 38997), (270, 38946), (273, 38934), (274, 38931),

Gene: FirstPlacePfu\_30 Start: 26907, Stop: 25918, Start Num: 44

Candidate Starts for FirstPlacePfu\_30:

(Start: 44 @26907 has 35 MA's), (63, 26877), (Start: 84 @26844 has 18 MA's), (Start: 87 @26841 has 1 MA's), (103, 26811), (105, 26808), (Start: 129 @26736 has 1 MA's), (Start: 131 @26727 has 1 MA's), (132, 26721), (144, 26676), (168, 26559), (169, 26556), (170, 26553), (178, 26523), (180, 26511), (184, 26496), (191, 26478), (199, 26451), (207, 26424), (208, 26418), (221, 26364), (223, 26358), (224, 26340), (236, 26289), (255, 26205), (266, 26145), (274, 26103), (280, 26061), (311, 25932),

Gene: Fishburne\_30 Start: 26875, Stop: 25919, Start Num: 44

Candidate Starts for Fishburne\_30:

(Start: 44 @26875 has 35 MA's), (63, 26845), (Start: 84 @26812 has 18 MA's), (Start: 87 @26809 has 1 MA's), (Start: 129 @26737 has 1 MA's), (Start: 131 @26728 has 1 MA's), (132, 26722), (144, 26677), (168, 26560), (169, 26557), (170, 26554), (178, 26524), (180, 26512), (184, 26497), (191, 26479), (199, 26452), (207, 26425), (208, 26419), (221, 26365), (223, 26359), (236, 26290), (255, 26206), (266, 26146), (274, 26104), (280, 26062), (311, 25933),

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

Candidate Starts for Frosty24\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Fugax\_50 Start: 39601, Stop: 38714, Start Num: 59

Candidate Starts for Fugax\_50:

(Start: 36 @39649 has 18 MA's), (Start: 59 @39601 has 5 MA's), (Start: 62 @39598 has 1 MA's), (Start: 71 @39580 has 3 MA's), (Start: 76 @39571 has 1 MA's), (Start: 131 @39439 has 1 MA's), (174, 39256), (177, 39244), (184, 39211), (199, 39169), (211, 39118), (220, 39079), (262, 38875), (264, 38866), (272, 38806), (280, 38758), (281, 38743), (283, 38731),

Gene: Fulbright\_35 Start: 27807, Stop: 26836, Start Num: 34

Candidate Starts for Fulbright\_35:

(Start: 34 @27807 has 40 MA's), (Start: 83 @27723 has 1 MA's), (Start: 95 @27708 has 1 MA's), (138, 27585), (144, 27561), (168, 27444), (169, 27441), (175, 27420), (184, 27381), (185, 27378), (188, 27372), (194, 27357), (199, 27336), (204, 27321), (216, 27264), (219, 27252), (227, 27213), (233, 27186), (236, 27174), (240, 27147), (248, 27108), (255, 27084), (259, 27069), (280, 26940), (281, 26925), (290, 26886),

Gene: GEazy\_42 Start: 31613, Stop: 30720, Start Num: 80

Candidate Starts for GEazy\_42:

(Start: 80 @31613 has 18 MA's), (Start: 83 @31607 has 1 MA's), (Start: 86 @31604 has 1 MA's), (100, 31580), (115, 31547), (116, 31544), (127, 31502), (Start: 131 @31487 has 1 MA's), (148, 31418), (189, 31253), (193, 31247), (196, 31232), (200, 31220), (207, 31196), (212, 31169), (226, 31094), (235, 31058), (236, 31049), (267, 30899), (277, 30839), (280, 30818), (282, 30794), (297, 30740),

Gene: GMA3\_75 Start: 57620, Stop: 56823, Start Num: 104

Candidate Starts for GMA3\_75:

(Start: 104 @57620 has 1 MA's), (137, 57515), (157, 57422), (213, 57200), (230, 57119), (251, 57014), (254, 57008), (269, 56921), (271, 56915), (283, 56834),

Gene: GMA5\_17 Start: 13993, Stop: 13184, Start Num: 97

Candidate Starts for GMA5\_17:

(45, 14077), (50, 14071), (Start: 86 @14011 has 1 MA's), (Start: 97 @13993 has 1 MA's), (143, 13840), (158, 13774), (171, 13714), (174, 13705), (199, 13618), (217, 13540), (223, 13519), (225, 13498), (227, 13489), (231, 13465), (255, 13384), (258, 13372), (264, 13345),

Gene: GRU3\_17 Start: 14088, Stop: 13195, Start Num: 45

Candidate Starts for GRU3\_17:

(45, 14088), (66, 14052), (Start: 86 @14022 has 1 MA's), (Start: 97 @14004 has 1 MA's), (140, 13866), (161, 13767), (174, 13716), (176, 13707), (199, 13629), (211, 13578), (230, 13482), (231, 13476), (258, 13383),

Gene: Gavriela\_30 Start: 27132, Stop: 26176, Start Num: 44

Candidate Starts for Gavriela\_30:

(Start: 44 @27132 has 35 MA's), (Start: 84 @27069 has 18 MA's), (Start: 87 @27066 has 1 MA's), (Start: 129 @26994 has 1 MA's), (Start: 131 @26985 has 1 MA's), (144, 26934), (168, 26817), (169, 26814), (170, 26811), (178, 26781), (180, 26769), (184, 26754), (191, 26736), (199, 26709), (207, 26682), (208, 26676), (221, 26622), (223, 26616), (224, 26598), (236, 26547), (255, 26463), (271, 26373), (274, 26361), (280, 26319), (311, 26190),

Gene: Gex\_36 Start: 28635, Stop: 27763, Start Num: 95

Candidate Starts for Gex\_36:

(Start: 34 @28734 has 40 MA's), (Start: 83 @28650 has 1 MA's), (Start: 95 @28635 has 1 MA's), (138, 28512), (144, 28488), (168, 28371), (169, 28368), (175, 28347), (184, 28308), (185, 28305), (188, 28299), (194, 28284), (199, 28263), (204, 28248), (216, 28191), (219, 28179), (227, 28140), (233, 28113), (236, 28101), (240, 28074), (248, 28035), (255, 28011), (259, 27996), (280, 27867), (281, 27852), (290, 27813),

Gene: Gezellig\_49 Start: 39461, Stop: 38574, Start Num: 59

Candidate Starts for Gezellig\_49:

(Start: 36 @39509 has 18 MA's), (Start: 59 @39461 has 5 MA's), (Start: 62 @39458 has 1 MA's), (Start: 71 @39440 has 3 MA's), (Start: 76 @39431 has 1 MA's), (Start: 131 @39299 has 1 MA's), (174, 39116), (177, 39104), (184, 39071), (199, 39029), (211, 38978), (220, 38939), (262, 38735), (264, 38726), (272, 38666), (280, 38618), (281, 38603), (283, 38591),

Gene: Gibbles\_68 Start: 56757, Stop: 55996, Start Num: 109

Candidate Starts for Gibbles\_68:

(54, 56847), (73, 56817), (Start: 85 @56799 has 1 MA's), (Start: 109 @56757 has 4 MA's), (130, 56688), (154, 56586), (155, 56583), (175, 56499), (179, 56481), (184, 56460), (188, 56451), (195, 56433), (200, 56412), (220, 56331), (231, 56274), (264, 56142), (266, 56118), (270, 56091), (274, 56076), (278, 56040), (280, 56034), (283, 56007), (285, 56001),

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

Candidate Starts for Gideon\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Glaske\_30 Start: 27132, Stop: 26176, Start Num: 44

Candidate Starts for Glaske\_30:

(Start: 44 @27132 has 35 MA's), (Start: 84 @27069 has 18 MA's), (Start: 87 @27066 has 1 MA's), (Start: 129 @26994 has 1 MA's), (Start: 131 @26985 has 1 MA's), (144, 26934), (168, 26817), (169, 26814), (170, 26811), (178, 26781), (180, 26769), (184, 26754), (191, 26736), (199, 26709), (207, 26682), (208, 26676), (221, 26622), (223, 26616), (224, 26598), (236, 26547), (255, 26463), (271, 26373), (274, 26361), (280, 26319), (311, 26190),

Gene: Gmala1\_67 Start: 54450, Stop: 53653, Start Num: 106

Candidate Starts for Gmala1\_67:

(106, 54450), (146, 54309), (152, 54273), (208, 54057), (228, 53961), (232, 53940), (236, 53925), (254, 53838), (270, 53748), (283, 53664),

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

Candidate Starts for GoldenAsh\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for Gomashi\_32:

(Start: 10 @28918 has 58 MA's), (28, 28855), (102, 28729), (135, 28621), (144, 28588), (158, 28522), (183, 28411), (190, 28393), (197, 28372), (199, 28366), (200, 28363), (207, 28339), (223, 28267), (228, 28231), (262, 28072), (273, 28000), (283, 27928), (285, 27925), (305, 27856), (306, 27850), (312, 27814),

Gene: GordDuk1\_71 Start: 55008, Stop: 54211, Start Num: 106

Candidate Starts for GordDuk1\_71:

(106, 55008), (144, 54879), (146, 54867), (152, 54831), (208, 54615), (232, 54498), (236, 54483), (254, 54396), (270, 54306), (283, 54222),

Gene: GordTnk2\_72 Start: 55169, Stop: 54372, Start Num: 106

Candidate Starts for GordTnk2\_72:

(106, 55169), (146, 55028), (152, 54992), (208, 54776), (232, 54659), (236, 54644), (254, 54557), (270, 54467), (283, 54383),

Gene: GreaseLightnin\_30 Start: 27124, Stop: 26168, Start Num: 44

Candidate Starts for GreaseLightnin\_30:

(Start: 44 @27124 has 35 MA's), (Start: 84 @27061 has 18 MA's), (Start: 87 @27058 has 1 MA's), (Start: 129 @26986 has 1 MA's), (Start: 131 @26977 has 1 MA's), (144, 26926), (168, 26809), (169, 26806), (170, 26803), (178, 26773), (180, 26761), (184, 26746), (191, 26728), (199, 26701), (207, 26674), (208, 26668), (221, 26614), (224, 26590), (236, 26539), (255, 26455), (271, 26365), (274, 26353), (280, 26311), (311, 26182),

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

Candidate Starts for Grizzly\_32:

(7, 28941), (Start: 10 @28917 has 58 MA's), (28, 28854), (91, 28749), (108, 28719), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (295, 27888), (305, 27855), (306, 27849), (312, 27813),

Gene: Guacamole\_38 Start: 32142, Stop: 31252, Start Num: 48

Candidate Starts for Guacamole\_38:

(Start: 48 @32142 has 8 MA's), (Start: 58 @32121 has 1 MA's), (67, 32106), (Start: 78 @32088 has 1 MA's), (Start: 84 @32079 has 18 MA's), (Start: 96 @32061 has 6 MA's), (122, 31995), (199, 31689), (223, 31596), (226, 31569), (236, 31527), (248, 31467), (255, 31443), (264, 31407), (275, 31326),

Gene: Gudmit\_35 Start: 26430, Stop: 25561, Start Num: 58

Candidate Starts for Gudmit\_35:

(56, 26433), (Start: 58 @26430 has 1 MA's), (Start: 84 @26388 has 18 MA's), (Start: 92 @26376 has 1 MA's), (Start: 96 @26370 has 6 MA's), (110, 26343), (122, 26304), (128, 26286), (154, 26178), (180,

26061), (181, 26055), (199, 25998), (205, 25980), (208, 25965), (209, 25956), (216, 25926), (223, 25905), (236, 25836), (237, 25830), (248, 25776), (255, 25752), (264, 25716), (267, 25689), (270, 25665), (275, 25635),

Gene: HUHilltop\_30 Start: 26908, Stop: 25919, Start Num: 44

Candidate Starts for HUHilltop\_30:

(Start: 44 @26908 has 35 MA's), (63, 26878), (Start: 84 @26845 has 18 MA's), (Start: 87 @26842 has 1 MA's), (103, 26812), (105, 26809), (Start: 129 @26737 has 1 MA's), (Start: 131 @26728 has 1 MA's), (132, 26722), (144, 26677), (168, 26560), (169, 26557), (170, 26554), (178, 26524), (180, 26512), (184, 26497), (188, 26488), (191, 26479), (199, 26452), (207, 26425), (208, 26419), (221, 26365), (223, 26359), (224, 26341), (233, 26302), (236, 26290), (255, 26206), (266, 26146), (274, 26104), (311, 25933),

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

Candidate Starts for Halo\_32:

(Start: 10 @28912 has 58 MA's), (28, 28849), (102, 28723), (135, 28615), (144, 28582), (158, 28516), (183, 28405), (190, 28387), (197, 28366), (199, 28360), (200, 28357), (207, 28333), (223, 28261), (228, 28225), (262, 28066), (273, 27994), (283, 27922), (285, 27919), (305, 27850), (306, 27844), (312, 27808),

Gene: Halo3\_48 Start: 40094, Stop: 39159, Start Num: 36

Candidate Starts for Halo3\_48:

(Start: 36 @40094 has 18 MA's), (Start: 59 @40046 has 5 MA's), (Start: 62 @40043 has 1 MA's), (Start: 71 @40025 has 3 MA's), (Start: 76 @40016 has 1 MA's), (Start: 131 @39884 has 1 MA's), (174, 39701), (177, 39689), (183, 39659), (184, 39656), (199, 39614), (211, 39563), (220, 39524), (262, 39320), (264, 39311), (272, 39251), (280, 39203), (281, 39188), (283, 39176),

Gene: Hanako\_37 Start: 29035, Stop: 28064, Start Num: 34

Candidate Starts for Hanako\_37:

(Start: 34 @29035 has 40 MA's), (Start: 83 @28951 has 1 MA's), (Start: 89 @28942 has 1 MA's), (144, 28789), (168, 28672), (169, 28669), (184, 28609), (188, 28600), (194, 28585), (199, 28564), (205, 28546), (219, 28480), (233, 28414), (236, 28402), (240, 28375), (248, 28336), (255, 28312), (259, 28297), (271, 28222), (280, 28168),

Gene: HannahD\_40 Start: 30978, Stop: 30085, Start Num: 80

Candidate Starts for HannahD\_40:

(Start: 80 @30978 has 18 MA's), (Start: 83 @30972 has 1 MA's), (Start: 86 @30969 has 1 MA's), (100, 30945), (115, 30912), (116, 30909), (127, 30867), (Start: 131 @30852 has 1 MA's), (148, 30783), (189, 30618), (193, 30612), (196, 30597), (200, 30585), (207, 30561), (212, 30534), (226, 30459), (235, 30423), (236, 30414), (267, 30264), (277, 30204), (280, 30183), (282, 30159), (297, 30105),

Gene: Hedwig\_41 Start: 31459, Stop: 30632, Start Num: 84

Candidate Starts for Hedwig\_41:

(56, 31504), (Start: 58 @31501 has 1 MA's), (Start: 61 @31498 has 1 MA's), (67, 31486), (Start: 84 @31459 has 18 MA's), (Start: 96 @31441 has 6 MA's), (122, 31375), (128, 31357), (151, 31261), (199, 31069), (226, 30949), (236, 30907), (248, 30847), (255, 30823), (264, 30787), (275, 30706), (287, 30640),

Gene: Heinz\_32 Start: 25034, Stop: 24150, Start Num: 62

Candidate Starts for Heinz\_32:

(Start: 36 @25085 has 18 MA's), (Start: 62 @25034 has 1 MA's), (Start: 71 @25016 has 3 MA's), (Start: 131 @24875 has 1 MA's), (174, 24692), (177, 24680), (199, 24605), (200, 24602), (210, 24557), (220, 24515), (226, 24479), (262, 24311), (264, 24302), (271, 24248), (275, 24221), (281, 24179),

(283, 24167),

Gene: Hibiscus\_32 Start: 25034, Stop: 24099, Start Num: 36

Candidate Starts for Hibiscus\_32:

(Start: 36 @25034 has 18 MA's), (Start: 62 @24983 has 1 MA's), (Start: 71 @24965 has 3 MA's),  
(Start: 131 @24824 has 1 MA's), (174, 24641), (177, 24629), (199, 24554), (200, 24551), (210, 24506),  
(220, 24464), (226, 24428), (262, 24260), (264, 24251), (271, 24197), (275, 24170), (281, 24128),  
(283, 24116),

Gene: Hitter\_41 Start: 31874, Stop: 30984, Start Num: 48

Candidate Starts for Hitter\_41:

(Start: 48 @31874 has 8 MA's), (Start: 58 @31853 has 1 MA's), (67, 31838), (Start: 78 @31820 has 1  
MA's), (Start: 84 @31811 has 18 MA's), (Start: 96 @31793 has 6 MA's), (122, 31727), (199, 31421),  
(226, 31301), (236, 31259), (248, 31199), (255, 31175), (264, 31139), (275, 31058),

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

Candidate Starts for Hope\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521),  
(183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266),  
(228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849),  
(312, 27813),

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

Candidate Starts for Hotshotbaby7\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521),  
(183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266),  
(228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849),  
(312, 27813),

Gene: IdentityCrisis\_34 Start: 26927, Stop: 26055, Start Num: 85

Candidate Starts for IdentityCrisis\_34:

(31, 27017), (54, 26969), (Start: 70 @26948 has 1 MA's), (Start: 85 @26927 has 1 MA's), (125, 26840),  
(168, 26651), (175, 26627), (194, 26564), (199, 26543), (201, 26537), (208, 26510), (223, 26450),  
(230, 26402), (233, 26393), (236, 26381), (240, 26354), (246, 26327), (255, 26291), (266, 26231),  
(273, 26192), (274, 26189), (296, 26069),

Gene: Island3\_33 Start: 29011, Stop: 28055, Start Num: 44

Candidate Starts for Island3\_33:

(Start: 44 @29011 has 35 MA's), (63, 28981), (Start: 84 @28948 has 18 MA's), (Start: 87 @28945 has  
1 MA's), (Start: 129 @28873 has 1 MA's), (Start: 131 @28864 has 1 MA's), (144, 28813), (168, 28696),  
(169, 28693), (170, 28690), (178, 28660), (180, 28648), (184, 28633), (191, 28615), (199, 28588),  
(207, 28561), (208, 28555), (221, 28501), (224, 28477), (236, 28426), (255, 28342), (271, 28252),  
(274, 28240), (280, 28198), (311, 28069),

Gene: Jambalaya\_47 Start: 39156, Stop: 38221, Start Num: 36

Candidate Starts for Jambalaya\_47:

(Start: 36 @39156 has 18 MA's), (Start: 59 @39108 has 5 MA's), (Start: 62 @39105 has 1 MA's),  
(Start: 71 @39087 has 3 MA's), (Start: 76 @39078 has 1 MA's), (Start: 131 @38946 has 1 MA's), (174,  
38763), (177, 38751), (184, 38718), (199, 38676), (211, 38625), (220, 38586), (262, 38382), (264,  
38373), (272, 38313), (280, 38265), (281, 38250), (283, 38238),

Gene: Jamie19\_33 Start: 27788, Stop: 26817, Start Num: 34

Candidate Starts for Jamie19\_33:



(Start: 34 @27788 has 40 MA's), (Start: 83 @27704 has 1 MA's), (Start: 95 @27689 has 1 MA's), (138, 27566), (144, 27542), (168, 27425), (169, 27422), (175, 27401), (184, 27362), (185, 27359), (188, 27353), (194, 27338), (199, 27317), (204, 27302), (216, 27245), (219, 27233), (227, 27194), (233, 27167), (236, 27155), (240, 27128), (248, 27089), (255, 27065), (259, 27050), (280, 26921), (281, 26906), (290, 26867),

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

Candidate Starts for Jane\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: JasperJr\_38 Start: 32142, Stop: 31252, Start Num: 48

Candidate Starts for JasperJr\_38:

(Start: 48 @32142 has 8 MA's), (Start: 58 @32121 has 1 MA's), (67, 32106), (Start: 78 @32088 has 1 MA's), (Start: 84 @32079 has 18 MA's), (Start: 96 @32061 has 6 MA's), (122, 31995), (199, 31689), (223, 31596), (226, 31569), (236, 31527), (248, 31467), (255, 31443), (264, 31407), (275, 31326),

Gene: Jeanie\_18 Start: 13573, Stop: 12677, Start Num: 49

Candidate Starts for Jeanie\_18:

(Start: 49 @13573 has 2 MA's), (66, 13540), (Start: 97 @13492 has 1 MA's), (100, 13486), (133, 13381), (144, 13339), (155, 13291), (159, 13273), (161, 13258), (189, 13150), (190, 13147), (199, 13120), (200, 13117), (211, 13069), (223, 13021), (227, 12991), (257, 12877), (271, 12793), (275, 12766), (284, 12709),

Gene: Jebeks\_30 Start: 26796, Stop: 25903, Start Num: 84

Candidate Starts for Jebeks\_30:

(Start: 44 @26859 has 35 MA's), (63, 26829), (Start: 84 @26796 has 18 MA's), (Start: 87 @26793 has 1 MA's), (Start: 129 @26721 has 1 MA's), (Start: 131 @26712 has 1 MA's), (144, 26661), (168, 26544), (169, 26541), (170, 26538), (178, 26508), (180, 26496), (184, 26481), (191, 26463), (199, 26436), (207, 26409), (208, 26403), (221, 26349), (223, 26343), (236, 26274), (255, 26190), (271, 26100), (274, 26088), (280, 26046), (311, 25917),

Gene: Jojo24\_30 Start: 25776, Stop: 24811, Start Num: 21

Candidate Starts for Jojo24\_30:

(16, 25785), (Start: 21 @25776 has 1 MA's), (Start: 23 @25770 has 1 MA's), (Start: 78 @25659 has 1 MA's), (Start: 96 @25632 has 6 MA's), (113, 25596), (154, 25440), (156, 25428), (168, 25368), (180, 25320), (182, 25311), (196, 25266), (199, 25257), (205, 25239), (236, 25095), (237, 25089), (248, 25035), (255, 25011), (259, 24996), (264, 24975), (266, 24951), (273, 24912), (274, 24909), (275, 24894),

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

Candidate Starts for Jolene\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (91, 28749), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813), (315, 27777),

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

Candidate Starts for Jonghyun\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (91, 28749), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338),

(223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813), (315, 27777),

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

Candidate Starts for JorRay\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Journey\_34 Start: 27409, Stop: 26438, Start Num: 34

Candidate Starts for Journey\_34:

(Start: 34 @27409 has 40 MA's), (38, 27400), (Start: 83 @27325 has 1 MA's), (Start: 95 @27310 has 1 MA's), (138, 27187), (144, 27163), (168, 27046), (169, 27043), (175, 27022), (184, 26983), (185, 26980), (188, 26974), (194, 26959), (199, 26938), (204, 26923), (216, 26866), (219, 26854), (227, 26815), (233, 26788), (236, 26776), (240, 26749), (248, 26710), (255, 26686), (259, 26671), (280, 26542), (290, 26488), (301, 26455),

Gene: Jumbo\_69 Start: 59172, Stop: 58372, Start Num: 104

Candidate Starts for Jumbo\_69:

(Start: 104 @59172 has 1 MA's), (182, 58866), (196, 58824), (211, 58764), (228, 58686), (239, 58626), (254, 58563), (266, 58500), (270, 58470), (275, 58440), (283, 58386),

Gene: Jung\_29 Start: 26776, Stop: 25883, Start Num: 84

Candidate Starts for Jung\_29:

(Start: 44 @26839 has 35 MA's), (Start: 84 @26776 has 18 MA's), (Start: 87 @26773 has 1 MA's), (Start: 129 @26701 has 1 MA's), (Start: 131 @26692 has 1 MA's), (144, 26641), (168, 26524), (169, 26521), (170, 26518), (178, 26488), (180, 26476), (184, 26461), (191, 26443), (199, 26416), (207, 26389), (208, 26383), (221, 26329), (224, 26305), (236, 26254), (255, 26170), (271, 26080), (274, 26068), (280, 26026), (311, 25897),

Gene: Juniormint\_30 Start: 26911, Stop: 25955, Start Num: 44

Candidate Starts for Juniormint\_30:

(Start: 44 @26911 has 35 MA's), (Start: 84 @26848 has 18 MA's), (Start: 87 @26845 has 1 MA's), (Start: 129 @26773 has 1 MA's), (Start: 131 @26764 has 1 MA's), (144, 26713), (168, 26596), (169, 26593), (170, 26590), (178, 26560), (180, 26548), (184, 26533), (191, 26515), (199, 26488), (207, 26461), (208, 26455), (221, 26401), (236, 26326), (255, 26242), (271, 26152), (274, 26140), (280, 26098), (311, 25969),

Gene: JustASigh\_45 Start: 34059, Stop: 33148, Start Num: 43

Candidate Starts for JustASigh\_45:

(Start: 43 @34059 has 1 MA's), (Start: 78 @33999 has 1 MA's), (81, 33996), (91, 33984), (123, 33900), (Start: 131 @33873 has 1 MA's), (133, 33861), (140, 33840), (186, 33642), (199, 33603), (223, 33510), (262, 33312), (264, 33303), (272, 33243), (275, 33222), (283, 33168),

Gene: Kampe\_71 Start: 57027, Stop: 56266, Start Num: 109

Candidate Starts for Kampe\_71:

(54, 57117), (73, 57087), (Start: 85 @57069 has 1 MA's), (Start: 109 @57027 has 4 MA's), (130, 56958), (154, 56856), (155, 56853), (175, 56769), (179, 56751), (184, 56730), (188, 56721), (195, 56703), (200, 56682), (220, 56601), (231, 56544), (264, 56412), (266, 56388), (270, 56361), (274, 56346), (278, 56310), (280, 56304), (283, 56277), (285, 56271),

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

Candidate Starts for Kareem\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Kari\_30 Start: 26809, Stop: 25916, Start Num: 84

Candidate Starts for Kari\_30:

(Start: 44 @26872 has 35 MA's), (63, 26842), (Start: 84 @26809 has 18 MA's), (Start: 87 @26806 has 1 MA's), (Start: 129 @26734 has 1 MA's), (Start: 131 @26725 has 1 MA's), (132, 26719), (144, 26674), (168, 26557), (169, 26554), (170, 26551), (178, 26521), (180, 26509), (184, 26494), (191, 26476), (199, 26449), (207, 26422), (208, 26416), (221, 26362), (223, 26356), (236, 26287), (255, 26203), (266, 26143), (274, 26101), (280, 26059), (311, 25930),

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

Candidate Starts for Kasen3\_32:

(7, 28942), (Start: 10 @28918 has 58 MA's), (28, 28855), (91, 28750), (108, 28720), (135, 28621), (144, 28588), (158, 28522), (183, 28411), (190, 28393), (197, 28372), (199, 28366), (200, 28363), (207, 28339), (223, 28267), (228, 28231), (262, 28072), (273, 28000), (283, 27928), (285, 27925), (305, 27856), (306, 27850), (312, 27814), (315, 27778),

Gene: Kevin1\_35 Start: 28640, Stop: 27669, Start Num: 34

Candidate Starts for Kevin1\_35:

(32, 28643), (Start: 34 @28640 has 40 MA's), (Start: 83 @28556 has 1 MA's), (Start: 131 @28445 has 1 MA's), (138, 28418), (144, 28394), (168, 28277), (188, 28205), (194, 28190), (199, 28169), (227, 28046), (233, 28019), (236, 28007), (240, 27980), (248, 27941), (255, 27917), (259, 27902), (274, 27815), (280, 27773), (281, 27758), (290, 27719),

Gene: Kiko\_39 Start: 31306, Stop: 30413, Start Num: 80

Candidate Starts for Kiko\_39:

(Start: 80 @31306 has 18 MA's), (Start: 83 @31300 has 1 MA's), (Start: 86 @31297 has 1 MA's), (115, 31240), (116, 31237), (127, 31195), (148, 31111), (160, 31060), (172, 31009), (200, 30913), (207, 30889), (221, 30817), (236, 30742), (277, 30532), (282, 30487),

Gene: KilKor\_30 Start: 27132, Stop: 26176, Start Num: 44

Candidate Starts for KilKor\_30:

(Start: 44 @27132 has 35 MA's), (Start: 84 @27069 has 18 MA's), (Start: 87 @27066 has 1 MA's), (Start: 129 @26994 has 1 MA's), (Start: 131 @26985 has 1 MA's), (144, 26934), (168, 26817), (169, 26814), (170, 26811), (178, 26781), (180, 26769), (184, 26754), (191, 26736), (199, 26709), (207, 26682), (208, 26676), (221, 26622), (223, 26616), (224, 26598), (236, 26547), (255, 26463), (271, 26373), (274, 26361), (280, 26319), (311, 26190),

Gene: KimmyK\_48 Start: 40022, Stop: 39156, Start Num: 71

Candidate Starts for KimmyK\_48:

(Start: 36 @40091 has 18 MA's), (Start: 59 @40043 has 5 MA's), (Start: 62 @40040 has 1 MA's), (Start: 71 @40022 has 3 MA's), (Start: 76 @40013 has 1 MA's), (Start: 131 @39881 has 1 MA's), (174, 39698), (177, 39686), (184, 39653), (199, 39611), (211, 39560), (220, 39521), (262, 39317), (264, 39308), (272, 39248), (280, 39200), (281, 39185), (283, 39173),

Gene: Ksquared\_30 Start: 26889, Stop: 25933, Start Num: 44

Candidate Starts for Ksquared\_30:

(Start: 44 @26889 has 35 MA's), (Start: 84 @26826 has 18 MA's), (Start: 87 @26823 has 1 MA's), (Start: 129 @26751 has 1 MA's), (Start: 131 @26742 has 1 MA's), (144, 26691), (168, 26574), (169,

26571), (170, 26568), (178, 26538), (180, 26526), (184, 26511), (191, 26493), (199, 26466), (207, 26439), (208, 26433), (221, 26379), (236, 26304), (255, 26220), (271, 26130), (274, 26118), (280, 26076), (311, 25947),

Gene: Langerak\_30 Start: 26891, Stop: 25902, Start Num: 44

Candidate Starts for Langerak\_30:

(Start: 44 @26891 has 35 MA's), (63, 26861), (Start: 84 @26828 has 18 MA's), (Start: 87 @26825 has 1 MA's), (103, 26795), (105, 26792), (Start: 129 @26720 has 1 MA's), (Start: 131 @26711 has 1 MA's), (132, 26705), (144, 26660), (168, 26543), (169, 26540), (170, 26537), (178, 26507), (180, 26495), (184, 26480), (191, 26462), (199, 26435), (207, 26408), (208, 26402), (221, 26348), (223, 26342), (224, 26324), (236, 26273), (255, 26189), (266, 26129), (274, 26087), (280, 26045), (311, 25916),

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

Candidate Starts for Liefie\_32:

(Start: 10 @28915 has 58 MA's), (28, 28852), (91, 28747), (102, 28726), (135, 28618), (144, 28585), (158, 28519), (183, 28408), (190, 28390), (197, 28369), (199, 28363), (200, 28360), (207, 28336), (223, 28264), (228, 28228), (262, 28069), (273, 27997), (283, 27925), (285, 27922), (305, 27853), (306, 27847), (312, 27811), (315, 27775),

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

Candidate Starts for LouisV14\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: MagicMan\_38 Start: 31978, Stop: 31088, Start Num: 80

Candidate Starts for MagicMan\_38:

(24, 32086), (27, 32077), (Start: 44 @32032 has 35 MA's), (Start: 80 @31978 has 18 MA's), (Start: 83 @31972 has 1 MA's), (Start: 86 @31969 has 1 MA's), (115, 31912), (116, 31909), (127, 31867), (139, 31822), (148, 31783), (189, 31618), (196, 31597), (200, 31585), (202, 31579), (207, 31561), (212, 31534), (226, 31459), (235, 31423), (236, 31414), (252, 31333), (277, 31204), (280, 31183), (282, 31159),

Gene: Magsby\_36 Start: 28735, Stop: 27764, Start Num: 34

Candidate Starts for Magsby\_36:

(Start: 34 @28735 has 40 MA's), (Start: 83 @28651 has 1 MA's), (Start: 95 @28636 has 1 MA's), (138, 28513), (144, 28489), (168, 28372), (169, 28369), (175, 28348), (184, 28309), (185, 28306), (188, 28300), (194, 28285), (199, 28264), (204, 28249), (216, 28192), (219, 28180), (227, 28141), (233, 28114), (236, 28102), (240, 28075), (248, 28036), (255, 28012), (259, 27997), (280, 27868), (281, 27853), (290, 27814),

Gene: Majeke\_30 Start: 26913, Stop: 25924, Start Num: 44

Candidate Starts for Majeke\_30:

(Start: 44 @26913 has 35 MA's), (63, 26883), (Start: 84 @26850 has 18 MA's), (Start: 87 @26847 has 1 MA's), (103, 26817), (105, 26814), (Start: 129 @26742 has 1 MA's), (Start: 131 @26733 has 1 MA's), (132, 26727), (144, 26682), (168, 26565), (169, 26562), (170, 26559), (178, 26529), (180, 26517), (184, 26502), (191, 26484), (199, 26457), (207, 26430), (208, 26424), (221, 26370), (223, 26364), (224, 26346), (236, 26295), (255, 26211), (266, 26151), (274, 26109), (280, 26067), (311, 25938),

Gene: Maliketh\_32 Start: 28728, Stop: 27721, Start Num: 102

Candidate Starts for Maliketh\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Malithi\_30 Start: 26799, Stop: 25843, Start Num: 44

Candidate Starts for Malithi\_30:

(Start: 44 @26799 has 35 MA's), (63, 26769), (Start: 84 @26736 has 18 MA's), (Start: 87 @26733 has 1 MA's), (Start: 129 @26661 has 1 MA's), (Start: 131 @26652 has 1 MA's), (144, 26601), (168, 26484), (169, 26481), (170, 26478), (178, 26448), (180, 26436), (184, 26421), (191, 26403), (199, 26376), (207, 26349), (208, 26343), (221, 26289), (224, 26265), (236, 26214), (255, 26130), (271, 26040), (274, 26028), (280, 25986), (311, 25857),

Gene: Mangethe\_30 Start: 26913, Stop: 25924, Start Num: 44

Candidate Starts for Mangethe\_30:

(Start: 44 @26913 has 35 MA's), (63, 26883), (Start: 84 @26850 has 18 MA's), (Start: 87 @26847 has 1 MA's), (103, 26817), (105, 26814), (Start: 129 @26742 has 1 MA's), (Start: 131 @26733 has 1 MA's), (132, 26727), (144, 26682), (168, 26565), (169, 26562), (170, 26559), (178, 26529), (180, 26517), (184, 26502), (191, 26484), (199, 26457), (207, 26430), (208, 26424), (221, 26370), (223, 26364), (224, 26346), (236, 26295), (255, 26211), (266, 26151), (274, 26109), (280, 26067), (311, 25938),

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

Candidate Starts for Marmie\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Mbo2\_72 Start: 53083, Stop: 52283, Start Num: 97

Candidate Starts for Mbo2\_72:

(55, 53146), (Start: 97 @53083 has 1 MA's), (Start: 129 @52990 has 1 MA's), (136, 52960), (150, 52900), (161, 52843), (177, 52786), (184, 52753), (188, 52744), (197, 52714), (214, 52642), (234, 52558), (236, 52549), (243, 52522), (249, 52489), (261, 52444), (269, 52381), (271, 52375), (283, 52294),

Gene: McGonagall\_18 Start: 13573, Stop: 12677, Start Num: 49

Candidate Starts for McGonagall\_18:

(Start: 49 @13573 has 2 MA's), (66, 13540), (Start: 97 @13492 has 1 MA's), (100, 13486), (133, 13381), (144, 13339), (155, 13291), (159, 13273), (161, 13258), (189, 13150), (190, 13147), (199, 13120), (200, 13117), (211, 13069), (223, 13021), (227, 12991), (257, 12877), (271, 12793), (275, 12766), (284, 12709),

Gene: Megiddo\_30 Start: 27132, Stop: 26176, Start Num: 44

Candidate Starts for Megiddo\_30:

(Start: 44 @27132 has 35 MA's), (Start: 84 @27069 has 18 MA's), (Start: 87 @27066 has 1 MA's), (Start: 129 @26994 has 1 MA's), (Start: 131 @26985 has 1 MA's), (144, 26934), (168, 26817), (169, 26814), (170, 26811), (178, 26781), (180, 26769), (184, 26754), (191, 26736), (199, 26709), (207, 26682), (208, 26676), (221, 26622), (223, 26616), (224, 26598), (236, 26547), (255, 26463), (271, 26373), (274, 26361), (280, 26319), (311, 26190),

Gene: Melba\_39 Start: 32054, Stop: 31227, Start Num: 84

Candidate Starts for Melba\_39:

(Start: 48 @32117 has 8 MA's), (Start: 58 @32096 has 1 MA's), (67, 32081), (Start: 78 @32063 has 1 MA's), (Start: 84 @32054 has 18 MA's), (Start: 96 @32036 has 6 MA's), (122, 31970), (199, 31664), (223, 31571), (226, 31544), (236, 31502), (248, 31442), (255, 31418), (264, 31382), (275, 31301),

Gene: Melville\_38 Start: 28719, Stop: 27748, Start Num: 34

Candidate Starts for Melville\_38:

(Start: 34 @28719 has 40 MA's), (Start: 83 @28635 has 1 MA's), (Start: 95 @28620 has 1 MA's), (138, 28497), (144, 28473), (168, 28356), (169, 28353), (175, 28332), (184, 28293), (185, 28290), (188, 28284), (194, 28269), (199, 28248), (204, 28233), (216, 28176), (219, 28164), (227, 28125), (233, 28098), (236, 28086), (240, 28059), (248, 28020), (255, 27996), (259, 27981), (280, 27852), (281, 27837), (290, 27798),

Gene: Meyran\_33 Start: 30330, Stop: 29470, Start Num: 80

Candidate Starts for Meyran\_33:

(12, 30474), (33, 30408), (Start: 80 @30330 has 18 MA's), (128, 30225), (135, 30195), (144, 30162), (168, 30045), (194, 29958), (198, 29940), (199, 29937), (223, 29844), (227, 29814), (229, 29799), (236, 29775), (240, 29748), (255, 29685), (270, 29598), (274, 29583), (280, 29541), (288, 29496),

Gene: MichelleMyBell\_34 Start: 27726, Stop: 26755, Start Num: 34

Candidate Starts for MichelleMyBell\_34:

(Start: 34 @27726 has 40 MA's), (Start: 83 @27642 has 1 MA's), (Start: 95 @27627 has 1 MA's), (138, 27504), (144, 27480), (168, 27363), (169, 27360), (175, 27339), (184, 27300), (185, 27297), (188, 27291), (194, 27276), (199, 27255), (204, 27240), (216, 27183), (219, 27171), (227, 27132), (233, 27105), (236, 27093), (240, 27066), (248, 27027), (255, 27003), (259, 26988), (280, 26859), (281, 26844), (290, 26805),

Gene: MintFen\_40 Start: 32191, Stop: 31301, Start Num: 48

Candidate Starts for MintFen\_40:

(Start: 48 @32191 has 8 MA's), (Start: 58 @32170 has 1 MA's), (67, 32155), (Start: 78 @32137 has 1 MA's), (Start: 84 @32128 has 18 MA's), (Start: 96 @32110 has 6 MA's), (122, 32044), (199, 31738), (223, 31645), (226, 31618), (236, 31576), (248, 31516), (255, 31492), (264, 31456), (275, 31375),

Gene: Moonflower\_38 Start: 32642, Stop: 31752, Start Num: 80

Candidate Starts for Moonflower\_38:

(26, 32750), (Start: 80 @32642 has 18 MA's), (Start: 83 @32636 has 1 MA's), (Start: 86 @32633 has 1 MA's), (108, 32597), (115, 32576), (116, 32573), (127, 32531), (148, 32447), (200, 32249), (230, 32102), (250, 32003), (277, 31868), (280, 31847), (282, 31823),

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

Candidate Starts for Mowgli\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Mutzi\_47 Start: 40485, Stop: 39550, Start Num: 36

Candidate Starts for Mutzi\_47:

(Start: 36 @40485 has 18 MA's), (Start: 59 @40437 has 5 MA's), (Start: 62 @40434 has 1 MA's), (Start: 71 @40416 has 3 MA's), (Start: 76 @40407 has 1 MA's), (Start: 131 @40275 has 1 MA's), (174, 40092), (177, 40080), (184, 40047), (199, 40005), (211, 39954), (220, 39915), (262, 39711), (264, 39702), (272, 39642), (280, 39594), (281, 39579), (283, 39567),

Gene: Nazo\_34 Start: 28936, Stop: 28034, Start Num: 77

Candidate Starts for Nazo\_34:

(60, 28963), (Start: 77 @28936 has 2 MA's), (Start: 84 @28927 has 18 MA's), (Start: 129 @28852 has 1 MA's), (Start: 131 @28843 has 1 MA's), (168, 28675), (169, 28672), (170, 28669), (178, 28639), (180, 28627), (184, 28612), (191, 28594), (199, 28567), (207, 28540), (208, 28534), (221, 28480), (224, 28456), (233, 28417), (236, 28405), (255, 28321), (259, 28306), (263, 28288), (274, 28219), (280, 28177), (294, 28108), (311, 28048),

Gene: Necropolis\_30 Start: 26871, Stop: 25915, Start Num: 44

Candidate Starts for Necropolis\_30:

(Start: 44 @26871 has 35 MA's), (63, 26841), (Start: 84 @26808 has 18 MA's), (Start: 87 @26805 has 1 MA's), (Start: 129 @26733 has 1 MA's), (Start: 131 @26724 has 1 MA's), (132, 26718), (144, 26673), (168, 26556), (169, 26553), (170, 26550), (178, 26520), (180, 26508), (184, 26493), (191, 26475), (199, 26448), (207, 26421), (208, 26415), (221, 26361), (224, 26337), (236, 26286), (255, 26202), (271, 26112), (274, 26100), (280, 26058), (311, 25929),

Gene: Nenae\_37 Start: 29038, Stop: 28067, Start Num: 34

Candidate Starts for Nenae\_37:

(Start: 34 @29038 has 40 MA's), (Start: 83 @28954 has 1 MA's), (Start: 89 @28945 has 1 MA's), (144, 28792), (168, 28675), (169, 28672), (184, 28612), (188, 28603), (194, 28588), (199, 28567), (205, 28549), (219, 28483), (233, 28417), (236, 28405), (240, 28378), (248, 28339), (255, 28315), (259, 28300), (271, 28225), (280, 28171),

Gene: Nubi\_47 Start: 39482, Stop: 38547, Start Num: 36

Candidate Starts for Nubi\_47:

(Start: 36 @39482 has 18 MA's), (Start: 59 @39434 has 5 MA's), (Start: 62 @39431 has 1 MA's), (Start: 71 @39413 has 3 MA's), (Start: 76 @39404 has 1 MA's), (Start: 131 @39272 has 1 MA's), (174, 39089), (177, 39077), (184, 39044), (199, 39002), (211, 38951), (220, 38912), (262, 38708), (264, 38699), (272, 38639), (280, 38591), (281, 38576), (283, 38564),

Gene: Nyceirae\_34 Start: 29373, Stop: 28474, Start Num: 80

Candidate Starts for Nyceirae\_34:

(Start: 80 @29373 has 18 MA's), (Start: 83 @29367 has 1 MA's), (Start: 86 @29364 has 1 MA's), (115, 29307), (116, 29304), (121, 29280), (127, 29262), (160, 29127), (172, 29076), (180, 29040), (201, 28977), (230, 28833), (259, 28707), (274, 28620), (277, 28599), (282, 28554), (299, 28494),

Gene: Obliviate\_36 Start: 30564, Stop: 29674, Start Num: 48

Candidate Starts for Obliviate\_36:

(Start: 48 @30564 has 8 MA's), (Start: 58 @30543 has 1 MA's), (67, 30528), (Start: 78 @30510 has 1 MA's), (Start: 84 @30501 has 18 MA's), (Start: 96 @30483 has 6 MA's), (122, 30417), (199, 30111), (226, 29991), (236, 29949), (248, 29889), (255, 29865), (264, 29829), (275, 29748),

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

Candidate Starts for OctaviousRex\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for Olga\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849),

(312, 27813),

Gene: Opie\_41 Start: 32411, Stop: 31515, Start Num: 80

Candidate Starts for Opie\_41:

(Start: 80 @32411 has 18 MA's), (Start: 83 @32405 has 1 MA's), (Start: 86 @32402 has 1 MA's), (115, 32345), (116, 32342), (127, 32300), (Start: 131 @32285 has 1 MA's), (139, 32255), (160, 32165), (170, 32120), (171, 32117), (172, 32114), (200, 32018), (202, 32012), (207, 31994), (236, 31847), (242, 31817), (267, 31697), (277, 31637), (280, 31616), (282, 31592),

Gene: Orchid\_70 Start: 57028, Stop: 56267, Start Num: 109

Candidate Starts for Orchid\_70:

(54, 57118), (73, 57088), (Start: 85 @57070 has 1 MA's), (Start: 109 @57028 has 4 MA's), (130, 56959), (154, 56857), (155, 56854), (175, 56770), (179, 56752), (184, 56731), (188, 56722), (195, 56704), (200, 56683), (220, 56602), (231, 56545), (264, 56413), (266, 56389), (270, 56362), (274, 56347), (278, 56311), (280, 56305), (283, 56278), (285, 56272),

Gene: P3MA\_37 Start: 29827, Stop: 28817, Start Num: 20

Candidate Starts for P3MA\_37:

(Start: 20 @29827 has 1 MA's), (Start: 76 @29710 has 1 MA's), (118, 29641), (Start: 129 @29605 has 1 MA's), (Start: 131 @29596 has 1 MA's), (157, 29470), (161, 29449), (168, 29416), (194, 29329), (199, 29308), (208, 29275), (216, 29236), (223, 29215), (224, 29197), (226, 29188), (227, 29185), (230, 29167), (236, 29146), (245, 29101), (253, 29065), (276, 28945), (293, 28843),

Gene: Paito\_32 Start: 29040, Stop: 27946, Start Num: 8

Candidate Starts for Paito\_32:

(Start: 8 @29040 has 1 MA's), (13, 29013), (14, 29007), (29, 28971), (65, 28899), (112, 28821), (135, 28734), (158, 28635), (180, 28536), (189, 28509), (190, 28506), (197, 28485), (199, 28479), (200, 28476), (209, 28437), (223, 28380), (233, 28320), (262, 28185), (264, 28176), (273, 28113), (275, 28095), (278, 28074), (282, 28044), (283, 28041), (285, 28038), (298, 27984),

Gene: Panchino\_32 Start: 29134, Stop: 28163, Start Num: 34

Candidate Starts for Panchino\_32:

(Start: 34 @29134 has 40 MA's), (Start: 83 @29050 has 1 MA's), (Start: 95 @29035 has 1 MA's), (138, 28912), (144, 28888), (168, 28771), (169, 28768), (175, 28747), (184, 28708), (185, 28705), (188, 28699), (194, 28684), (199, 28663), (204, 28648), (216, 28591), (219, 28579), (227, 28540), (233, 28513), (236, 28501), (240, 28474), (248, 28435), (255, 28411), (259, 28396), (280, 28267), (281, 28252), (290, 28213),

Gene: Parmesanjohn\_36 Start: 28738, Stop: 27767, Start Num: 34

Candidate Starts for Parmesanjohn\_36:

(Start: 34 @28738 has 40 MA's), (Start: 83 @28654 has 1 MA's), (Start: 95 @28639 has 1 MA's), (138, 28516), (144, 28492), (168, 28375), (169, 28372), (175, 28351), (184, 28312), (185, 28309), (188, 28303), (194, 28288), (199, 28267), (204, 28252), (216, 28195), (219, 28183), (227, 28144), (233, 28117), (236, 28105), (240, 28078), (248, 28039), (255, 28015), (259, 28000), (280, 27871), (281, 27856), (290, 27817),

Gene: PatrickStar\_71 Start: 57027, Stop: 56266, Start Num: 109

Candidate Starts for PatrickStar\_71:

(54, 57117), (73, 57087), (Start: 85 @57069 has 1 MA's), (Start: 109 @57027 has 4 MA's), (130, 56958), (154, 56856), (155, 56853), (175, 56769), (179, 56751), (184, 56730), (188, 56721), (195, 56703), (200, 56682), (220, 56601), (231, 56544), (264, 56412), (266, 56388), (270, 56361), (274, 56346), (278, 56310), (280, 56304), (283, 56277), (285, 56271),



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

Candidate Starts for Peeb\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (91, 28749), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (295, 27888), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for Periodt\_32:

(Start: 10 @28908 has 58 MA's), (28, 28845), (91, 28740), (102, 28719), (135, 28611), (144, 28578), (158, 28512), (183, 28401), (190, 28383), (197, 28362), (199, 28356), (200, 28353), (207, 28329), (223, 28257), (228, 28221), (262, 28062), (273, 27990), (283, 27918), (285, 27915), (305, 27846), (306, 27840), (312, 27804), (315, 27768),

Gene: Petra\_37 Start: 30869, Stop: 30033, Start Num: 78

Candidate Starts for Petra\_37:

(Start: 48 @30923 has 8 MA's), (Start: 58 @30902 has 1 MA's), (67, 30887), (Start: 78 @30869 has 1 MA's), (Start: 84 @30860 has 18 MA's), (Start: 96 @30842 has 6 MA's), (122, 30776), (199, 30470), (205, 30452), (208, 30437), (226, 30350), (230, 30329), (236, 30308), (248, 30248), (255, 30224), (264, 30188), (275, 30107),

Gene: Phalm\_30 Start: 27132, Stop: 26176, Start Num: 44

Candidate Starts for Phalm\_30:

(Start: 44 @27132 has 35 MA's), (Start: 84 @27069 has 18 MA's), (Start: 87 @27066 has 1 MA's), (Start: 129 @26994 has 1 MA's), (Start: 131 @26985 has 1 MA's), (144, 26934), (168, 26817), (169, 26814), (170, 26811), (178, 26781), (180, 26769), (184, 26754), (191, 26736), (199, 26709), (207, 26682), (208, 26676), (221, 26622), (223, 26616), (224, 26598), (236, 26547), (255, 26463), (271, 26373), (274, 26361), (280, 26319), (311, 26190),

Gene: PhancyPhin\_37 Start: 29032, Stop: 28061, Start Num: 34

Candidate Starts for PhancyPhin\_37:

(Start: 34 @29032 has 40 MA's), (Start: 83 @28948 has 1 MA's), (Start: 89 @28939 has 1 MA's), (144, 28786), (168, 28669), (169, 28666), (184, 28606), (188, 28597), (194, 28582), (199, 28561), (205, 28543), (219, 28477), (233, 28411), (236, 28399), (240, 28372), (248, 28333), (255, 28309), (259, 28294), (271, 28219), (280, 28165),

Gene: Phayonce\_32 Start: 28847, Stop: 27957, Start Num: 84

Candidate Starts for Phayonce\_32:

(42, 28913), (Start: 48 @28904 has 8 MA's), (53, 28895), (Start: 84 @28847 has 18 MA's), (Start: 129 @28772 has 1 MA's), (Start: 131 @28763 has 1 MA's), (168, 28589), (169, 28586), (170, 28583), (180, 28541), (184, 28526), (191, 28508), (199, 28481), (208, 28448), (221, 28394), (228, 28352), (236, 28319), (255, 28235), (259, 28220), (274, 28133), (280, 28091), (289, 28040), (297, 28010), (302, 27998),

Gene: Phegasus\_30 Start: 26880, Stop: 25924, Start Num: 44

Candidate Starts for Phegasus\_30:

(Start: 44 @26880 has 35 MA's), (63, 26850), (Start: 84 @26817 has 18 MA's), (Start: 87 @26814 has 1 MA's), (Start: 129 @26742 has 1 MA's), (Start: 131 @26733 has 1 MA's), (132, 26727), (144, 26682), (168, 26565), (169, 26562), (170, 26559), (178, 26529), (180, 26517), (184, 26502), (191, 26484), (199, 26457), (207, 26430), (208, 26424), (221, 26370), (224, 26346), (236, 26295), (255, 26211), (266, 26151), (274, 26109), (280, 26067), (311, 25938),

Gene: Philonius\_34 Start: 27400, Stop: 26429, Start Num: 34

Candidate Starts for Philonius\_34:

(Start: 34 @27400 has 40 MA's), (38, 27391), (Start: 83 @27316 has 1 MA's), (Start: 95 @27301 has 1 MA's), (138, 27178), (144, 27154), (168, 27037), (169, 27034), (175, 27013), (184, 26974), (185, 26971), (188, 26965), (194, 26950), (199, 26929), (204, 26914), (216, 26857), (219, 26845), (227, 26806), (233, 26779), (236, 26767), (240, 26740), (248, 26701), (255, 26677), (259, 26662), (280, 26533), (290, 26479), (301, 26446),

Gene: Phineas\_30 Start: 27246, Stop: 26290, Start Num: 44

Candidate Starts for Phineas\_30:

(Start: 44 @27246 has 35 MA's), (63, 27216), (Start: 84 @27183 has 18 MA's), (Start: 87 @27180 has 1 MA's), (Start: 129 @27108 has 1 MA's), (Start: 131 @27099 has 1 MA's), (132, 27093), (144, 27048), (168, 26931), (169, 26928), (170, 26925), (178, 26895), (180, 26883), (184, 26868), (191, 26850), (199, 26823), (207, 26796), (208, 26790), (221, 26736), (223, 26730), (236, 26661), (255, 26577), (266, 26517), (274, 26475), (280, 26433), (311, 26304),

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

Candidate Starts for Phish\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Phishy\_35 Start: 30744, Stop: 29884, Start Num: 80

Candidate Starts for Phishy\_35:

(Start: 44 @30795 has 35 MA's), (Start: 80 @30744 has 18 MA's), (128, 30639), (135, 30609), (144, 30576), (145, 30567), (168, 30459), (169, 30456), (184, 30396), (194, 30372), (198, 30354), (199, 30351), (227, 30228), (229, 30213), (236, 30189), (240, 30162), (255, 30099), (259, 30084), (270, 30012), (274, 29997), (280, 29955), (288, 29910),

Gene: Phlop\_46 Start: 39515, Stop: 38628, Start Num: 59

Candidate Starts for Phlop\_46:

(Start: 36 @39563 has 18 MA's), (Start: 59 @39515 has 5 MA's), (Start: 62 @39512 has 1 MA's), (Start: 71 @39494 has 3 MA's), (Start: 76 @39485 has 1 MA's), (Start: 131 @39353 has 1 MA's), (174, 39170), (177, 39158), (184, 39125), (199, 39083), (211, 39032), (220, 38993), (262, 38789), (264, 38780), (272, 38720), (280, 38672), (281, 38657), (283, 38645),

Gene: Phloss\_34 Start: 28145, Stop: 27174, Start Num: 34

Candidate Starts for Phloss\_34:

(Start: 34 @28145 has 40 MA's), (Start: 83 @28061 has 1 MA's), (Start: 95 @28046 has 1 MA's), (138, 27923), (144, 27899), (168, 27782), (169, 27779), (175, 27758), (184, 27719), (185, 27716), (188, 27710), (194, 27695), (199, 27674), (204, 27659), (216, 27602), (219, 27590), (227, 27551), (233, 27524), (236, 27512), (240, 27485), (248, 27446), (255, 27422), (259, 27407), (280, 27278), (281, 27263), (290, 27224),

Gene: Phrann\_37 Start: 29816, Stop: 28845, Start Num: 34

Candidate Starts for Phrann\_37:

(Start: 34 @29816 has 40 MA's), (Start: 83 @29732 has 1 MA's), (Start: 89 @29723 has 1 MA's), (144, 29570), (168, 29453), (169, 29450), (184, 29390), (188, 29381), (194, 29366), (199, 29345), (205, 29327), (219, 29261), (233, 29195), (236, 29183), (240, 29156), (248, 29117), (255, 29093), (259, 29078), (271, 29003), (280, 28949),

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

Candidate Starts for Phreak\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: PhrostedPhlake\_43 Start: 32416, Stop: 31481, Start Num: 36

Candidate Starts for PhrostedPhlake\_43:

(Start: 36 @32416 has 18 MA's), (Start: 59 @32368 has 5 MA's), (Start: 62 @32365 has 1 MA's), (Start: 71 @32347 has 3 MA's), (Start: 131 @32206 has 1 MA's), (174, 32023), (184, 31978), (199, 31936), (211, 31885), (220, 31846), (226, 31810), (247, 31699), (262, 31642), (264, 31633), (271, 31579), (283, 31498),

Gene: PinkCoffee\_49 Start: 39618, Stop: 38731, Start Num: 59

Candidate Starts for PinkCoffee\_49:

(Start: 36 @39666 has 18 MA's), (Start: 59 @39618 has 5 MA's), (Start: 62 @39615 has 1 MA's), (Start: 71 @39597 has 3 MA's), (Start: 76 @39588 has 1 MA's), (Start: 131 @39456 has 1 MA's), (174, 39273), (177, 39261), (184, 39228), (199, 39186), (211, 39135), (220, 39096), (262, 38892), (264, 38883), (272, 38823), (280, 38775), (281, 38760), (283, 38748),

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

Candidate Starts for PinkYoshi\_32:

(Start: 10 @28908 has 58 MA's), (28, 28845), (102, 28719), (135, 28611), (144, 28578), (158, 28512), (183, 28401), (190, 28383), (197, 28362), (199, 28356), (200, 28353), (207, 28329), (223, 28257), (228, 28221), (262, 28062), (273, 27990), (283, 27918), (285, 27915), (305, 27846), (306, 27840), (312, 27804),

Gene: Pipp\_37 Start: 31000, Stop: 30065, Start Num: 36

Candidate Starts for Pipp\_37:

(Start: 36 @31000 has 18 MA's), (Start: 59 @30952 has 5 MA's), (Start: 62 @30949 has 1 MA's), (Start: 71 @30931 has 3 MA's), (Start: 76 @30922 has 1 MA's), (Start: 131 @30790 has 1 MA's), (174, 30607), (184, 30562), (199, 30520), (209, 30478), (211, 30469), (220, 30430), (226, 30394), (250, 30268), (262, 30226), (281, 30094), (283, 30082),

Gene: Pipsqueaks\_36 Start: 28715, Stop: 27744, Start Num: 34

Candidate Starts for Pipsqueaks\_36:

(Start: 34 @28715 has 40 MA's), (Start: 83 @28631 has 1 MA's), (Start: 95 @28616 has 1 MA's), (138, 28493), (144, 28469), (168, 28352), (169, 28349), (175, 28328), (184, 28289), (185, 28286), (188, 28280), (194, 28265), (199, 28244), (204, 28229), (216, 28172), (219, 28160), (227, 28121), (233, 28094), (236, 28082), (240, 28055), (248, 28016), (255, 27992), (259, 27977), (280, 27848), (281, 27833), (290, 27794),

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

Candidate Starts for Plagueis\_32:

(Start: 10 @28752 has 58 MA's), (28, 28689), (102, 28563), (135, 28455), (144, 28422), (158, 28356), (183, 28245), (190, 28227), (197, 28206), (199, 28200), (200, 28197), (207, 28173), (223, 28101), (228, 28065), (262, 27906), (273, 27834), (283, 27762), (285, 27759), (305, 27690), (306, 27684), (312, 27648),

Gene: Polkaroo\_30 Start: 26826, Stop: 25933, Start Num: 84

Candidate Starts for Polkaroo\_30:

(Start: 44 @26889 has 35 MA's), (Start: 84 @26826 has 18 MA's), (Start: 87 @26823 has 1 MA's), (Start: 129 @26751 has 1 MA's), (Start: 131 @26742 has 1 MA's), (144, 26691), (168, 26574), (169, 26571), (170, 26568), (178, 26538), (180, 26526), (184, 26511), (191, 26493), (199, 26466), (207,

26439), (208, 26433), (221, 26379), (223, 26373), (224, 26355), (236, 26304), (255, 26220), (271, 26130), (274, 26118), (280, 26076), (311, 25947),

Gene: Portcullis\_49 Start: 39169, Stop: 38234, Start Num: 36

Candidate Starts for Portcullis\_49:

(Start: 36 @39169 has 18 MA's), (Start: 59 @39121 has 5 MA's), (Start: 62 @39118 has 1 MA's), (Start: 71 @39100 has 3 MA's), (Start: 76 @39091 has 1 MA's), (Start: 131 @38959 has 1 MA's), (174, 38776), (177, 38764), (183, 38734), (184, 38731), (199, 38689), (211, 38638), (220, 38599), (262, 38395), (264, 38386), (272, 38326), (280, 38278), (281, 38263), (283, 38251),

Gene: PullumCavea\_46 Start: 39563, Stop: 38628, Start Num: 36

Candidate Starts for PullumCavea\_46:

(Start: 36 @39563 has 18 MA's), (Start: 59 @39515 has 5 MA's), (Start: 62 @39512 has 1 MA's), (Start: 71 @39494 has 3 MA's), (Start: 76 @39485 has 1 MA's), (Start: 131 @39353 has 1 MA's), (174, 39170), (177, 39158), (184, 39125), (199, 39083), (211, 39032), (220, 38993), (262, 38789), (264, 38780), (272, 38720), (280, 38672), (281, 38657), (283, 38645),

Gene: Purgamenstris\_37 Start: 28943, Stop: 28065, Start Num: 89

Candidate Starts for Purgamenstris\_37:

(Start: 34 @29036 has 40 MA's), (Start: 83 @28952 has 1 MA's), (Start: 89 @28943 has 1 MA's), (144, 28790), (168, 28673), (169, 28670), (184, 28610), (188, 28601), (194, 28586), (199, 28565), (205, 28547), (219, 28481), (233, 28415), (236, 28403), (240, 28376), (248, 28337), (255, 28313), (259, 28298), (271, 28223), (280, 28169),

Gene: Purky\_37 Start: 29562, Stop: 28654, Start Num: 84

Candidate Starts for Purky\_37:

(47, 29622), (51, 29613), (Start: 84 @29562 has 18 MA's), (125, 29496), (Start: 131 @29478 has 1 MA's), (168, 29310), (170, 29304), (178, 29274), (180, 29262), (191, 29229), (199, 29202), (201, 29196), (236, 29040), (255, 28956), (256, 28953), (268, 28875), (271, 28866), (280, 28812), (297, 28731),

Gene: Pygmy\_32 Start: 28714, Stop: 27758, Start Num: 44

Candidate Starts for Pygmy\_32:

(Start: 44 @28714 has 35 MA's), (63, 28684), (Start: 84 @28651 has 18 MA's), (Start: 87 @28648 has 1 MA's), (Start: 129 @28576 has 1 MA's), (Start: 131 @28567 has 1 MA's), (132, 28561), (144, 28516), (168, 28399), (169, 28396), (170, 28393), (178, 28363), (180, 28351), (184, 28336), (188, 28327), (191, 28318), (199, 28291), (207, 28264), (208, 28258), (221, 28204), (224, 28180), (236, 28129), (255, 28045), (266, 27985), (271, 27955), (274, 27943), (280, 27901), (311, 27772),

Gene: QueenHazel\_29 Start: 26975, Stop: 26085, Start Num: 84

Candidate Starts for QueenHazel\_29:

(Start: 44 @27038 has 35 MA's), (Start: 84 @26975 has 18 MA's), (Start: 131 @26891 has 1 MA's), (135, 26873), (168, 26723), (169, 26720), (170, 26717), (178, 26687), (180, 26675), (184, 26660), (188, 26651), (191, 26642), (199, 26615), (207, 26588), (208, 26582), (221, 26528), (223, 26522), (233, 26465), (236, 26453), (255, 26369), (259, 26354), (271, 26279), (274, 26267), (280, 26225), (302, 26132), (308, 26117),

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

Candidate Starts for Rabbs\_32:

(6, 29051), (7, 29024), (Start: 10 @29000 has 58 MA's), (28, 28937), (91, 28832), (135, 28703), (158, 28604), (183, 28493), (190, 28475), (196, 28457), (197, 28454), (199, 28448), (207, 28421), (211, 28397), (223, 28349), (228, 28313), (262, 28154), (273, 28082), (283, 28010), (285, 28007), (305, 27938), (306, 27932), (312, 27896), (315, 27860),

Gene: Rahul\_19 Start: 13941, Stop: 13114, Start Num: 80

Candidate Starts for Rahul\_19:

(Start: 80 @13941 has 18 MA's), (Start: 99 @13914 has 1 MA's), (124, 13842), (Start: 129 @13827 has 1 MA's), (137, 13791), (157, 13704), (171, 13641), (184, 13587), (196, 13554), (199, 13545), (214, 13479), (215, 13476), (218, 13464), (221, 13452), (223, 13446), (226, 13419), (227, 13416), (244, 13365), (253, 13314), (264, 13272), (271, 13218), (273, 13209), (274, 13206), (280, 13164), (281, 13149), (282, 13140),

Gene: RayTheFireFly\_45 Start: 32624, Stop: 31815, Start Num: 96

Candidate Starts for RayTheFireFly\_45:

(56, 32687), (Start: 58 @32684 has 1 MA's), (67, 32669), (Start: 84 @32642 has 18 MA's), (Start: 96 @32624 has 6 MA's), (122, 32558), (151, 32444), (196, 32261), (199, 32252), (207, 32225), (208, 32219), (226, 32132), (236, 32090), (248, 32030), (255, 32006), (264, 31970), (275, 31889), (287, 31823),

Gene: Raymond7\_31 Start: 28846, Stop: 27872, Start Num: 34

Candidate Starts for Raymond7\_31:

(Start: 34 @28846 has 40 MA's), (Start: 83 @28762 has 1 MA's), (132, 28645), (138, 28624), (144, 28600), (161, 28516), (168, 28483), (169, 28480), (175, 28459), (185, 28417), (188, 28411), (194, 28396), (199, 28375), (205, 28357), (216, 28303), (219, 28291), (227, 28252), (233, 28225), (236, 28213), (240, 28186), (248, 28147), (255, 28123), (259, 28108), (266, 28063), (280, 27979), (290, 27925),

Gene: Redi\_37 Start: 29035, Stop: 28064, Start Num: 34

Candidate Starts for Redi\_37:

(Start: 34 @29035 has 40 MA's), (Start: 83 @28951 has 1 MA's), (Start: 89 @28942 has 1 MA's), (144, 28789), (168, 28672), (169, 28669), (184, 28609), (188, 28600), (194, 28585), (199, 28564), (205, 28546), (219, 28480), (233, 28414), (236, 28402), (240, 28375), (248, 28336), (255, 28312), (259, 28297), (271, 28222), (280, 28168),

Gene: Rem711\_46 Start: 33683, Stop: 32640, Start Num: 15

Candidate Starts for Rem711\_46:

(Start: 15 @33683 has 1 MA's), (79, 33548), (94, 33524), (118, 33467), (120, 33458), (138, 33395), (141, 33380), (143, 33374), (161, 33287), (163, 33281), (164, 33278), (168, 33254), (188, 33182), (194, 33167), (198, 33149), (199, 33146), (208, 33113), (223, 33053), (229, 33008), (233, 32996), (236, 32984), (255, 32891), (264, 32855), (266, 32831), (271, 32801),

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

Candidate Starts for Remy19\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

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

Candidate Starts for Renaissance\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Reyja\_31 Start: 25906, Stop: 25172, Start Num: 129

Candidate Starts for Reyja\_31:

(19, 26140), (Start: 23 @26131 has 1 MA's), (Start: 78 @26020 has 1 MA's), (Start: 96 @25993 has 6 MA's), (113, 25957), (Start: 129 @25906 has 1 MA's), (154, 25801), (156, 25789), (168, 25729), (180, 25681), (196, 25627), (199, 25618), (205, 25600), (223, 25525), (236, 25456), (248, 25396), (255, 25372), (259, 25357), (264, 25336), (266, 25312), (273, 25273), (274, 25270), (275, 25255), (288, 25183),

Gene: Reynauld\_68 Start: 57456, Stop: 56647, Start Num: 97

Candidate Starts for Reynauld\_68:

(Start: 97 @57456 has 1 MA's), (Start: 129 @57366 has 1 MA's), (136, 57336), (165, 57210), (174, 57171), (196, 57093), (214, 57018), (223, 56985), (225, 56964), (236, 56916), (269, 56745), (271, 56739), (283, 56658),

Gene: RobinSparkles\_72 Start: 56946, Stop: 56164, Start Num: 98

Candidate Starts for RobinSparkles\_72:

(Start: 98 @56946 has 1 MA's), (Start: 109 @56925 has 4 MA's), (130, 56856), (154, 56754), (155, 56751), (175, 56667), (179, 56649), (184, 56628), (188, 56619), (195, 56601), (200, 56580), (220, 56499), (231, 56442), (264, 56310), (266, 56286), (270, 56259), (274, 56244), (278, 56208), (280, 56202), (283, 56175), (285, 56169),

Gene: RogerDodger\_50 Start: 39706, Stop: 38771, Start Num: 36

Candidate Starts for RogerDodger\_50:

(Start: 36 @39706 has 18 MA's), (Start: 59 @39658 has 5 MA's), (Start: 62 @39655 has 1 MA's), (Start: 71 @39637 has 3 MA's), (Start: 76 @39628 has 1 MA's), (Start: 131 @39496 has 1 MA's), (174, 39313), (177, 39301), (183, 39271), (184, 39268), (199, 39226), (211, 39175), (220, 39136), (221, 39133), (262, 38932), (264, 38923), (272, 38863), (280, 38815), (281, 38800), (283, 38788),

Gene: Rubeelu\_37 Start: 29461, Stop: 28490, Start Num: 34

Candidate Starts for Rubeelu\_37:

(32, 29464), (Start: 34 @29461 has 40 MA's), (Start: 83 @29377 has 1 MA's), (Start: 131 @29266 has 1 MA's), (138, 29239), (144, 29215), (168, 29098), (188, 29026), (194, 29011), (199, 28990), (227, 28867), (233, 28840), (236, 28828), (240, 28801), (248, 28762), (255, 28738), (259, 28723), (271, 28648), (274, 28636), (280, 28594), (281, 28579), (290, 28540),

Gene: SallySpecial\_17 Start: 13669, Stop: 12869, Start Num: 99

Candidate Starts for SallySpecial\_17:

(1, 14119), (2, 14104), (3, 14101), (5, 13924), (27, 13801), (37, 13771), (41, 13762), (Start: 80 @13696 has 18 MA's), (Start: 99 @13669 has 1 MA's), (106, 13657), (108, 13654), (116, 13630), (125, 13591), (135, 13552), (142, 13525), (145, 13510), (171, 13396), (173, 13390), (178, 13369), (184, 13342), (198, 13303), (199, 13300), (211, 13249), (214, 13234), (215, 13231), (223, 13201), (225, 13180), (226, 13174), (227, 13171), (228, 13165), (244, 13120), (253, 13069), (264, 13027), (271, 12973), (279, 12922), (280, 12919), (281, 12904), (282, 12895),

Gene: Salvador\_46 Start: 39375, Stop: 38440, Start Num: 36

Candidate Starts for Salvador\_46:

(Start: 36 @39375 has 18 MA's), (Start: 59 @39327 has 5 MA's), (Start: 62 @39324 has 1 MA's), (Start: 71 @39306 has 3 MA's), (Start: 76 @39297 has 1 MA's), (Start: 131 @39165 has 1 MA's), (174, 38982), (177, 38970), (183, 38940), (184, 38937), (199, 38895), (211, 38844), (220, 38805), (262, 38601), (264, 38592), (272, 38532), (280, 38484), (281, 38469), (283, 38457),

Gene: Santhid\_30 Start: 24489, Stop: 23530, Start Num: 23

Candidate Starts for Santhid\_30:

(16, 24504), (Start: 21 @24495 has 1 MA's), (Start: 23 @24489 has 1 MA's), (Start: 78 @24378 has 1 MA's), (Start: 96 @24351 has 6 MA's), (113, 24315), (154, 24159), (156, 24147), (168, 24087), (180, 24039), (182, 24030), (196, 23985), (199, 23976), (205, 23958), (236, 23814), (237, 23808), (248, 23754), (255, 23730), (259, 23715), (264, 23694), (273, 23631), (275, 23613),

Gene: Savbucketdawg\_47 Start: 39156, Stop: 38221, Start Num: 36

Candidate Starts for Savbucketdawg\_47:

(Start: 36 @39156 has 18 MA's), (Start: 59 @39108 has 5 MA's), (Start: 62 @39105 has 1 MA's), (Start: 71 @39087 has 3 MA's), (Start: 76 @39078 has 1 MA's), (Start: 131 @38946 has 1 MA's), (174, 38763), (177, 38751), (184, 38718), (199, 38676), (211, 38625), (220, 38586), (262, 38382), (264, 38373), (272, 38313), (280, 38265), (281, 38250), (283, 38238),

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

Candidate Starts for Schiebel\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Schnabeltier\_38 Start: 31608, Stop: 30718, Start Num: 80

Candidate Starts for Schnabeltier\_38:

(42, 31668), (Start: 80 @31608 has 18 MA's), (Start: 83 @31602 has 1 MA's), (Start: 86 @31599 has 1 MA's), (115, 31542), (116, 31539), (127, 31497), (139, 31452), (148, 31413), (189, 31248), (196, 31227), (200, 31215), (202, 31209), (207, 31191), (212, 31164), (226, 31089), (235, 31053), (236, 31044), (252, 30963), (277, 30834), (280, 30813), (282, 30789),

Gene: Schnauzer\_36 Start: 28738, Stop: 27767, Start Num: 34

Candidate Starts for Schnauzer\_36:

(Start: 34 @28738 has 40 MA's), (Start: 83 @28654 has 1 MA's), (Start: 95 @28639 has 1 MA's), (138, 28516), (144, 28492), (168, 28375), (169, 28372), (175, 28351), (184, 28312), (185, 28309), (188, 28303), (194, 28288), (199, 28267), (204, 28252), (216, 28195), (219, 28183), (227, 28144), (233, 28117), (236, 28105), (240, 28078), (248, 28039), (255, 28015), (259, 28000), (280, 27871), (281, 27856), (290, 27817),

Gene: Scitech\_31 Start: 26586, Stop: 25615, Start Num: 34

Candidate Starts for Scitech\_31:

(Start: 34 @26586 has 40 MA's), (Start: 83 @26502 has 1 MA's), (Start: 95 @26487 has 1 MA's), (138, 26364), (144, 26340), (168, 26223), (169, 26220), (175, 26199), (184, 26160), (185, 26157), (188, 26151), (194, 26136), (199, 26115), (204, 26100), (216, 26043), (219, 26031), (227, 25992), (233, 25965), (236, 25953), (240, 25926), (248, 25887), (255, 25863), (259, 25848), (280, 25719), (290, 25665), (301, 25632),

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

Candidate Starts for ShaboiShabazz\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Shinji\_48 Start: 38871, Stop: 37984, Start Num: 59

Candidate Starts for Shinji\_48:

(Start: 36 @38919 has 18 MA's), (Start: 59 @38871 has 5 MA's), (Start: 62 @38868 has 1 MA's), (Start: 71 @38850 has 3 MA's), (Start: 76 @38841 has 1 MA's), (Start: 131 @38709 has 1 MA's), (174,

38526), (177, 38514), (183, 38484), (184, 38481), (199, 38439), (211, 38388), (220, 38349), (221, 38346), (262, 38145), (264, 38136), (272, 38076), (280, 38028), (281, 38013), (283, 38001),

Gene: Shipwreck\_32 Start: 28626, Stop: 27733, Start Num: 84

Candidate Starts for Shipwreck\_32:

(Start: 44 @28689 has 35 MA's), (63, 28659), (Start: 84 @28626 has 18 MA's), (Start: 87 @28623 has 1 MA's), (Start: 129 @28551 has 1 MA's), (Start: 131 @28542 has 1 MA's), (132, 28536), (144, 28491), (168, 28374), (169, 28371), (170, 28368), (178, 28338), (180, 28326), (184, 28311), (188, 28302), (191, 28293), (199, 28266), (207, 28239), (208, 28233), (221, 28179), (224, 28155), (236, 28104), (255, 28020), (266, 27960), (271, 27930), (274, 27918), (280, 27876), (311, 27747),

Gene: ShrimpFriedEgg\_37 Start: 29035, Stop: 28064, Start Num: 34

Candidate Starts for ShrimpFriedEgg\_37:

(Start: 34 @29035 has 40 MA's), (Start: 83 @28951 has 1 MA's), (Start: 89 @28942 has 1 MA's), (144, 28789), (168, 28672), (169, 28669), (184, 28609), (188, 28600), (194, 28585), (199, 28564), (205, 28546), (219, 28480), (233, 28414), (236, 28402), (240, 28375), (248, 28336), (255, 28312), (259, 28297), (271, 28222), (280, 28168),

Gene: Shweta\_33 Start: 27918, Stop: 26947, Start Num: 34

Candidate Starts for Shweta\_33:

(Start: 34 @27918 has 40 MA's), (Start: 83 @27834 has 1 MA's), (Start: 95 @27819 has 1 MA's), (138, 27696), (144, 27672), (168, 27555), (169, 27552), (175, 27531), (184, 27492), (185, 27489), (188, 27483), (194, 27468), (199, 27447), (204, 27432), (216, 27375), (219, 27363), (227, 27324), (233, 27297), (236, 27285), (240, 27258), (248, 27219), (255, 27195), (259, 27180), (280, 27051), (281, 27036), (290, 26997),

Gene: Silvafighter\_37 Start: 28711, Stop: 27740, Start Num: 34

Candidate Starts for Silvafighter\_37:

(Start: 34 @28711 has 40 MA's), (Start: 83 @28627 has 1 MA's), (Start: 95 @28612 has 1 MA's), (138, 28489), (144, 28465), (168, 28348), (169, 28345), (175, 28324), (184, 28285), (185, 28282), (188, 28276), (194, 28261), (199, 28240), (204, 28225), (216, 28168), (219, 28156), (227, 28117), (233, 28090), (236, 28078), (240, 28051), (248, 28012), (255, 27988), (259, 27973), (280, 27844), (281, 27829), (290, 27790),

Gene: Silvy\_34 Start: 27389, Stop: 26418, Start Num: 34

Candidate Starts for Silvy\_34:

(Start: 34 @27389 has 40 MA's), (38, 27380), (Start: 83 @27305 has 1 MA's), (Start: 95 @27290 has 1 MA's), (138, 27167), (144, 27143), (168, 27026), (169, 27023), (175, 27002), (184, 26963), (185, 26960), (188, 26954), (194, 26939), (199, 26918), (204, 26903), (216, 26846), (219, 26834), (227, 26795), (233, 26768), (236, 26756), (240, 26729), (248, 26690), (255, 26666), (259, 26651), (280, 26522), (290, 26468), (301, 26435),

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

Candidate Starts for Sizemore\_32:

(7, 28942), (Start: 10 @28918 has 58 MA's), (28, 28855), (91, 28750), (108, 28720), (135, 28621), (144, 28588), (158, 28522), (183, 28411), (190, 28393), (197, 28372), (199, 28366), (200, 28363), (207, 28339), (223, 28267), (228, 28231), (262, 28072), (273, 28000), (283, 27928), (285, 27925), (305, 27856), (306, 27850), (312, 27814), (315, 27778),

Gene: SkinnyPete\_31 Start: 26449, Stop: 25478, Start Num: 34

Candidate Starts for SkinnyPete\_31:

(Start: 34 @26449 has 40 MA's), (Start: 83 @26365 has 1 MA's), (Start: 95 @26350 has 1 MA's), (138, 26227), (144, 26203), (168, 26086), (169, 26083), (175, 26062), (184, 26023), (185, 26020), (188,



26014), (194, 25999), (199, 25978), (204, 25963), (216, 25906), (219, 25894), (227, 25855), (233, 25828), (236, 25816), (240, 25789), (248, 25750), (255, 25726), (259, 25711), (280, 25582), (290, 25528), (301, 25495),

Gene: SmokingBunny\_47 Start: 39390, Stop: 38533, Start Num: 76

Candidate Starts for SmokingBunny\_47:

(Start: 36 @39468 has 18 MA's), (Start: 59 @39420 has 5 MA's), (Start: 62 @39417 has 1 MA's), (Start: 71 @39399 has 3 MA's), (Start: 76 @39390 has 1 MA's), (Start: 131 @39258 has 1 MA's), (174, 39075), (177, 39063), (184, 39030), (199, 38988), (211, 38937), (220, 38898), (262, 38694), (264, 38685), (272, 38625), (280, 38577), (281, 38562), (283, 38550),

Gene: Smurph\_36 Start: 28738, Stop: 27767, Start Num: 34

Candidate Starts for Smurph\_36:

(Start: 34 @28738 has 40 MA's), (Start: 83 @28654 has 1 MA's), (Start: 95 @28639 has 1 MA's), (138, 28516), (144, 28492), (168, 28375), (169, 28372), (175, 28351), (184, 28312), (185, 28309), (188, 28303), (194, 28288), (199, 28267), (204, 28252), (216, 28195), (219, 28183), (227, 28144), (233, 28117), (236, 28105), (240, 28078), (248, 28039), (255, 28015), (259, 28000), (280, 27871), (281, 27856), (290, 27817),

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

Candidate Starts for Sneeze\_32:

(6, 29050), (7, 29023), (Start: 10 @28999 has 58 MA's), (28, 28936), (91, 28831), (135, 28702), (158, 28603), (183, 28492), (190, 28474), (196, 28456), (197, 28453), (199, 28447), (207, 28420), (211, 28396), (223, 28348), (228, 28312), (262, 28153), (273, 28081), (283, 28009), (285, 28006), (305, 27937), (306, 27931), (312, 27895), (315, 27859),

Gene: Snekmaggedon\_33 Start: 27788, Stop: 26817, Start Num: 34

Candidate Starts for Snekmaggedon\_33:

(Start: 34 @27788 has 40 MA's), (Start: 83 @27704 has 1 MA's), (Start: 95 @27689 has 1 MA's), (138, 27566), (144, 27542), (168, 27425), (169, 27422), (175, 27401), (184, 27362), (185, 27359), (188, 27353), (194, 27338), (199, 27317), (204, 27302), (216, 27245), (219, 27233), (227, 27194), (233, 27167), (236, 27155), (240, 27128), (248, 27089), (255, 27065), (259, 27050), (280, 26921), (281, 26906), (290, 26867),

Gene: Sonah\_30 Start: 26861, Stop: 25905, Start Num: 44

Candidate Starts for Sonah\_30:

(Start: 44 @26861 has 35 MA's), (63, 26831), (Start: 84 @26798 has 18 MA's), (Start: 87 @26795 has 1 MA's), (Start: 129 @26723 has 1 MA's), (Start: 131 @26714 has 1 MA's), (144, 26663), (168, 26546), (169, 26543), (170, 26540), (178, 26510), (180, 26498), (184, 26483), (191, 26465), (199, 26438), (207, 26411), (208, 26405), (221, 26351), (224, 26327), (236, 26276), (255, 26192), (271, 26102), (274, 26090), (280, 26048), (311, 25919),

Gene: SpongeBob\_33 Start: 27788, Stop: 26817, Start Num: 34

Candidate Starts for SpongeBob\_33:

(Start: 34 @27788 has 40 MA's), (Start: 83 @27704 has 1 MA's), (Start: 95 @27689 has 1 MA's), (138, 27566), (144, 27542), (168, 27425), (169, 27422), (175, 27401), (184, 27362), (185, 27359), (188, 27353), (194, 27338), (199, 27317), (204, 27302), (216, 27245), (219, 27233), (227, 27194), (233, 27167), (236, 27155), (240, 27128), (248, 27089), (255, 27065), (259, 27050), (280, 26921), (281, 26906), (290, 26867),

Gene: StevieRay\_30 Start: 26777, Stop: 25884, Start Num: 84

Candidate Starts for StevieRay\_30:

(Start: 44 @26840 has 35 MA's), (Start: 84 @26777 has 18 MA's), (Start: 87 @26774 has 1 MA's), (Start: 129 @26702 has 1 MA's), (Start: 131 @26693 has 1 MA's), (144, 26642), (168, 26525), (169, 26522), (170, 26519), (178, 26489), (180, 26477), (184, 26462), (191, 26444), (199, 26417), (207, 26390), (208, 26384), (221, 26330), (236, 26255), (255, 26171), (271, 26081), (274, 26069), (280, 26027), (311, 25898),

Gene: StressBall\_30 Start: 27132, Stop: 26176, Start Num: 44

Candidate Starts for StressBall\_30:

(Start: 44 @27132 has 35 MA's), (Start: 84 @27069 has 18 MA's), (Start: 87 @27066 has 1 MA's), (Start: 129 @26994 has 1 MA's), (Start: 131 @26985 has 1 MA's), (144, 26934), (168, 26817), (169, 26814), (170, 26811), (178, 26781), (180, 26769), (184, 26754), (191, 26736), (199, 26709), (207, 26682), (208, 26676), (221, 26622), (223, 26616), (224, 26598), (236, 26547), (255, 26463), (271, 26373), (274, 26361), (280, 26319), (311, 26190),

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

Candidate Starts for Sweets\_32:

(Start: 10 @28912 has 58 MA's), (28, 28849), (102, 28723), (135, 28615), (144, 28582), (158, 28516), (183, 28405), (190, 28387), (197, 28366), (199, 28360), (200, 28357), (207, 28333), (223, 28261), (228, 28225), (262, 28066), (273, 27994), (283, 27922), (285, 27919), (305, 27850), (306, 27844), (312, 27808),

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

Candidate Starts for Taheera\_32:

(6, 29086), (7, 29059), (Start: 10 @29035 has 58 MA's), (28, 28972), (40, 28951), (91, 28867), (135, 28738), (158, 28639), (183, 28528), (190, 28510), (196, 28492), (197, 28489), (199, 28483), (207, 28456), (211, 28432), (223, 28384), (228, 28348), (262, 28189), (273, 28117), (283, 28045), (285, 28042), (305, 27979), (306, 27973), (312, 27937),

Gene: Tapioca\_37 Start: 28704, Stop: 27733, Start Num: 34

Candidate Starts for Tapioca\_37:

(Start: 34 @28704 has 40 MA's), (Start: 83 @28620 has 1 MA's), (Start: 95 @28605 has 1 MA's), (138, 28482), (144, 28458), (168, 28341), (169, 28338), (175, 28317), (184, 28278), (185, 28275), (188, 28269), (194, 28254), (199, 28233), (204, 28218), (216, 28161), (219, 28149), (227, 28110), (233, 28083), (236, 28071), (240, 28044), (248, 28005), (255, 27981), (259, 27966), (280, 27837), (281, 27822), (290, 27783),

Gene: TaronosaurusRx\_39 Start: 30540, Stop: 29644, Start Num: 80

Candidate Starts for TaronosaurusRx\_39:

(Start: 80 @30540 has 18 MA's), (Start: 83 @30534 has 1 MA's), (Start: 86 @30531 has 1 MA's), (115, 30474), (116, 30471), (127, 30429), (139, 30384), (160, 30294), (166, 30273), (172, 30243), (200, 30147), (202, 30141), (207, 30123), (236, 29976), (242, 29946), (264, 29853), (267, 29826), (277, 29766), (280, 29745), (282, 29721),

Gene: Tarzan\_31 Start: 25523, Stop: 24702, Start Num: 96

Candidate Starts for Tarzan\_31:

(19, 25670), (Start: 23 @25661 has 1 MA's), (Start: 78 @25550 has 1 MA's), (Start: 96 @25523 has 6 MA's), (113, 25487), (Start: 129 @25436 has 1 MA's), (154, 25331), (156, 25319), (168, 25259), (180, 25211), (196, 25157), (199, 25148), (205, 25130), (223, 25055), (236, 24986), (248, 24926), (255, 24902), (259, 24887), (264, 24866), (266, 24842), (273, 24803), (274, 24800), (275, 24785),

Gene: Techage\_30 Start: 26898, Stop: 25909, Start Num: 44

Candidate Starts for Techage\_30:

(Start: 44 @26898 has 35 MA's), (63, 26868), (Start: 84 @26835 has 18 MA's), (Start: 87 @26832 has 1 MA's), (103, 26802), (105, 26799), (Start: 129 @26727 has 1 MA's), (Start: 131 @26718 has 1 MA's), (132, 26712), (144, 26667), (168, 26550), (169, 26547), (170, 26544), (178, 26514), (180, 26502), (184, 26487), (191, 26469), (199, 26442), (207, 26415), (208, 26409), (221, 26355), (223, 26349), (224, 26331), (236, 26280), (255, 26196), (266, 26136), (274, 26094), (280, 26052), (311, 25923),

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

Candidate Starts for Terror\_32:

(6, 29086), (7, 29059), (Start: 10 @29035 has 58 MA's), (28, 28972), (40, 28951), (91, 28867), (135, 28738), (158, 28639), (183, 28528), (190, 28510), (196, 28492), (197, 28489), (199, 28483), (207, 28456), (211, 28432), (223, 28384), (228, 28348), (262, 28189), (273, 28117), (283, 28045), (285, 28042), (305, 27979), (306, 27973), (312, 27937),

Gene: Thespis\_30 Start: 26805, Stop: 25912, Start Num: 84

Candidate Starts for Thespis\_30:

(Start: 44 @26868 has 35 MA's), (Start: 84 @26805 has 18 MA's), (Start: 87 @26802 has 1 MA's), (Start: 129 @26730 has 1 MA's), (Start: 131 @26721 has 1 MA's), (144, 26670), (168, 26553), (169, 26550), (170, 26547), (178, 26517), (180, 26505), (184, 26490), (191, 26472), (199, 26445), (207, 26418), (208, 26412), (221, 26358), (223, 26352), (224, 26334), (236, 26283), (255, 26199), (271, 26109), (274, 26097), (280, 26055), (311, 25926),

Gene: TillyBobJoe\_47 Start: 39311, Stop: 38487, Start Num: 92

Candidate Starts for TillyBobJoe\_47:

(90, 39314), (Start: 92 @39311 has 1 MA's), (Start: 96 @39305 has 6 MA's), (151, 39128), (168, 39047), (196, 38951), (199, 38942), (219, 38858), (236, 38780), (248, 38723), (255, 38699), (259, 38684), (264, 38663), (270, 38612), (273, 38600), (274, 38597),

Gene: TinaBug\_32 Start: 28723, Stop: 27716, Start Num: 102

Candidate Starts for TinaBug\_32:

(Start: 10 @28912 has 58 MA's), (28, 28849), (102, 28723), (135, 28615), (144, 28582), (158, 28516), (183, 28405), (190, 28387), (197, 28366), (199, 28360), (200, 28357), (207, 28333), (223, 28261), (228, 28225), (262, 28066), (273, 27994), (283, 27922), (285, 27919), (305, 27850), (306, 27844), (312, 27808),

Gene: Togo\_46 Start: 39399, Stop: 38533, Start Num: 71

Candidate Starts for Togo\_46:

(Start: 36 @39468 has 18 MA's), (Start: 59 @39420 has 5 MA's), (Start: 62 @39417 has 1 MA's), (Start: 71 @39399 has 3 MA's), (Start: 76 @39390 has 1 MA's), (Start: 131 @39258 has 1 MA's), (174, 39075), (177, 39063), (184, 39030), (199, 38988), (211, 38937), (220, 38898), (262, 38694), (264, 38685), (272, 38625), (280, 38577), (281, 38562), (283, 38550),

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

Candidate Starts for TomBrady\_32:

(Start: 10 @28918 has 58 MA's), (28, 28855), (102, 28729), (135, 28621), (144, 28588), (158, 28522), (183, 28411), (190, 28393), (197, 28372), (199, 28366), (200, 28363), (207, 28339), (223, 28267), (228, 28231), (262, 28072), (273, 28000), (283, 27928), (285, 27925), (305, 27856), (306, 27850), (312, 27814),

Gene: Tortoise12\_34 Start: 27421, Stop: 26450, Start Num: 34

Candidate Starts for Tortoise12\_34:

(Start: 34 @27421 has 40 MA's), (38, 27412), (Start: 83 @27337 has 1 MA's), (Start: 95 @27322 has 1 MA's), (138, 27199), (144, 27175), (168, 27058), (169, 27055), (175, 27034), (184, 26995), (185, 26992), (188, 26986), (194, 26971), (199, 26950), (204, 26935), (216, 26878), (219, 26866), (227,

26827), (233, 26800), (236, 26788), (240, 26761), (248, 26722), (255, 26698), (259, 26683), (280, 26554), (290, 26500), (301, 26467),

Gene: Trogglehumper\_82 Start: 64380, Stop: 63535, Start Num: 82

Candidate Starts for Trogglehumper\_82:

(57, 64422), (Start: 82 @64380 has 1 MA's), (126, 64272), (147, 64185), (149, 64179), (152, 64155), (181, 64032), (188, 64014), (200, 63975), (227, 63855), (228, 63849), (236, 63813), (259, 63711), (265, 63666), (268, 63639), (270, 63633),

Gene: Twister6\_49 Start: 39200, Stop: 38334, Start Num: 71

Candidate Starts for Twister6\_49:

(Start: 36 @39269 has 18 MA's), (Start: 59 @39221 has 5 MA's), (Start: 62 @39218 has 1 MA's), (Start: 71 @39200 has 3 MA's), (Start: 76 @39191 has 1 MA's), (Start: 131 @39059 has 1 MA's), (174, 38876), (177, 38864), (183, 38834), (184, 38831), (199, 38789), (211, 38738), (220, 38699), (221, 38696), (262, 38495), (264, 38486), (272, 38426), (280, 38378), (281, 38363), (283, 38351),

Gene: UmaThurman\_35 Start: 31152, Stop: 30235, Start Num: 39

Candidate Starts for UmaThurman\_35:

(35, 31161), (Start: 39 @31152 has 1 MA's), (65, 31101), (68, 31098), (183, 30735), (199, 30690), (207, 30663), (209, 30648), (227, 30561), (258, 30414), (260, 30405), (262, 30396), (283, 30252), (285, 30249),

Gene: Valary\_49 Start: 40311, Stop: 39376, Start Num: 36

Candidate Starts for Valary\_49:

(Start: 36 @40311 has 18 MA's), (Start: 59 @40263 has 5 MA's), (Start: 62 @40260 has 1 MA's), (Start: 71 @40242 has 3 MA's), (Start: 76 @40233 has 1 MA's), (Start: 131 @40101 has 1 MA's), (174, 39918), (177, 39906), (184, 39873), (199, 39831), (211, 39780), (220, 39741), (262, 39537), (264, 39528), (272, 39468), (280, 39420), (281, 39405), (283, 39393),

Gene: VanDeWege\_50 Start: 39603, Stop: 38668, Start Num: 36

Candidate Starts for VanDeWege\_50:

(Start: 36 @39603 has 18 MA's), (Start: 59 @39555 has 5 MA's), (Start: 62 @39552 has 1 MA's), (Start: 71 @39534 has 3 MA's), (Start: 76 @39525 has 1 MA's), (Start: 131 @39393 has 1 MA's), (174, 39210), (177, 39198), (184, 39165), (199, 39123), (211, 39072), (220, 39033), (262, 38829), (264, 38820), (272, 38760), (280, 38712), (281, 38697), (283, 38685),

Gene: Venti\_30 Start: 26875, Stop: 25919, Start Num: 44

Candidate Starts for Venti\_30:

(Start: 44 @26875 has 35 MA's), (63, 26845), (Start: 84 @26812 has 18 MA's), (Start: 87 @26809 has 1 MA's), (Start: 129 @26737 has 1 MA's), (Start: 131 @26728 has 1 MA's), (132, 26722), (144, 26677), (168, 26560), (169, 26557), (170, 26554), (178, 26524), (180, 26512), (184, 26497), (191, 26479), (199, 26452), (207, 26425), (208, 26419), (221, 26365), (223, 26359), (236, 26290), (255, 26206), (266, 26146), (274, 26104), (280, 26062), (311, 25933),

Gene: Vidya\_30 Start: 26845, Stop: 25919, Start Num: 84

Candidate Starts for Vidya\_30:

(Start: 44 @26908 has 35 MA's), (63, 26878), (Start: 84 @26845 has 18 MA's), (Start: 87 @26842 has 1 MA's), (103, 26812), (105, 26809), (Start: 129 @26737 has 1 MA's), (Start: 131 @26728 has 1 MA's), (132, 26722), (144, 26677), (168, 26560), (169, 26557), (170, 26554), (178, 26524), (180, 26512), (184, 26497), (191, 26479), (199, 26452), (207, 26425), (208, 26419), (221, 26365), (223, 26359), (224, 26341), (236, 26290), (255, 26206), (266, 26146), (274, 26104), (311, 25933),

Gene: Vordorf\_34 Start: 29605, Stop: 28745, Start Num: 80

Candidate Starts for Vordorf\_34:

(12, 29749), (33, 29683), (Start: 80 @29605 has 18 MA's), (128, 29500), (135, 29470), (144, 29437), (168, 29320), (194, 29233), (198, 29215), (199, 29212), (223, 29119), (227, 29089), (229, 29074), (236, 29050), (240, 29023), (255, 28960), (270, 28873), (274, 28858), (288, 28771),

Gene: Walrus\_40 Start: 32146, Stop: 31328, Start Num: 96

Candidate Starts for Walrus\_40:

(64, 32194), (90, 32155), (Start: 92 @32152 has 1 MA's), (Start: 96 @32146 has 6 MA's), (128, 32065), (Start: 129 @32062 has 1 MA's), (162, 31918), (168, 31888), (196, 31792), (199, 31783), (219, 31699), (229, 31645), (236, 31621), (248, 31564), (252, 31546), (255, 31540), (259, 31525), (264, 31504), (273, 31441), (274, 31438), (275, 31423), (283, 31369), (292, 31336),

Gene: Weirido19\_45 Start: 34583, Stop: 33348, Start Num: 8

Candidate Starts for Weirido19\_45:

(4, 34775), (Start: 8 @34583 has 1 MA's), (Start: 43 @34472 has 1 MA's), (68, 34427), (Start: 76 @34412 has 1 MA's), (108, 34364), (114, 34346), (122, 34313), (Start: 129 @34292 has 1 MA's), (135, 34265), (158, 34166), (174, 34097), (183, 34055), (189, 34040), (190, 34037), (197, 34016), (198, 34013), (199, 34010), (200, 34007), (207, 33983), (220, 33920), (222, 33914), (223, 33911), (225, 33890), (227, 33881), (233, 33851), (253, 33749), (258, 33734), (262, 33716), (264, 33707), (268, 33662), (271, 33653), (273, 33644), (275, 33626), (281, 33584), (283, 33572), (306, 33491), (307, 33482), (314, 33440), (318, 33389),

Gene: Wendigo\_32 Start: 28728, Stop: 27721, Start Num: 102

Candidate Starts for Wendigo\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266), (228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849), (312, 27813),

Gene: Whack\_39 Start: 32450, Stop: 31497, Start Num: 52

Candidate Starts for Whack\_39:

(Start: 52 @32450 has 1 MA's), (Start: 92 @32384 has 1 MA's), (103, 32363), (157, 32177), (166, 32141), (172, 32111), (178, 32087), (211, 31961), (214, 31946), (222, 31910), (223, 31907), (236, 31835), (248, 31775), (266, 31691), (268, 31670), (291, 31550), (304, 31502),

Gene: Willsammy\_29 Start: 26615, Stop: 25659, Start Num: 44

Candidate Starts for Willsammy\_29:

(Start: 44 @26615 has 35 MA's), (Start: 84 @26552 has 18 MA's), (Start: 87 @26549 has 1 MA's), (Start: 129 @26477 has 1 MA's), (Start: 131 @26468 has 1 MA's), (144, 26417), (168, 26300), (169, 26297), (170, 26294), (178, 26264), (180, 26252), (184, 26237), (191, 26219), (199, 26192), (207, 26165), (208, 26159), (221, 26105), (223, 26099), (224, 26081), (236, 26030), (255, 25946), (271, 25856), (274, 25844), (280, 25802), (311, 25673),

Gene: Wizard\_46 Start: 39461, Stop: 38574, Start Num: 59

Candidate Starts for Wizard\_46:

(Start: 36 @39509 has 18 MA's), (Start: 59 @39461 has 5 MA's), (Start: 62 @39458 has 1 MA's), (Start: 71 @39440 has 3 MA's), (Start: 76 @39431 has 1 MA's), (Start: 131 @39299 has 1 MA's), (174, 39116), (177, 39104), (184, 39071), (199, 39029), (211, 38978), (220, 38939), (262, 38735), (264, 38726), (272, 38666), (280, 38618), (281, 38603), (283, 38591),

Gene: Xeno\_33 Start: 27175, Stop: 26204, Start Num: 34

Candidate Starts for Xeno\_33:

(Start: 34 @27175 has 40 MA's), (Start: 83 @27091 has 1 MA's), (Start: 95 @27076 has 1 MA's), (138, 26953), (144, 26929), (168, 26812), (169, 26809), (175, 26788), (184, 26749), (185, 26746), (188, 26740), (194, 26725), (199, 26704), (204, 26689), (216, 26632), (219, 26620), (227, 26581), (233, 26554), (236, 26542), (240, 26515), (248, 26476), (255, 26452), (259, 26437), (280, 26308), (290, 26254),

Gene: Xerxes\_36 Start: 28735, Stop: 27764, Start Num: 34

Candidate Starts for Xerxes\_36:

(Start: 34 @28735 has 40 MA's), (Start: 83 @28651 has 1 MA's), (Start: 95 @28636 has 1 MA's), (138, 28513), (144, 28489), (168, 28372), (169, 28369), (175, 28348), (184, 28309), (185, 28306), (188, 28300), (194, 28285), (199, 28264), (204, 28249), (216, 28192), (219, 28180), (227, 28141), (233, 28114), (236, 28102), (240, 28075), (248, 28036), (255, 28012), (259, 27997), (280, 27868), (281, 27853), (290, 27814),

Gene: Xula\_28 Start: 26499, Stop: 25609, Start Num: 84

Candidate Starts for Xula\_28:

(Start: 44 @26562 has 35 MA's), (Start: 84 @26499 has 18 MA's), (Start: 131 @26415 has 1 MA's), (135, 26397), (168, 26247), (169, 26244), (170, 26241), (178, 26211), (180, 26199), (184, 26184), (188, 26175), (191, 26166), (199, 26139), (207, 26112), (208, 26106), (221, 26052), (223, 26046), (233, 25989), (236, 25977), (255, 25893), (259, 25878), (271, 25803), (274, 25791), (280, 25749), (302, 25656), (308, 25641),

Gene: YungMoney\_50 Start: 41701, Stop: 40871, Start Num: 96

Candidate Starts for YungMoney\_50:

(74, 41731), (90, 41710), (Start: 92 @41707 has 1 MA's), (Start: 96 @41701 has 6 MA's), (151, 41524), (168, 41443), (196, 41347), (199, 41338), (219, 41254), (229, 41200), (236, 41176), (248, 41119), (252, 41101), (255, 41095), (259, 41080), (264, 41059), (270, 41008), (271, 41005), (273, 40996), (274, 40993),

Gene: ZAYM\_40 Start: 31559, Stop: 30693, Start Num: 80

Candidate Starts for ZAYM\_40:

(Start: 80 @31559 has 18 MA's), (135, 31424), (144, 31391), (145, 31382), (153, 31346), (168, 31274), (194, 31187), (198, 31169), (199, 31166), (203, 31154), (205, 31148), (223, 31073), (229, 31028), (236, 31004), (240, 30977), (255, 30914), (274, 30812), (280, 30770), (288, 30725),

Gene: Zarbodnamra\_39 Start: 31599, Stop: 30709, Start Num: 48

Candidate Starts for Zarbodnamra\_39:

(Start: 48 @31599 has 8 MA's), (Start: 58 @31578 has 1 MA's), (67, 31563), (Start: 78 @31545 has 1 MA's), (Start: 84 @31536 has 18 MA's), (Start: 96 @31518 has 6 MA's), (122, 31452), (199, 31146), (223, 31053), (226, 31026), (236, 30984), (248, 30924), (255, 30900), (264, 30864), (275, 30783),

Gene: Zilizebeth\_30 Start: 26907, Stop: 25918, Start Num: 44

Candidate Starts for Zilizebeth\_30:

(Start: 44 @26907 has 35 MA's), (63, 26877), (Start: 84 @26844 has 18 MA's), (Start: 87 @26841 has 1 MA's), (103, 26811), (105, 26808), (Start: 129 @26736 has 1 MA's), (Start: 131 @26727 has 1 MA's), (132, 26721), (144, 26676), (168, 26559), (169, 26556), (170, 26553), (178, 26523), (180, 26511), (184, 26496), (191, 26478), (199, 26451), (207, 26424), (208, 26418), (221, 26364), (223, 26358), (224, 26340), (236, 26289), (255, 26205), (266, 26145), (274, 26103), (280, 26061), (311, 25932),

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

Candidate Starts for ZoMa\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521), (183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266),

(228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849),  
(312, 27813),

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

Candidate Starts for Zombie\_32:

(Start: 10 @28917 has 58 MA's), (28, 28854), (102, 28728), (135, 28620), (144, 28587), (158, 28521),  
(183, 28410), (190, 28392), (197, 28371), (199, 28365), (200, 28362), (207, 28338), (223, 28266),  
(228, 28230), (262, 28071), (273, 27999), (283, 27927), (285, 27924), (305, 27855), (306, 27849),  
(312, 27813),