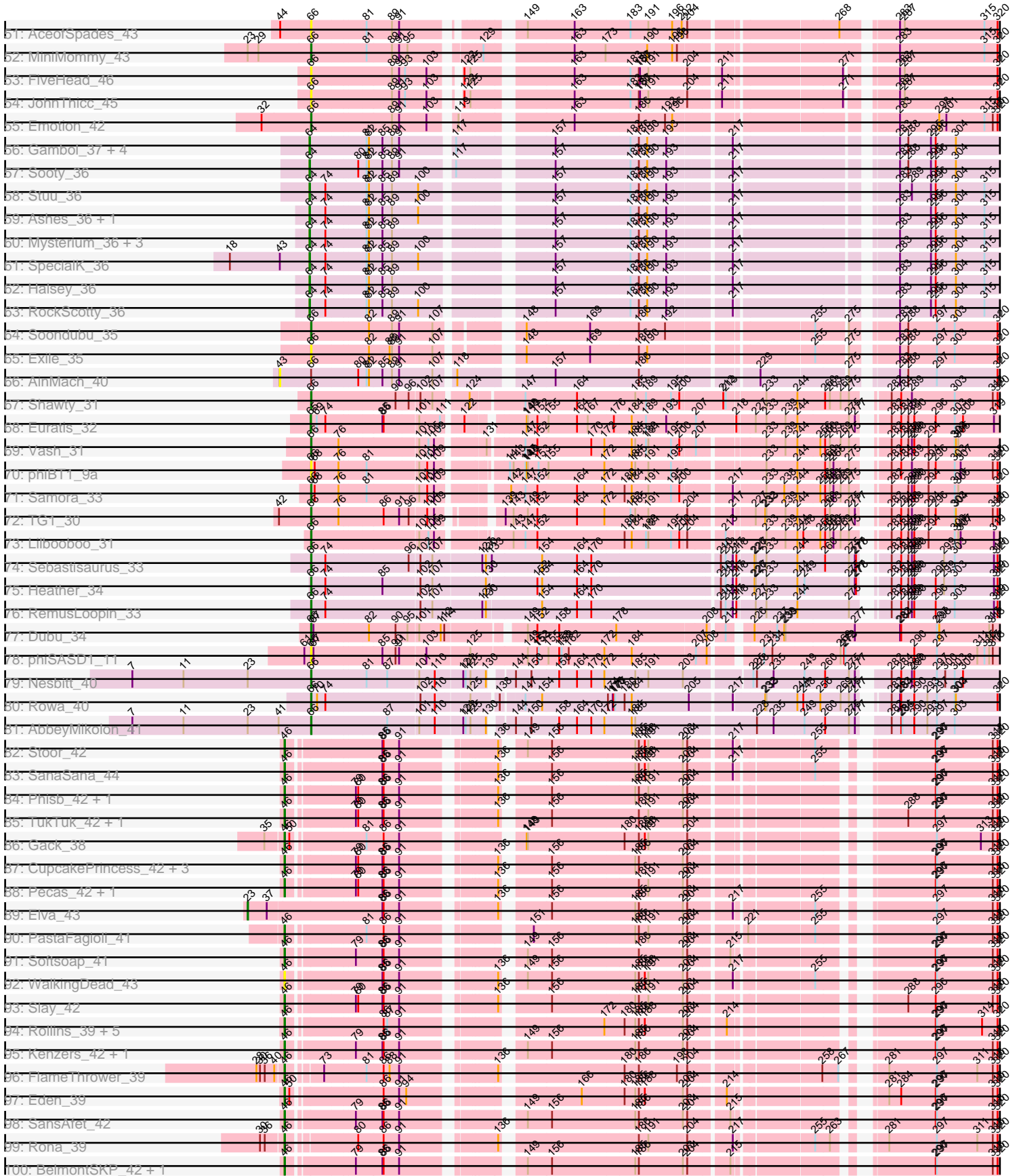
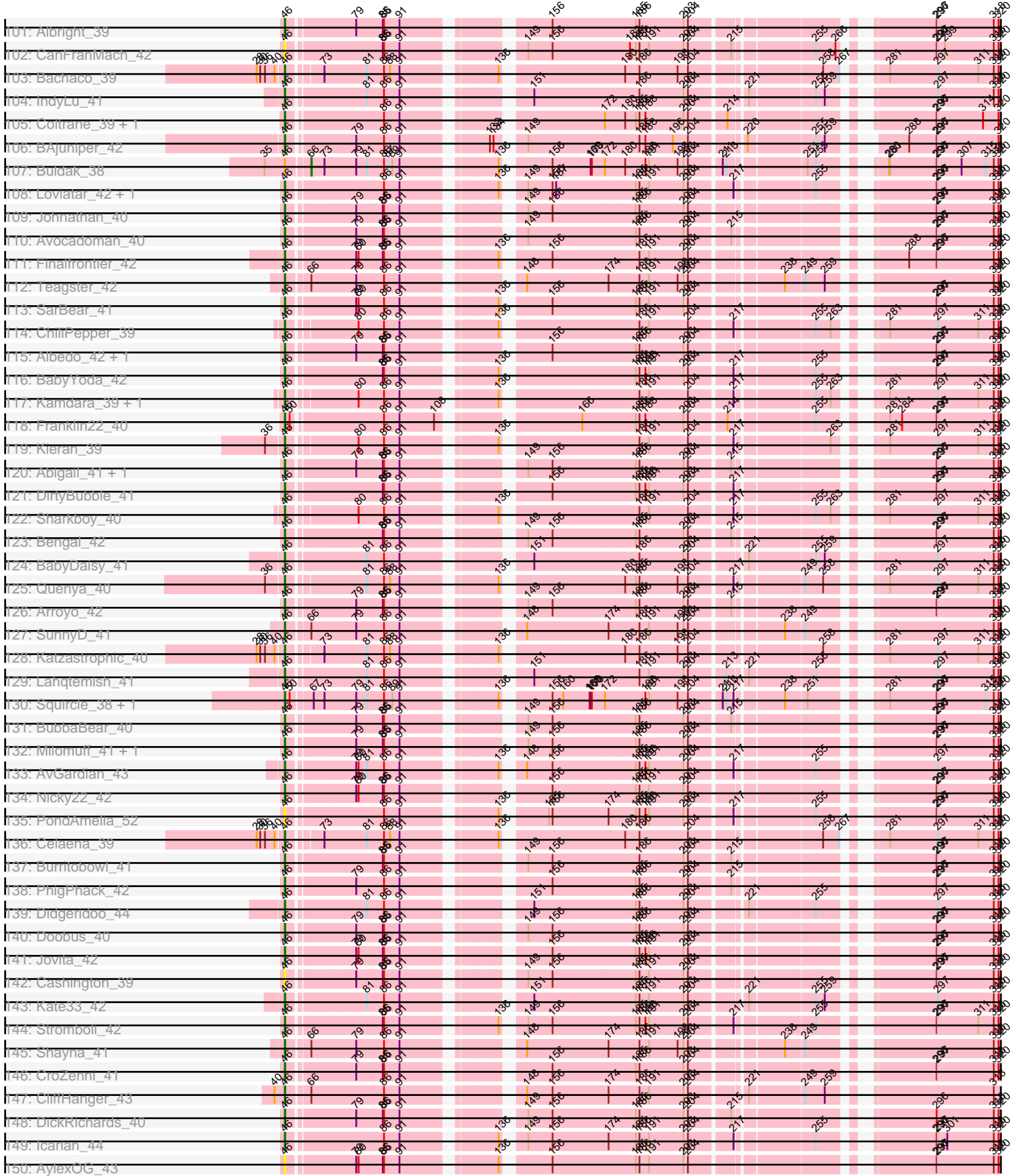




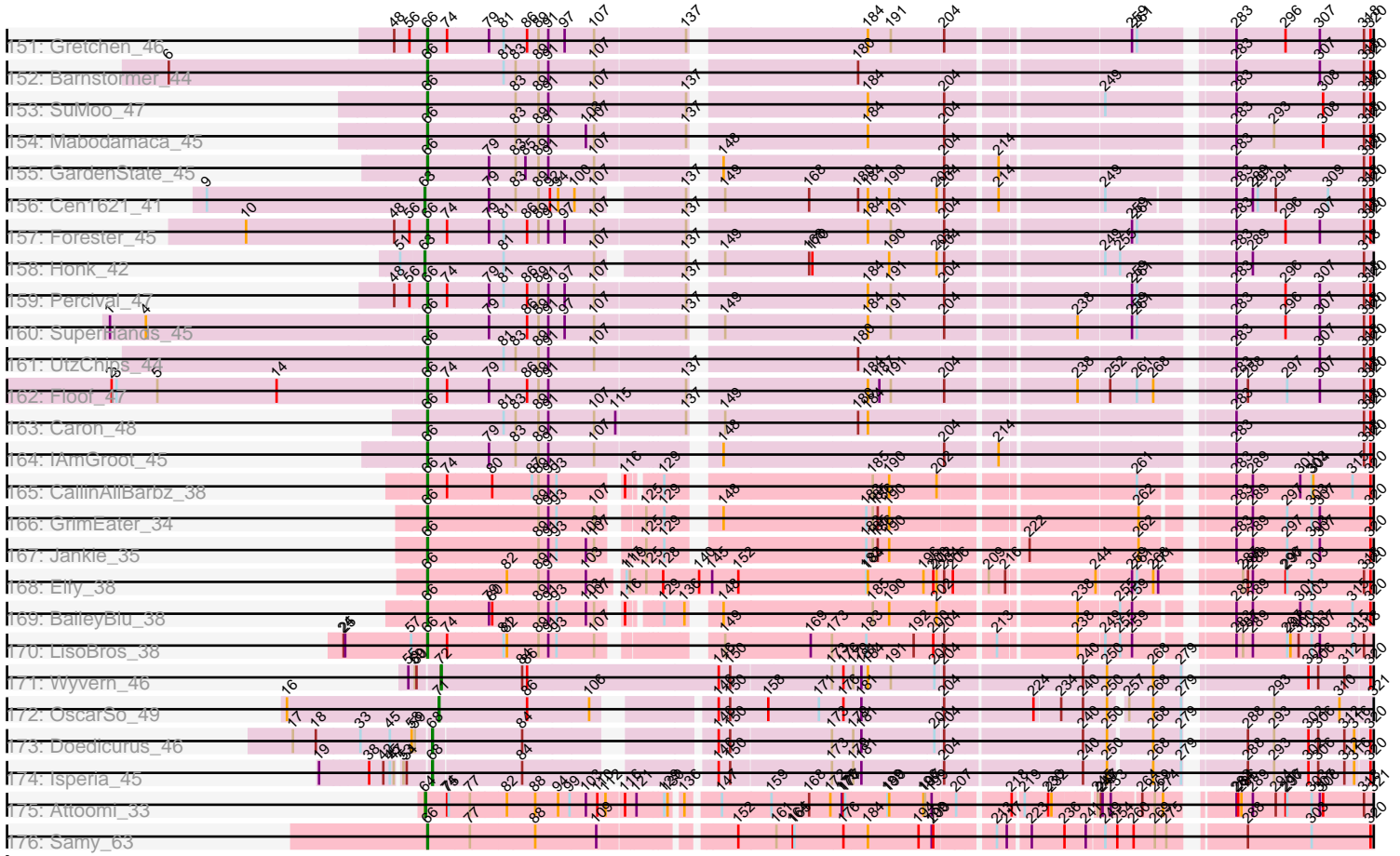
# Zoomed Pham 308045



# Zoomed Pham 308045



# Zoomed Pham 308045



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 308045 Report

This analysis was run 06/27/26 on database version 652.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 308045 has 225 members, 32 are drafts.

Phages represented in each track:

- Track 1 : ThursdayNight\_41
- Track 2 : Michkear\_39
- Track 3 : Tuck\_41
- Track 4 : Lizalica\_36
- Track 5 : Simpson\_40, Cyan\_38, JohnDoe\_38, Flutur\_37, Joemato\_38
- Track 6 : DrSierra\_36
- Track 7 : Powerpuff\_40, YesChef\_38
- Track 8 : Elezi\_37, London\_37, Eraser\_37, Subaru\_38
- Track 9 : Pumpkins\_37
- Track 10 : Ascela\_39
- Track 11 : Asa16\_37, Niobe\_37, Skelbel\_38, Jstan\_39
- Track 12 : Sue2\_38
- Track 13 : Kaylissa\_38, Lego\_38
- Track 14 : Cassia\_37
- Track 15 : Turab\_35, Amploria\_37, AEgle\_35
- Track 16 : Community\_40
- Track 17 : MissSwiss\_37
- Track 18 : Crewmate\_43
- Track 19 : Tutumahutu\_38
- Track 20 : Reedo\_37
- Track 21 : AGrandiflora\_38
- Track 22 : Tbone\_37, Warda\_38
- Track 23 : ObiToo\_43
- Track 24 : Berrie\_39
- Track 25 : Yang\_38
- Track 26 : Janeemi\_40
- Track 27 : IttyBittyPiggy\_38
- Track 28 : Pixelle\_38
- Track 29 : Nitro\_38
- Track 30 : Phives\_40
- Track 31 : PandaPo\_37
- Track 32 : Schaffner\_38
- Track 33 : Wildwest\_37

- Track 34 : KeAlii\_37
- Track 35 : Amyev\_37, Tian\_37
- Track 36 : JuneStar\_39
- Track 37 : Adolin\_37
- Track 38 : Tallboi\_38
- Track 39 : TforTroy\_39
- Track 40 : Adumb2043\_36
- Track 41 : lter\_39
- Track 42 : Mudpuppy\_36
- Track 43 : DrManhattan\_37
- Track 44 : VResidence\_38
- Track 45 : MaGuCo\_37
- Track 46 : Liebe\_39, Maureen\_39, IUFootball\_39
- Track 47 : Snek\_37, Tweety19\_37
- Track 48 : JasmineDragon\_42, ShakeltOph\_42
- Track 49 : VroomVroom\_42
- Track 50 : LadyAstra\_45, Origami\_44
- Track 51 : AceofSpades\_43
- Track 52 : MiniMommy\_43
- Track 53 : FiveHead\_46
- Track 54 : JohnThicc\_45
- Track 55 : Emotion\_42
- Track 56 : Gambol\_37, Kalimba\_36, Cappuccino\_36, Donkey\_36, Sabourin\_36
- Track 57 : Sooty\_36
- Track 58 : Stuu\_36
- Track 59 : Ashes\_36, Moss\_36
- Track 60 : Mysterium\_36, Giorgio\_36, Beaupre\_36, Gumpizza\_36
- Track 61 : SpecialK\_36
- Track 62 : Halsey\_36
- Track 63 : RockScotty\_36
- Track 64 : Soondubu\_35
- Track 65 : Exile\_35
- Track 66 : AinMach\_40
- Track 67 : Shawty\_31
- Track 68 : Euratis\_32
- Track 69 : Vash\_31
- Track 70 : phiBT1\_9a
- Track 71 : Samora\_33
- Track 72 : TG1\_30
- Track 73 : Lilbooboo\_31
- Track 74 : Sebastisaurus\_33
- Track 75 : Heather\_34
- Track 76 : RemusLoopin\_33
- Track 77 : Dubu\_34
- Track 78 : phiSASD1\_11
- Track 79 : Nesbitt\_40
- Track 80 : Rowa\_40
- Track 81 : AbbeyMikolon\_41
- Track 82 : Stoor\_42
- Track 83 : SanaSana\_44
- Track 84 : Phisb\_42, Swervy\_42
- Track 85 : TukTuk\_42, Lilo27\_42
- Track 86 : Gack\_38

- Track 87 : CupcakePrincess\_42, Jabb\_42, Eula\_42, MsUbiquitous\_42
- Track 88 : Pecas\_42, QMacho\_44
- Track 89 : Elva\_43
- Track 90 : PastaFagioli\_41
- Track 91 : Softsoap\_41
- Track 92 : WalkingDead\_43
- Track 93 : Slay\_42
- Track 94 : Rollins\_39, Armstrong\_39, Skylord\_39, Bernstein\_39, Clayda5\_40, Vitas\_39
- Track 95 : Kenzers\_42, Lynlen\_42
- Track 96 : FlameThrower\_39
- Track 97 : Eden\_39
- Track 98 : SansAfet\_42
- Track 99 : Rona\_39
- Track 100 : BelmontSKP\_42, AnnaLie\_42
- Track 101 : Albright\_39
- Track 102 : CanFranMach\_42
- Track 103 : Bachaco\_39
- Track 104 : IndyLu\_41
- Track 105 : Coltrane\_39, Brahms\_39
- Track 106 : BAjuniper\_42
- Track 107 : Buldak\_38
- Track 108 : Loviatar\_42, Akino08\_42
- Track 109 : Johnathan\_40
- Track 110 : Avocadoman\_40
- Track 111 : Finalfrontier\_42
- Track 112 : Teagster\_42
- Track 113 : SarBear\_41
- Track 114 : ChiliPepper\_39
- Track 115 : Albedo\_42, SirBeanington\_41
- Track 116 : BabyYoda\_42
- Track 117 : Kamdara\_39, Dismas\_39
- Track 118 : Franklin22\_40
- Track 119 : Kieran\_39
- Track 120 : Abigail\_41, LimaBean\_41
- Track 121 : DirtyBubble\_41
- Track 122 : Sharkboy\_40
- Track 123 : Bengal\_42
- Track 124 : BabyDaisy\_41
- Track 125 : Quenya\_40
- Track 126 : Arroyo\_42
- Track 127 : SunnyD\_41
- Track 128 : Katzastrophic\_40
- Track 129 : Lahqtemish\_41
- Track 130 : Squirrel\_38, Olliecat\_38
- Track 131 : BubbaBear\_40
- Track 132 : Milomuff\_41, Solea\_42
- Track 133 : AvGardian\_43
- Track 134 : Nicky22\_42
- Track 135 : PondAmelia\_52
- Track 136 : Celaena\_39
- Track 137 : Burritobowl\_41
- Track 138 : PhigPhack\_42

- Track 139 : Didgeridoo\_44
- Track 140 : Doobus\_40
- Track 141 : Jovita\_42
- Track 142 : Cashington\_39
- Track 143 : Kate33\_42
- Track 144 : Stromboli\_42
- Track 145 : Shayna\_41
- Track 146 : CroZenni\_41
- Track 147 : CliffHanger\_43
- Track 148 : DickRichards\_40
- Track 149 : Icarian\_44
- Track 150 : AylexOG\_43
- Track 151 : Gretchen\_46
- Track 152 : Barnstormer\_44
- Track 153 : SuMoo\_47
- Track 154 : Mabodamaca\_45
- Track 155 : GardenState\_45
- Track 156 : Cen1621\_41
- Track 157 : Forester\_45
- Track 158 : Honk\_42
- Track 159 : Percival\_47
- Track 160 : SuperHands\_45
- Track 161 : UtzChips\_44
- Track 162 : Floof\_47
- Track 163 : Caron\_48
- Track 164 : IAmGroot\_45
- Track 165 : CallinAllBarbz\_38
- Track 166 : GrimEater\_34
- Track 167 : Jankie\_35
- Track 168 : Elfy\_38
- Track 169 : BaileyBlu\_38
- Track 170 : LisoBros\_38
- Track 171 : Wyvern\_46
- Track 172 : OscarSo\_49
- Track 173 : Doedicurus\_46
- Track 174 : Isperia\_45
- Track 175 : Attoomi\_33
- Track 176 : Samy\_63

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

The start number called the most often in the published annotations is 66, it was called in 85 of the 193 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AEgle\_35, AGrandiflora\_38, AbbeyMikolon\_41, AceofSpades\_43, Adolin\_37, Adumb2043\_36, Amploria\_37, Amyev\_37, Asa16\_37, BaileyBlu\_38, Barnstormer\_44, Berrie\_39, Buldak\_38, CallinAllBarbz\_38, Caron\_48, Cassia\_37, Community\_40, Crewmate\_43, Cyan\_38, DrManhattan\_37, DrSierra\_36, Dubu\_34, Elezi\_37, Elfy\_38, Emotion\_42, Eraser\_37, Exile\_35, FiveHead\_46, Floof\_47, Flutur\_37, Forester\_45,

GardenState\_45, Gretchen\_46, GrimEater\_34, Heather\_34, IAmGroot\_45, IUFootball\_39, IttyBittyPiggy\_38, Janeemi\_40, Jankie\_35, JasmineDragon\_42, Joemato\_38, JohnDoe\_38, JohnThicc\_45, Jstan\_39, JuneStar\_39, Kaylissa\_38, LadyAstra\_45, Lego\_38, Liebe\_39, Lilbooboo\_31, LisoBros\_38, Lizalica\_36, London\_37, MaGuCo\_37, Mabodamaca\_45, Maureen\_39, Michkear\_39, MiniMommy\_43, MissSwiss\_37, Mudpuppy\_36, Nesbitt\_40, Niobe\_37, Nitro\_38, ObiToo\_43, Origami\_44, PandaPo\_37, Percival\_47, Phives\_40, Pixelle\_38, Powerpuff\_40, Pumpkins\_37, Reedo\_37, RemusLoopin\_33, Rowa\_40, Samora\_33, Samy\_63, Schaffner\_38, Sebastisaurus\_33, ShakeltOph\_42, Shawty\_31, Simpson\_40, Skelbel\_38, Snek\_37, Soondubu\_35, SuMoo\_47, Subaru\_38, SuperHands\_45, TG1\_30, Tallboi\_38, Tbone\_37, TforTroy\_39, ThursdayNight\_41, Tian\_37, Tuck\_41, Turab\_35, Tutumahutu\_38, Tweety19\_37, UtzChips\_44, VResidence\_38, Vash\_31, VroomVroom\_42, Warda\_38, Wildwest\_37, Yang\_38, YesChef\_38, phiBT1\_9a, phiSASD1\_11,

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

- AinMach\_40, CliffHanger\_43, Shayna\_41, SunnyD\_41, Teagster\_42,

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

- Abigail\_41, Akino08\_42, Albedo\_42, Albright\_39, AnnaLie\_42, Armstrong\_39, Arroyo\_42, Ascela\_39, Ashes\_36, Attoomi\_33, AvGardian\_43, Avocadoman\_40, AylexOG\_43, BAjuniper\_42, BabyDaisy\_41, BabyYoda\_42, Bachaco\_39, Beaupre\_36, BelmontSKP\_42, Bengal\_42, Bernstein\_39, Brahms\_39, BubbaBear\_40, Burritobowl\_41, CanFranMach\_42, Cappuccino\_36, Cashington\_39, Celaena\_39, Cen1621\_41, ChiliPepper\_39, Clayda5\_40, Coltrane\_39, CroZenni\_41, CupcakePrincess\_42, DickRichards\_40, Didgeridoo\_44, DirtyBubble\_41, Dismas\_39, Doedicurus\_46, Donkey\_36, Doobus\_40, Eden\_39, Elva\_43, Eula\_42, Euratis\_32, Finalfrontier\_42, FlameThrower\_39, Franklin22\_40, Gack\_38, Gambol\_37, Giorgio\_36, Gumpizza\_36, Halsey\_36, Honk\_42, Icarian\_44, IndyLu\_41, Isperia\_45, Iter\_39, Jabb\_42, Johnathan\_40, Jovita\_42, Kalimba\_36, Kamdara\_39, Kate33\_42, Katzastrophic\_40, KeAlii\_37, Kenzers\_42, Kieran\_39, Lahqtemish\_41, Lilo27\_42, LimaBean\_41, Loviatar\_42, Lynlen\_42, Milomuff\_41, Moss\_36, MsUbiquitous\_42, Mysterium\_36, Nicky22\_42, Olliecat\_38, OscarSo\_49, PastaFagioli\_41, Pecas\_42, PhigPhack\_42, Phisb\_42, PondAmelia\_52, QMacho\_44, Quenya\_40, RockScotty\_36, Rollins\_39, Rona\_39, Sabourin\_36, SanaSana\_44, SansAfet\_42, SarBear\_41, Sharkboy\_40, SirBeanington\_41, Skylord\_39, Slay\_42, Softsoap\_41, Solea\_42, Sooty\_36, SpecialK\_36, Squircle\_38, Stoor\_42, Stromboli\_42, Stuu\_36, Sue2\_38, Swervy\_42, TukTuk\_42, Vitas\_39, WalkingDead\_43, Wyvern\_46,

### Summary by start number:

Start 23:

- Found in 6 of 225 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 193
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Elva\_43 (EB),

Start 43:

- Found in 4 of 225 ( 1.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: AinMach\_40 (AZ7),

Start 46:

- Found in 88 of 225 ( 39.1% ) of genes in pham
- Manual Annotations of this start: 79 of 193
- Called 98.9% of time when present
- Phage (with cluster) where this start called: Abigail\_41 (EB), Akino08\_42 (EB), Albedo\_42 (EB), Albright\_39 (EB), AnnaLie\_42 (EB), Armstrong\_39 (EB), Arroyo\_42 (EB), AvGardian\_43 (EB), Avocadoman\_40 (EB), AylexOG\_43 (EB), BAjuniper\_42 (EB), BabyDaisy\_41 (EB), BabyYoda\_42 (EB), Bachaco\_39 (EB), BelmontSKP\_42 (EB), Bengal\_42 (EB), Bernstein\_39 (EB), Brahms\_39 (EB), BubbaBear\_40 (EB), Burritobowl\_41 (EB), CanFranMach\_42 (EB), Cashington\_39 (EB), Celaena\_39 (EB), ChiliPepper\_39 (EB), Clayda5\_40 (EB), CliffHanger\_43 (EB), Coltrane\_39 (EB), CroZenni\_41 (EB), CupcakePrincess\_42 (EB), DickRichards\_40 (EB), Didgeridoo\_44 (EB), DirtyBubble\_41 (EB), Dismas\_39 (EB), Doobus\_40 (EB), Eden\_39 (EB), Eula\_42 (EB), Finalfrontier\_42 (EB), FlameThrower\_39 (EB), Franklin22\_40 (EB), Gack\_38 (EB), Icarian\_44 (EB), IndyLu\_41 (EB), Jabb\_42 (EB), Johnathan\_40 (EB), Jovita\_42 (EB), Kamdara\_39 (EB), Kate33\_42 (EB), Katzastrophic\_40 (EB), Kenzers\_42 (EB), Kieran\_39 (EB), Lahqtemish\_41 (EB), Lilo27\_42 (EB), LimaBean\_41 (EB), Loviatar\_42 (EB), Lynlen\_42 (EB), Milomuff\_41 (EB), MsUbiquitous\_42 (EB), Nicky22\_42 (EB), Olliecat\_38 (EB), PastaFagioli\_41 (EB), Pecas\_42 (EB), PhigPhack\_42 (EB), Phisb\_42 (EB), PondAmelia\_52 (EB), QMacho\_44 (EB), Quenya\_40 (EB), Rollins\_39 (EB), Rona\_39 (EB), SanaSana\_44 (EB), SansAfet\_42 (EB), SarBear\_41 (EB), Sharkboy\_40 (EB), Shayna\_41 (EB), SirBeanington\_41 (EB), Skylord\_39 (EB), Slay\_42 (EB), Softsoap\_41 (EB), Solea\_42 (EB), Squircle\_38 (EB), Stoor\_42 (EB), Stromboli\_42 (EB), SunnyD\_41 (EB), Swervy\_42 (EB), Teagster\_42 (EB), TukTuk\_42 (EB), Vitas\_39 (EB), WalkingDead\_43 (EB),

Start 62:

- Found in 2 of 225 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 193
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ascela\_39 (AZ1), Iter\_39 (AZ1),

Start 63:

- Found in 2 of 225 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 193
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cen1621\_41 (EH), Honk\_42 (EH),

Start 64:

- Found in 19 of 225 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 19 of 193
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashes\_36 (AZ5), Attoomi\_33 (singleton), Beaupre\_36 (AZ5), Cappuccino\_36 (AZ5), Donkey\_36 (AZ5), Gambol\_37 (AZ5), Giorgio\_36 (AZ5), Gumpizza\_36 (AZ5), Halsey\_36 (AZ5), Kalimba\_36 (AZ5), Kealii\_37 (AZ1), Moss\_36 (AZ5), Mysterium\_36 (AZ5), RockScotty\_36 (AZ5), Sabourin\_36 (AZ5), Sooty\_36 (AZ5), SpecialK\_36 (AZ5), Stuu\_36 (AZ5), Sue2\_38 (AZ1),

Start 65:

- Found in 1 of 225 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 193

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Euratis\_32 (BB1),

#### Start 66:

- Found in 113 of 225 ( 50.2% ) of genes in pham
- Manual Annotations of this start: 85 of 193
- Called 95.6% of time when present
- Phage (with cluster) where this start called: AEgle\_35 (AZ1), AGrandiflora\_38 (AZ1), AbbeyMikolon\_41 (BL), AceofSpades\_43 (AZ4), Adolin\_37 (AZ1), Adumb2043\_36 (AZ1), Amploria\_37 (AZ1), Amyev\_37 (AZ1), Asa16\_37 (AZ1), BaileyBlu\_38 (FP), Barnstormer\_44 (EH), Berrie\_39 (AZ1), Buldak\_38 (EB), CallinAllBarbz\_38 (FP), Caron\_48 (EH), Cassia\_37 (AZ1), Community\_40 (AZ1), Crewmate\_43 (AZ1), Cyan\_38 (AZ1), DrManhattan\_37 (AZ1), DrSierra\_36 (AZ1), Dubu\_34 (BJ), Elezi\_37 (AZ1), Elfy\_38 (FP), Emotion\_42 (AZ4), Eraser\_37 (AZ1), Exile\_35 (AZ6), FiveHead\_46 (AZ4), Floof\_47 (EH), Flutur\_37 (AZ), Forester\_45 (EH), GardenState\_45 (EH), Gretchen\_46 (EH), GrimEater\_34 (FP), Heather\_34 (BB2), IAmGroot\_45 (EH), IUFootball\_39 (AZ2), IttyBittyPiggy\_38 (AZ1), Janeemi\_40 (AZ1), Jankie\_35 (FP), JasmineDragon\_42 (AZ4), Joemato\_38 (AZ1), JohnDoe\_38 (AZ1), JohnThicc\_45 (AZ4), Jstan\_39 (AZ1), JuneStar\_39 (AZ1), Kaylissa\_38 (AZ1), LadyAstra\_45 (AZ4), Lego\_38 (AZ1), Liebe\_39 (AZ2), Lilbooboo\_31 (BB1), LisoBros\_38 (FP), Lizalica\_36 (AZ1), London\_37 (AZ1), MaGuCo\_37 (AZ2), Mabodamaca\_45 (EH), Maureen\_39 (AZ2), Michkear\_39 (AZ), MiniMommy\_43 (AZ4), MissSwiss\_37 (AZ1), Mudpuppy\_36 (AZ1), Nesbitt\_40 (BL), Niobe\_37 (AZ1), Nitro\_38 (AZ1), ObiToo\_43 (AZ1), Origami\_44 (AZ4), PandaPo\_37 (AZ1), Percival\_47 (EH), Phives\_40 (AZ1), Pixelle\_38 (AZ1), Powerpuff\_40 (AZ1), Pumpkins\_37 (AZ1), Reedo\_37 (AZ1), RemusLoopin\_33 (BB2), Rowa\_40 (BL), Samora\_33 (BB1), Samy\_63 (singleton), Schaffner\_38 (AZ1), Sebastisaurus\_33 (BB2), ShakeltOph\_42 (AZ4), Shawty\_31 (BB1), Simpson\_40 (AZ1), Skelbel\_38 (AZ1), Snek\_37 (AZ3), Soondubu\_35 (AZ6), SuMoo\_47 (EH), Subaru\_38 (AZ1), SuperHands\_45 (EH), TG1\_30 (BB1), Tallboi\_38 (AZ1), Tbone\_37 (AZ1), TforTroy\_39 (AZ1), ThursdayNight\_41 (AZ), Tian\_37 (AZ1), Tuck\_41 (AZ1), Turab\_35 (AZ1), Tutumahutu\_38 (AZ1), Tweety19\_37 (AZ3), UtzChips\_44 (EH), VResidence\_38 (AZ1), Vash\_31 (BB1), VroomVroom\_42 (AZ4), Warda\_38 (AZ1), Wildwest\_37 (AZ1), Yang\_38 (AZ1), YesChef\_38 (AZ1), phiBT1\_9a (BB1), phiSASD1\_11 (BJ),

#### Start 68:

- Found in 4 of 225 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 2 of 193
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Doedicurus\_46 (GJ), Isperia\_45 (GJ),

#### Start 71:

- Found in 1 of 225 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 193
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OscarSo\_49 (GJ),

#### Start 72:

- Found in 1 of 225 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 193
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wyvern\_46 (GJ),

## Summary by clusters:

There are 17 clusters represented in this pham: FP, singleton, AZ3, EH, BL, AZ6, BB2, GJ, EB, BJ, AZ1, AZ2, AZ, AZ4, AZ5, BB1, AZ7,

Info for manual annotations of cluster AZ1:

- Start number 62 was manually annotated 2 times for cluster AZ1.
- Start number 64 was manually annotated 2 times for cluster AZ1.
- Start number 66 was manually annotated 42 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 66 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 66 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 66 was manually annotated 5 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 64 was manually annotated 16 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 66 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster BB1:

- Start number 65 was manually annotated 1 time for cluster BB1.
- Start number 66 was manually annotated 5 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 66 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster BJ:

- Start number 66 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster BL:

- Start number 66 was manually annotated 3 times for cluster BL.

Info for manual annotations of cluster EB:

- Start number 23 was manually annotated 1 time for cluster EB.
- Start number 46 was manually annotated 79 times for cluster EB.
- Start number 66 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster EH:

- Start number 63 was manually annotated 2 times for cluster EH.
- Start number 66 was manually annotated 12 times for cluster EH.

Info for manual annotations of cluster FP:

- Start number 66 was manually annotated 6 times for cluster FP.

Info for manual annotations of cluster GJ:

- Start number 68 was manually annotated 2 times for cluster GJ.
- Start number 71 was manually annotated 1 time for cluster GJ.
- Start number 72 was manually annotated 1 time for cluster GJ.

**Gene Information:**

Gene: AEgle\_35 Start: 25989, Stop: 28502, Start Num: 66

Candidate Starts for AEgle\_35:

(Start: 66 @25989 has 85 MA's), (82, 26124), (89, 26181), (91, 26199), (186, 26721), (202, 26829), (206, 26850), (270, 27180), (283, 27285), (297, 27378), (320, 27531), (350, 27750), (353, 27780), (361, 27837), (367, 27882), (372, 27939), (378, 28008), (383, 28053), (385, 28068), (389, 28089), (403, 28161), (417, 28197),

Gene: AGrandiflora\_38 Start: 26644, Stop: 29136, Start Num: 66

Candidate Starts for AGrandiflora\_38:

(Start: 66 @26644 has 85 MA's), (80, 26755), (81, 26773), (89, 26836), (91, 26854), (157, 27169), (168, 27253), (170, 27259), (186, 27376), (193, 27445), (202, 27484), (217, 27586), (283, 27931), (296, 28021), (320, 28177), (350, 28396), (353, 28426), (361, 28483), (365, 28522), (383, 28699), (417, 28843), (439, 28963), (472, 29065),

Gene: AbbeyMikolon\_41 Start: 26828, Stop: 29296, Start Num: 66

Candidate Starts for AbbeyMikolon\_41:

(7, 26378), (11, 26507), (Start: 23 @26669 has 1 MA's), (41, 26747), (Start: 66 @26828 has 85 MA's), (87, 27011), (101, 27083), (110, 27122), (121, 27188), (123, 27194), (125, 27206), (130, 27242), (144, 27284), (150, 27323), (158, 27392), (164, 27437), (170, 27473), (172, 27506), (184, 27569), (185, 27578), (228, 27866), (235, 27908), (249, 27983), (260, 28034), (275, 28094), (277, 28109), (282, 28157), (284, 28181), (285, 28184), (290, 28214), (293, 28247), (297, 28271), (303, 28316), (323, 28436), (330, 28481), (337, 28538), (350, 28643), (353, 28673), (359, 28715), (361, 28730), (366, 28772), (373, 28838), (381, 28934), (383, 28946), (406, 29051), (430, 29177), (446, 29234), (448, 29240), (449, 29255), (450, 29261),

Gene: Abigail\_41 Start: 26823, Stop: 29288, Start Num: 46

Candidate Starts for Abigail\_41:

(Start: 46 @26823 has 79 MA's), (79, 26973), (85, 27039), (86, 27042), (91, 27081), (149, 27318), (156, 27378), (185, 27582), (186, 27591), (203, 27702), (204, 27708), (215, 27795), (296, 28200), (297, 28203), (318, 28344), (320, 28356), (353, 28605), (367, 28707), (378, 28833), (383, 28878), (401, 28977), (440, 29163), (453, 29220),

Gene: AceofSpades\_43 Start: 27772, Stop: 30264, Start Num: 66

Candidate Starts for AceofSpades\_43:

(44, 27700), (Start: 66 @27772 has 85 MA's), (81, 27901), (89, 27964), (91, 27982), (149, 28207), (163, 28324), (183, 28459), (191, 28504), (196, 28564), (202, 28588), (204, 28597), (268, 28933), (283, 29044), (287, 29056), (315, 29257), (320, 29290), (323, 29302), (349, 29506), (353, 29539), (361, 29596), (377, 29764), (391, 29854), (402, 29914),

Gene: Adolin\_37 Start: 24838, Stop: 27351, Start Num: 66

Candidate Starts for Adolin\_37:

(13, 24559), (20, 24649), (26, 24700), (Start: 66 @24838 has 85 MA's), (82, 24973), (89, 25030), (91, 25048), (148, 25291), (183, 25549), (186, 25570), (193, 25639), (196, 25654), (202, 25678), (283, 26134), (288, 26155), (320, 26380), (350, 26599), (353, 26629), (361, 26686), (372, 26788), (378,

26857), (385, 26917), (389, 26938), (403, 27010), (417, 27046),

Gene: Adumb2043\_36 Start: 26008, Stop: 28521, Start Num: 66

Candidate Starts for Adumb2043\_36:

(Start: 66 @26008 has 85 MA's), (82, 26143), (89, 26200), (91, 26218), (157, 26533), (186, 26740), (202, 26848), (206, 26869), (270, 27199), (283, 27304), (297, 27397), (320, 27550), (350, 27769), (353, 27799), (361, 27856), (372, 27958), (378, 28027), (383, 28072), (385, 28087), (389, 28108), (403, 28180), (417, 28216),

Gene: AinMach\_40 Start: 27212, Stop: 29776, Start Num: 43

Candidate Starts for AinMach\_40:

(43, 27212), (Start: 66 @27281 has 85 MA's), (80, 27392), (81, 27410), (82, 27416), (85, 27449), (89, 27473), (91, 27491), (107, 27575), (118, 27614), (157, 27812), (186, 28019), (229, 28280), (275, 28484), (283, 28574), (288, 28595), (297, 28667), (320, 28820), (322, 28829), (330, 28877), (338, 28946), (350, 29039), (353, 29069), (355, 29081), (361, 29126), (367, 29171), (372, 29228), (389, 29378), (417, 29486), (451, 29654),

Gene: Akino08\_42 Start: 29043, Stop: 31517, Start Num: 46

Candidate Starts for Akino08\_42:

(Start: 46 @29043 has 79 MA's), (86, 29262), (91, 29301), (136, 29502), (149, 29538), (156, 29598), (157, 29607), (185, 29802), (186, 29811), (191, 29835), (203, 29922), (204, 29928), (217, 30021), (255, 30195), (296, 30420), (297, 30423), (318, 30564), (320, 30576), (330, 30633), (353, 30825), (357, 30849), (367, 30927), (378, 31053), (379, 31071), (383, 31098), (401, 31197), (439, 31380), (440, 31383), (453, 31440), (474, 31497),

Gene: Albedo\_42 Start: 27429, Stop: 29894, Start Num: 46

Candidate Starts for Albedo\_42:

(Start: 46 @27429 has 79 MA's), (79, 27579), (85, 27645), (86, 27648), (91, 27687), (156, 27984), (185, 28188), (186, 28197), (203, 28308), (204, 28314), (296, 28806), (297, 28809), (318, 28950), (320, 28962), (326, 29010), (330, 29019), (343, 29139), (353, 29211), (367, 29313), (378, 29439), (383, 29484), (401, 29583), (408, 29616), (440, 29769), (453, 29826),

Gene: Albright\_39 Start: 26317, Stop: 28821, Start Num: 46

Candidate Starts for Albright\_39:

(Start: 46 @26317 has 79 MA's), (79, 26467), (85, 26533), (86, 26536), (91, 26575), (156, 26872), (185, 27076), (186, 27085), (203, 27196), (204, 27202), (296, 27694), (297, 27697), (318, 27838), (320, 27850), (326, 27898), (330, 27907), (353, 28099), (367, 28201), (378, 28327), (383, 28372), (401, 28471), (440, 28657), (453, 28714), (466, 28750), (470, 28762), (471, 28765), (478, 28786),

Gene: Amploria\_37 Start: 26191, Stop: 28704, Start Num: 66

Candidate Starts for Amploria\_37:

(Start: 66 @26191 has 85 MA's), (82, 26326), (89, 26383), (91, 26401), (186, 26923), (202, 27031), (206, 27052), (270, 27382), (283, 27487), (297, 27580), (320, 27733), (350, 27952), (353, 27982), (361, 28039), (367, 28084), (372, 28141), (378, 28210), (383, 28255), (385, 28270), (389, 28291), (403, 28363), (417, 28399),

Gene: Amyev\_37 Start: 27537, Stop: 30023, Start Num: 66

Candidate Starts for Amyev\_37:

(Start: 66 @27537 has 85 MA's), (80, 27648), (81, 27666), (89, 27729), (91, 27747), (157, 28062), (183, 28248), (186, 28269), (193, 28338), (200, 28371), (283, 28824), (320, 29070), (350, 29289), (353, 29319), (361, 29376), (365, 29415), (372, 29478), (383, 29592),

Gene: AnnaLie\_42 Start: 27434, Stop: 29899, Start Num: 46

Candidate Starts for AnnaLie\_42:

(Start: 46 @27434 has 79 MA's), (79, 27584), (85, 27650), (86, 27653), (91, 27692), (149, 27929), (156, 27989), (185, 28193), (186, 28202), (203, 28313), (204, 28319), (215, 28406), (296, 28811), (297, 28814), (318, 28955), (320, 28967), (343, 29144), (349, 29183), (353, 29216), (367, 29318), (378, 29444), (383, 29489), (401, 29588), (408, 29621), (440, 29774), (453, 29831),

Gene: Armstrong\_39 Start: 24974, Stop: 27445, Start Num: 46

Candidate Starts for Armstrong\_39:

(Start: 46 @24974 has 79 MA's), (86, 25190), (87, 25199), (91, 25229), (172, 25658), (180, 25703), (185, 25730), (186, 25739), (188, 25754), (203, 25850), (204, 25856), (214, 25934), (296, 26348), (297, 26351), (314, 26465), (320, 26504), (329, 26558), (343, 26681), (349, 26720), (350, 26723), (353, 26753), (357, 26777), (367, 26855), (416, 27179), (440, 27320), (453, 27377), (455, 27383), (459, 27410),

Gene: Arroyo\_42 Start: 27533, Stop: 30007, Start Num: 46

Candidate Starts for Arroyo\_42:

(Start: 46 @27533 has 79 MA's), (79, 27683), (85, 27749), (86, 27752), (91, 27791), (149, 28028), (156, 28088), (185, 28292), (186, 28301), (203, 28412), (204, 28418), (215, 28505), (296, 28910), (297, 28913), (318, 29054), (320, 29066), (353, 29315), (367, 29417), (378, 29543), (383, 29588), (401, 29687), (408, 29720), (440, 29873), (474, 29987),

Gene: Asa16\_37 Start: 27577, Stop: 30066, Start Num: 66

Candidate Starts for Asa16\_37:

(21, 27424), (Start: 66 @27577 has 85 MA's), (81, 27706), (89, 27769), (91, 27787), (116, 27898), (148, 28030), (184, 28291), (186, 28309), (193, 28378), (200, 28411), (202, 28417), (283, 28864), (320, 29110), (350, 29329), (353, 29359), (361, 29416), (365, 29455), (372, 29518), (383, 29632), (389, 29668), (420, 29794),

Gene: Ascela\_39 Start: 26765, Stop: 29260, Start Num: 62

Candidate Starts for Ascela\_39:

(Start: 62 @26765 has 2 MA's), (80, 26879), (81, 26897), (89, 26960), (91, 26978), (157, 27293), (186, 27500), (193, 27569), (202, 27608), (206, 27629), (283, 28055), (297, 28148), (320, 28301), (350, 28520), (353, 28550), (361, 28607), (367, 28652), (372, 28709), (383, 28823), (439, 29087),

Gene: Ashes\_36 Start: 24929, Stop: 27454, Start Num: 64

Candidate Starts for Ashes\_36:

(Start: 64 @24929 has 19 MA's), (74, 24968), (81, 25061), (82, 25067), (85, 25100), (89, 25124), (100, 25187), (157, 25460), (183, 25643), (186, 25664), (190, 25685), (193, 25733), (217, 25874), (283, 26225), (295, 26303), (296, 26315), (304, 26366), (315, 26438), (333, 26561), (340, 26603), (353, 26720), (355, 26732), (357, 26744), (358, 26759), (361, 26777), (366, 26819), (372, 26879), (403, 27101), (418, 27137),

Gene: Attoomi\_33 Start: 24351, Stop: 26792, Start Num: 64

Candidate Starts for Attoomi\_33:

(Start: 64 @24351 has 19 MA's), (74, 24390), (75, 24393), (77, 24429), (82, 24489), (88, 24540), (94, 24582), (99, 24603), (103, 24630), (110, 24651), (112, 24666), (116, 24696), (121, 24714), (129, 24762), (130, 24768), (136, 24783), (147, 24834), (159, 24924), (168, 24993), (172, 25032), (175, 25050), (176, 25053), (177, 25056), (189, 25131), (190, 25134), (196, 25197), (197, 25200), (199, 25212), (207, 25251), (218, 25332), (219, 25347), (230, 25389), (232, 25395), (245, 25458), (246, 25464), (247, 25467), (253, 25482), (264, 25530), (269, 25551), (274, 25563), (283, 25644), (284, 25647), (286, 25653), (289, 25674), (294, 25716), (296, 25734), (297, 25737), (303, 25782), (307, 25797), (308, 25803), (318, 25878), (321, 25896), (325, 25929), (330, 25947), (332, 25953), (337, 26004), (339, 26019), (344, 26082), (345, 26085), (349, 26109), (351, 26136), (353, 26142), (356,

26157), (361, 26199), (363, 26232), (367, 26247), (369, 26262), (370, 26271), (383, 26415), (390, 26454), (393, 26469), (411, 26538), (421, 26598), (426, 26625), (430, 26652), (436, 26670), (440, 26685), (445, 26703), (454, 26745),

Gene: AvGardian\_43 Start: 27441, Stop: 29900, Start Num: 46

Candidate Starts for AvGardian\_43:

(Start: 46 @27441 has 79 MA's), (79, 27591), (80, 27597), (81, 27618), (86, 27660), (91, 27699), (136, 27900), (148, 27933), (156, 27996), (185, 28200), (186, 28209), (188, 28224), (191, 28233), (203, 28320), (204, 28326), (217, 28419), (255, 28593), (297, 28821), (318, 28962), (320, 28974), (322, 28983), (326, 29022), (330, 29031), (353, 29223), (367, 29325), (378, 29451), (381, 29484), (383, 29496), (392, 29544), (412, 29640), (439, 29778), (440, 29781), (452, 29835), (453, 29841),

Gene: Avocadoman\_40 Start: 26554, Stop: 29028, Start Num: 46

Candidate Starts for Avocadoman\_40:

(Start: 46 @26554 has 79 MA's), (79, 26704), (85, 26770), (86, 26773), (91, 26812), (149, 27049), (185, 27313), (186, 27322), (203, 27433), (204, 27439), (215, 27526), (296, 27931), (297, 27934), (318, 28075), (320, 28087), (353, 28336), (367, 28438), (378, 28564), (383, 28609), (401, 28708), (408, 28741), (440, 28894), (474, 29008),

Gene: AylexOG\_43 Start: 27508, Stop: 29973, Start Num: 46

Candidate Starts for AylexOG\_43:

(Start: 46 @27508 has 79 MA's), (79, 27658), (80, 27664), (85, 27724), (86, 27727), (91, 27766), (136, 27967), (156, 28063), (185, 28267), (186, 28276), (191, 28300), (203, 28387), (204, 28393), (296, 28885), (297, 28888), (318, 29029), (320, 29041), (330, 29098), (343, 29218), (353, 29290), (367, 29392), (378, 29518), (383, 29563), (401, 29662), (440, 29848),

Gene: BAjuniper\_42 Start: 28374, Stop: 30821, Start Num: 46

Candidate Starts for BAjuniper\_42:

(Start: 46 @28374 has 79 MA's), (79, 28518), (86, 28587), (91, 28626), (132, 28806), (134, 28815), (149, 28863), (186, 29136), (188, 29151), (196, 29220), (204, 29253), (220, 29364), (255, 29520), (259, 29541), (288, 29670), (296, 29739), (297, 29742), (320, 29895), (322, 29904), (329, 29949), (350, 30114), (353, 30144), (357, 30168), (367, 30246), (368, 30249), (383, 30417), (392, 30465), (397, 30495), (416, 30561), (430, 30660), (439, 30699), (440, 30702),

Gene: BabyDaisy\_41 Start: 27358, Stop: 29862, Start Num: 46

Candidate Starts for BabyDaisy\_41:

(Start: 46 @27358 has 79 MA's), (81, 27535), (86, 27577), (91, 27616), (151, 27868), (186, 28126), (203, 28237), (204, 28243), (221, 28357), (255, 28510), (259, 28531), (297, 28738), (318, 28879), (320, 28891), (353, 29140), (367, 29242), (378, 29368), (383, 29413), (408, 29545), (440, 29707), (469, 29812), (477, 29836),

Gene: BabyYoda\_42 Start: 28160, Stop: 30634, Start Num: 46

Candidate Starts for BabyYoda\_42:

(Start: 46 @28160 has 79 MA's), (85, 28376), (86, 28379), (91, 28418), (136, 28619), (185, 28919), (186, 28928), (188, 28943), (191, 28952), (203, 29039), (204, 29045), (217, 29138), (255, 29312), (296, 29537), (297, 29540), (318, 29681), (320, 29693), (326, 29741), (330, 29750), (352, 29939), (353, 29942), (357, 29966), (367, 30044), (378, 30170), (379, 30188), (383, 30215), (401, 30314), (439, 30497), (440, 30500), (453, 30557), (474, 30614),

Gene: Bachaco\_39 Start: 28143, Stop: 30599, Start Num: 46

Candidate Starts for Bachaco\_39:

(28, 28080), (30, 28089), (36, 28101), (40, 28125), (Start: 46 @28143 has 79 MA's), (73, 28215), (81, 28314), (86, 28356), (88, 28371), (91, 28395), (136, 28596), (180, 28869), (186, 28905), (198, 29001),

(204, 29022), (258, 29307), (267, 29346), (281, 29397), (297, 29517), (311, 29619), (318, 29658), (320, 29670), (326, 29718), (330, 29727), (343, 29847), (353, 29919), (357, 29943), (367, 30021), (378, 30147), (381, 30180), (383, 30192), (392, 30240), (412, 30336), (424, 30393), (430, 30435), (439, 30474), (440, 30477), (474, 30579),

Gene: BaileyBlu\_38 Start: 26104, Stop: 28566, Start Num: 66

Candidate Starts for BaileyBlu\_38:

(Start: 66 @26104 has 85 MA's), (79, 26209), (80, 26215), (89, 26296), (91, 26314), (93, 26329), (103, 26383), (107, 26398), (116, 26425), (129, 26467), (136, 26503), (148, 26536), (185, 26806), (190, 26836), (202, 26923), (238, 27136), (255, 27208), (259, 27229), (283, 27370), (289, 27400), (301, 27487), (303, 27508), (315, 27583), (320, 27616), (337, 27730), (349, 27832), (353, 27865), (357, 27889), (361, 27922), (372, 28024), (383, 28138), (410, 28270), (419, 28300), (435, 28387), (449, 28444), (451, 28450), (463, 28480),

Gene: Barnstormer\_44 Start: 27928, Stop: 30438, Start Num: 66

Candidate Starts for Barnstormer\_44:

(6, 27463), (Start: 66 @27928 has 85 MA's), (81, 28057), (83, 28078), (89, 28120), (91, 28138), (107, 28219), (180, 28645), (283, 29245), (307, 29398), (318, 29479), (320, 29491), (350, 29710), (353, 29740), (355, 29752), (361, 29797), (390, 30052), (410, 30148),

Gene: Beaupre\_36 Start: 24930, Stop: 27455, Start Num: 64

Candidate Starts for Beaupre\_36:

(Start: 64 @24930 has 19 MA's), (74, 24969), (81, 25062), (82, 25068), (85, 25101), (89, 25125), (157, 25461), (183, 25644), (186, 25665), (190, 25686), (193, 25734), (217, 25875), (283, 26226), (295, 26304), (296, 26316), (304, 26367), (315, 26439), (333, 26562), (340, 26604), (353, 26721), (355, 26733), (358, 26760), (361, 26778), (366, 26820), (372, 26880), (403, 27102), (418, 27138),

Gene: BelmontSKP\_42 Start: 27434, Stop: 29899, Start Num: 46

Candidate Starts for BelmontSKP\_42:

(Start: 46 @27434 has 79 MA's), (79, 27584), (85, 27650), (86, 27653), (91, 27692), (149, 27929), (156, 27989), (185, 28193), (186, 28202), (203, 28313), (204, 28319), (215, 28406), (296, 28811), (297, 28814), (318, 28955), (320, 28967), (343, 29144), (349, 29183), (353, 29216), (367, 29318), (378, 29444), (383, 29489), (401, 29588), (408, 29621), (440, 29774), (453, 29831),

Gene: Bengal\_42 Start: 27078, Stop: 29552, Start Num: 46

Candidate Starts for Bengal\_42:

(Start: 46 @27078 has 79 MA's), (85, 27294), (86, 27297), (91, 27336), (149, 27573), (156, 27633), (185, 27837), (186, 27846), (203, 27957), (204, 27963), (215, 28050), (296, 28455), (297, 28458), (318, 28599), (320, 28611), (343, 28788), (349, 28827), (353, 28860), (367, 28962), (378, 29088), (383, 29133), (401, 29232), (408, 29265), (440, 29418), (474, 29532),

Gene: Bernstein\_39 Start: 25056, Stop: 27527, Start Num: 46

Candidate Starts for Bernstein\_39:

(Start: 46 @25056 has 79 MA's), (86, 25272), (87, 25281), (91, 25311), (172, 25740), (180, 25785), (185, 25812), (186, 25821), (188, 25836), (203, 25932), (204, 25938), (214, 26016), (296, 26430), (297, 26433), (314, 26547), (320, 26586), (329, 26640), (343, 26763), (349, 26802), (350, 26805), (353, 26835), (357, 26859), (367, 26937), (416, 27261), (440, 27402), (453, 27459), (455, 27465), (459, 27492),

Gene: Berrie\_39 Start: 27509, Stop: 29992, Start Num: 66

Candidate Starts for Berrie\_39:

(43, 27440), (Start: 66 @27509 has 85 MA's), (70, 27524), (80, 27620), (81, 27638), (89, 27701), (91, 27719), (186, 28235), (193, 28304), (202, 28343), (221, 28466), (283, 28790), (307, 28943), (320,

29036), (350, 29255), (353, 29285), (361, 29342), (372, 29444), (381, 29546), (417, 29702), (433, 29804), (451, 29870),

Gene: Brahms\_39 Start: 24976, Stop: 27447, Start Num: 46

Candidate Starts for Brahms\_39:

(Start: 46 @24976 has 79 MA's), (86, 25192), (91, 25231), (172, 25660), (180, 25705), (185, 25732), (186, 25741), (188, 25756), (203, 25852), (204, 25858), (214, 25936), (296, 26350), (297, 26353), (314, 26467), (320, 26506), (329, 26560), (343, 26683), (349, 26722), (350, 26725), (353, 26755), (357, 26779), (367, 26857), (416, 27181), (440, 27322), (453, 27379), (455, 27385), (459, 27412),

Gene: BubbaBear\_40 Start: 27007, Stop: 29481, Start Num: 46

Candidate Starts for BubbaBear\_40:

(Start: 46 @27007 has 79 MA's), (79, 27157), (85, 27223), (86, 27226), (91, 27265), (149, 27502), (156, 27562), (185, 27766), (186, 27775), (203, 27886), (204, 27892), (215, 27979), (296, 28384), (297, 28387), (318, 28528), (320, 28540), (343, 28717), (349, 28756), (353, 28789), (367, 28891), (378, 29017), (383, 29062), (401, 29161), (408, 29194), (440, 29347), (474, 29461),

Gene: Buldak\_38 Start: 25620, Stop: 28046, Start Num: 66

Candidate Starts for Buldak\_38:

(35, 25518), (Start: 46 @25569 has 79 MA's), (Start: 66 @25620 has 85 MA's), (73, 25653), (79, 25725), (81, 25752), (86, 25794), (87, 25803), (89, 25815), (91, 25833), (136, 26034), (156, 26130), (169, 26226), (170, 26229), (172, 26262), (180, 26307), (188, 26358), (191, 26367), (198, 26439), (203, 26454), (204, 26460), (211, 26526), (213, 26535), (251, 26706), (255, 26727), (280, 26832), (281, 26835), (296, 26952), (297, 26955), (307, 27015), (315, 27075), (318, 27096), (320, 27108), (322, 27117), (330, 27165), (335, 27210), (352, 27354), (353, 27357), (367, 27459), (378, 27585), (381, 27618), (424, 27831), (430, 27873), (440, 27915), (447, 27939), (455, 27981),

Gene: Burritobowl\_41 Start: 27008, Stop: 29482, Start Num: 46

Candidate Starts for Burritobowl\_41:

(Start: 46 @27008 has 79 MA's), (85, 27224), (86, 27227), (91, 27266), (149, 27503), (156, 27563), (186, 27776), (203, 27887), (204, 27893), (215, 27980), (296, 28385), (297, 28388), (318, 28529), (320, 28541), (349, 28757), (353, 28790), (367, 28892), (378, 29018), (383, 29063), (401, 29162), (408, 29195), (440, 29348), (474, 29462),

Gene: CallinAllBarbz\_38 Start: 26495, Stop: 28960, Start Num: 66

Candidate Starts for CallinAllBarbz\_38:

(Start: 66 @26495 has 85 MA's), (74, 26531), (80, 26606), (87, 26675), (89, 26687), (91, 26705), (93, 26720), (116, 26816), (129, 26858), (185, 27197), (190, 27227), (202, 27314), (261, 27629), (283, 27761), (289, 27791), (301, 27878), (303, 27899), (304, 27902), (315, 27974), (320, 28007), (349, 28223), (353, 28256), (357, 28280), (361, 28313), (372, 28415), (410, 28661), (419, 28691), (435, 28778), (451, 28841),

Gene: CanFranMach\_42 Start: 27056, Stop: 29524, Start Num: 46

Candidate Starts for CanFranMach\_42:

(Start: 46 @27056 has 79 MA's), (85, 27272), (86, 27275), (91, 27314), (149, 27551), (156, 27611), (182, 27800), (185, 27815), (186, 27824), (191, 27848), (203, 27935), (204, 27941), (215, 28028), (255, 28208), (266, 28256), (296, 28433), (297, 28436), (299, 28454), (318, 28577), (320, 28589), (323, 28601), (353, 28838), (367, 28940), (378, 29066), (383, 29111), (392, 29159), (404, 29225), (424, 29312), (439, 29393), (440, 29396),

Gene: Cappuccino\_36 Start: 24796, Stop: 27324, Start Num: 64

Candidate Starts for Cappuccino\_36:

(Start: 64 @24796 has 19 MA's), (81, 24928), (82, 24934), (85, 24967), (89, 24991), (91, 25009), (117, 25123), (157, 25327), (183, 25510), (186, 25531), (190, 25552), (193, 25600), (217, 25741), (283, 26092), (288, 26113), (295, 26170), (296, 26182), (304, 26233), (333, 26428), (353, 26587), (355, 26599), (358, 26626), (361, 26644), (366, 26686), (372, 26746), (402, 26962), (403, 26968), (418, 27004), (460, 27217),

Gene: Caron\_48 Start: 29297, Stop: 31807, Start Num: 66

Candidate Starts for Caron\_48:

(Start: 66 @29297 has 85 MA's), (81, 29426), (83, 29447), (89, 29489), (91, 29507), (107, 29588), (115, 29627), (137, 29744), (149, 29777), (180, 30014), (184, 30032), (283, 30614), (318, 30848), (320, 30860), (350, 31079), (353, 31109), (355, 31121), (361, 31166), (390, 31421), (410, 31517),

Gene: Cashington\_39 Start: 26357, Stop: 28861, Start Num: 46

Candidate Starts for Cashington\_39:

(Start: 46 @26357 has 79 MA's), (79, 26507), (85, 26573), (86, 26576), (91, 26615), (149, 26852), (156, 26912), (185, 27116), (186, 27125), (191, 27149), (203, 27236), (204, 27242), (296, 27734), (297, 27737), (318, 27878), (320, 27890), (326, 27938), (330, 27947), (343, 28067), (353, 28139), (367, 28241), (378, 28367), (383, 28412), (401, 28511), (440, 28697), (453, 28754), (466, 28790), (470, 28802), (471, 28805), (478, 28826),

Gene: Cassia\_37 Start: 26416, Stop: 28902, Start Num: 66

Candidate Starts for Cassia\_37:

(Start: 66 @26416 has 85 MA's), (80, 26527), (89, 26608), (91, 26626), (152, 26896), (163, 26989), (168, 27025), (183, 27127), (185, 27139), (186, 27148), (190, 27169), (202, 27256), (283, 27703), (297, 27796), (300, 27817), (320, 27949), (350, 28168), (353, 28198), (361, 28255), (383, 28471), (433, 28717), (451, 28783),

Gene: Celaena\_39 Start: 27885, Stop: 30341, Start Num: 46

Candidate Starts for Celaena\_39:

(28, 27822), (30, 27831), (36, 27843), (40, 27867), (Start: 46 @27885 has 79 MA's), (73, 27957), (81, 28056), (86, 28098), (88, 28113), (91, 28137), (136, 28338), (180, 28611), (186, 28647), (204, 28764), (258, 29049), (267, 29088), (281, 29139), (297, 29259), (311, 29361), (318, 29400), (320, 29412), (326, 29460), (330, 29469), (343, 29589), (353, 29661), (357, 29685), (367, 29763), (378, 29889), (381, 29922), (383, 29934), (392, 29982), (412, 30078), (424, 30135), (430, 30177), (439, 30216), (440, 30219), (474, 30321),

Gene: Cen1621\_41 Start: 26227, Stop: 28716, Start Num: 63

Candidate Starts for Cen1621\_41:

(9, 25831), (Start: 63 @26227 has 2 MA's), (79, 26335), (83, 26380), (89, 26422), (92, 26443), (94, 26458), (100, 26488), (107, 26524), (137, 26647), (149, 26680), (168, 26833), (180, 26917), (184, 26935), (190, 26974), (202, 27061), (204, 27070), (214, 27148), (249, 27319), (283, 27505), (289, 27535), (291, 27544), (294, 27577), (309, 27673), (318, 27739), (320, 27751), (340, 27883), (350, 27970), (353, 28000), (355, 28012), (361, 28057), (373, 28165), (397, 28351), (407, 28396), (467, 28648),

Gene: ChiliPepper\_39 Start: 27515, Stop: 29971, Start Num: 46

Candidate Starts for ChiliPepper\_39:

(Start: 46 @27515 has 79 MA's), (80, 27665), (86, 27728), (91, 27767), (136, 27968), (186, 28277), (191, 28301), (204, 28394), (217, 28487), (255, 28661), (263, 28697), (281, 28769), (297, 28889), (311, 28991), (318, 29030), (320, 29042), (326, 29090), (353, 29291), (367, 29393), (378, 29519), (392, 29612), (401, 29663), (412, 29708), (424, 29765), (440, 29849), (455, 29912),

Gene: Clayda5\_40 Start: 24963, Stop: 27434, Start Num: 46

Candidate Starts for Clayda5\_40:

(Start: 46 @24963 has 79 MA's), (86, 25179), (87, 25188), (91, 25218), (172, 25647), (180, 25692), (185, 25719), (186, 25728), (188, 25743), (203, 25839), (204, 25845), (214, 25923), (296, 26337), (297, 26340), (314, 26454), (320, 26493), (329, 26547), (343, 26670), (349, 26709), (350, 26712), (353, 26742), (357, 26766), (367, 26844), (416, 27168), (440, 27309), (453, 27366), (455, 27372), (459, 27399),

Gene: CliffHanger\_43 Start: 26264, Stop: 28744, Start Num: 46

Candidate Starts for CliffHanger\_43:

(40, 26243), (Start: 46 @26264 has 79 MA's), (Start: 66 @26309 has 85 MA's), (86, 26483), (91, 26522), (148, 26756), (156, 26819), (174, 26957), (186, 27032), (191, 27056), (203, 27143), (204, 27149), (221, 27263), (249, 27389), (259, 27437), (318, 27785), (323, 27809), (329, 27851), (343, 27974), (349, 28013), (353, 28046), (357, 28070), (367, 28148), (378, 28274), (397, 28397), (429, 28559), (430, 28562), (439, 28601), (456, 28679),

Gene: Coltrane\_39 Start: 24976, Stop: 27447, Start Num: 46

Candidate Starts for Coltrane\_39:

(Start: 46 @24976 has 79 MA's), (86, 25192), (91, 25231), (172, 25660), (180, 25705), (185, 25732), (186, 25741), (188, 25756), (203, 25852), (204, 25858), (214, 25936), (296, 26350), (297, 26353), (314, 26467), (320, 26506), (329, 26560), (343, 26683), (349, 26722), (350, 26725), (353, 26755), (357, 26779), (367, 26857), (416, 27181), (440, 27322), (453, 27379), (455, 27385), (459, 27412),

Gene: Community\_40 Start: 28289, Stop: 30775, Start Num: 66

Candidate Starts for Community\_40:

(Start: 66 @28289 has 85 MA's), (80, 28400), (81, 28418), (89, 28481), (91, 28499), (120, 28619), (184, 29000), (186, 29018), (193, 29087), (202, 29126), (283, 29573), (292, 29615), (320, 29819), (350, 30038), (353, 30068), (361, 30125), (372, 30227), (383, 30341), (389, 30377), (451, 30653),

Gene: Crewmate\_43 Start: 27086, Stop: 29578, Start Num: 66

Candidate Starts for Crewmate\_43:

(Start: 66 @27086 has 85 MA's), (80, 27197), (81, 27215), (89, 27278), (91, 27296), (157, 27611), (170, 27701), (183, 27797), (186, 27818), (206, 27947), (283, 28373), (292, 28415), (297, 28466), (307, 28526), (320, 28619), (350, 28838), (353, 28868), (361, 28925), (372, 29027), (383, 29141), (417, 29285), (433, 29387), (451, 29453),

Gene: CroZenni\_41 Start: 26928, Stop: 29402, Start Num: 46

Candidate Starts for CroZenni\_41:

(Start: 46 @26928 has 79 MA's), (79, 27078), (85, 27144), (86, 27147), (91, 27186), (156, 27483), (185, 27687), (186, 27696), (203, 27807), (204, 27813), (296, 28305), (297, 28308), (318, 28449), (320, 28461), (349, 28677), (353, 28710), (367, 28812), (378, 28938), (383, 28983), (401, 29082), (440, 29268), (474, 29382),

Gene: CupcakePrincess\_42 Start: 27123, Stop: 29588, Start Num: 46

Candidate Starts for CupcakePrincess\_42:

(Start: 46 @27123 has 79 MA's), (79, 27273), (80, 27279), (85, 27339), (86, 27342), (91, 27381), (136, 27582), (156, 27678), (185, 27882), (186, 27891), (203, 28002), (204, 28008), (296, 28500), (297, 28503), (318, 28644), (320, 28656), (326, 28704), (330, 28713), (343, 28833), (353, 28905), (367, 29007), (378, 29133), (383, 29178), (401, 29277), (440, 29463),

Gene: Cyan\_38 Start: 26699, Stop: 29191, Start Num: 66

Candidate Starts for Cyan\_38:

(Start: 66 @26699 has 85 MA's), (80, 26810), (81, 26828), (89, 26891), (91, 26909), (148, 27152), (157, 27224), (168, 27308), (170, 27314), (186, 27431), (193, 27500), (202, 27539), (217, 27641),

(283, 27986), (296, 28076), (320, 28232), (350, 28451), (353, 28481), (361, 28538), (365, 28577), (372, 28640), (383, 28754), (417, 28898), (439, 29018),

Gene: DickRichards\_40 Start: 27367, Stop: 29841, Start Num: 46

Candidate Starts for DickRichards\_40:

(Start: 46 @27367 has 79 MA's), (79, 27517), (85, 27583), (86, 27586), (91, 27625), (149, 27862), (156, 27922), (185, 28126), (186, 28135), (203, 28246), (204, 28252), (215, 28339), (296, 28744), (318, 28888), (320, 28900), (349, 29116), (353, 29149), (367, 29251), (378, 29377), (383, 29422), (401, 29521), (440, 29707), (474, 29821),

Gene: Didgeridoo\_44 Start: 27725, Stop: 30208, Start Num: 46

Candidate Starts for Didgeridoo\_44:

(Start: 46 @27725 has 79 MA's), (81, 27902), (86, 27944), (91, 27983), (151, 28235), (185, 28484), (186, 28493), (203, 28604), (204, 28610), (221, 28724), (255, 28877), (297, 29105), (318, 29246), (320, 29258), (353, 29507), (367, 29609), (378, 29735), (383, 29780), (399, 29864), (401, 29879), (408, 29912),

Gene: DirtyBubble\_41 Start: 27828, Stop: 30302, Start Num: 46

Candidate Starts for DirtyBubble\_41:

(Start: 46 @27828 has 79 MA's), (85, 28044), (86, 28047), (91, 28086), (156, 28383), (185, 28587), (186, 28596), (188, 28611), (191, 28620), (203, 28707), (204, 28713), (217, 28806), (296, 29205), (297, 29208), (318, 29349), (320, 29361), (330, 29418), (353, 29610), (367, 29712), (378, 29838), (379, 29856), (383, 29883), (401, 29982), (439, 30165), (440, 30168), (453, 30225), (474, 30282),

Gene: Dismas\_39 Start: 27468, Stop: 29924, Start Num: 46

Candidate Starts for Dismas\_39:

(Start: 46 @27468 has 79 MA's), (80, 27618), (86, 27681), (91, 27720), (136, 27921), (186, 28230), (191, 28254), (204, 28347), (217, 28440), (255, 28614), (263, 28650), (281, 28722), (297, 28842), (311, 28944), (318, 28983), (320, 28995), (326, 29043), (330, 29052), (353, 29244), (357, 29268), (367, 29346), (378, 29472), (392, 29565), (401, 29616), (412, 29661), (424, 29718), (440, 29802), (455, 29865),

Gene: Doedicurus\_46 Start: 32223, Stop: 29659, Start Num: 68

Candidate Starts for Doedicurus\_46:

(17, 32469), (18, 32427), (33, 32346), (45, 32292), (58, 32253), (59, 32247), (Start: 68 @32223 has 2 MA's), (84, 32067), (146, 31779), (150, 31758), (173, 31581), (179, 31545), (181, 31530), (201, 31398), (204, 31386), (240, 31149), (250, 31107), (268, 31038), (279, 30987), (288, 30906), (293, 30858), (302, 30795), (306, 30777), (312, 30729), (316, 30714), (320, 30690), (327, 30639), (329, 30633), (342, 30531), (345, 30498), (347, 30489), (361, 30384), (374, 30273), (396, 30087), (409, 30012), (413, 29997), (431, 29874), (432, 29868), (438, 29847), (457, 29754), (481, 29676),

Gene: Donkey\_36 Start: 24786, Stop: 27314, Start Num: 64

Candidate Starts for Donkey\_36:

(Start: 64 @24786 has 19 MA's), (81, 24918), (82, 24924), (85, 24957), (89, 24981), (91, 24999), (117, 25113), (157, 25317), (183, 25500), (186, 25521), (190, 25542), (193, 25590), (217, 25731), (283, 26082), (288, 26103), (295, 26160), (296, 26172), (304, 26223), (333, 26418), (353, 26577), (355, 26589), (358, 26616), (361, 26634), (366, 26676), (372, 26736), (402, 26952), (403, 26958), (418, 26994), (460, 27207),

Gene: Doobus\_40 Start: 26721, Stop: 29225, Start Num: 46

Candidate Starts for Doobus\_40:

(Start: 46 @26721 has 79 MA's), (79, 26871), (85, 26937), (86, 26940), (91, 26979), (149, 27216), (156, 27276), (185, 27480), (186, 27489), (203, 27600), (204, 27606), (296, 28098), (297, 28101),

(318, 28242), (320, 28254), (353, 28503), (367, 28605), (378, 28731), (383, 28776), (401, 28875), (440, 29061), (453, 29118), (466, 29154), (470, 29166), (471, 29169), (478, 29190),

Gene: DrManhattan\_37 Start: 24828, Stop: 27341, Start Num: 66

Candidate Starts for DrManhattan\_37:

(Start: 66 @24828 has 85 MA's), (82, 24963), (89, 25020), (91, 25038), (148, 25281), (183, 25539), (186, 25560), (193, 25629), (196, 25644), (202, 25668), (283, 26124), (288, 26145), (320, 26370), (350, 26589), (353, 26619), (361, 26676), (372, 26778), (378, 26847), (385, 26907), (389, 26928), (403, 27000), (417, 27036),

Gene: DrSierra\_36 Start: 24809, Stop: 27304, Start Num: 66

Candidate Starts for DrSierra\_36:

(Start: 66 @24809 has 85 MA's), (81, 24938), (89, 25001), (91, 25019), (103, 25088), (120, 25139), (148, 25259), (186, 25538), (193, 25607), (200, 25640), (221, 25769), (262, 25964), (283, 26102), (288, 26123), (320, 26348), (350, 26567), (353, 26597), (361, 26654), (365, 26693), (372, 26756), (383, 26870),

Gene: Dubu\_34 Start: 24710, Stop: 27175, Start Num: 66

Candidate Starts for Dubu\_34:

(Start: 66 @24710 has 85 MA's), (67, 24716), (82, 24848), (90, 24914), (95, 24941), (101, 24965), (112, 25019), (114, 25028), (149, 25193), (152, 25217), (158, 25271), (178, 25412), (208, 25628), (213, 25661), (226, 25703), (237, 25757), (238, 25775), (239, 25778), (277, 25949), (283, 26063), (284, 26066), (297, 26156), (298, 26162), (317, 26288), (318, 26297), (331, 26369), (334, 26405), (350, 26528), (353, 26558), (366, 26657), (372, 26717), (413, 26963), (444, 27113),

Gene: Eden\_39 Start: 25688, Stop: 28150, Start Num: 46

Candidate Starts for Eden\_39:

(Start: 46 @25688 has 79 MA's), (50, 25700), (86, 25904), (91, 25943), (94, 25961), (166, 26315), (180, 26417), (185, 26444), (186, 26453), (188, 26468), (203, 26564), (204, 26570), (214, 26648), (281, 26945), (284, 26975), (296, 27062), (297, 27065), (318, 27206), (320, 27218), (329, 27272), (350, 27437), (353, 27467), (357, 27491), (367, 27569), (381, 27728), (383, 27740), (392, 27788), (416, 27884), (440, 28025), (455, 28088), (459, 28115),

Gene: Elezi\_37 Start: 27593, Stop: 30082, Start Num: 66

Candidate Starts for Elezi\_37:

(21, 27440), (Start: 66 @27593 has 85 MA's), (81, 27722), (89, 27785), (91, 27803), (116, 27914), (148, 28046), (184, 28307), (186, 28325), (193, 28394), (200, 28427), (202, 28433), (206, 28454), (283, 28880), (320, 29126), (350, 29345), (353, 29375), (361, 29432), (365, 29471), (372, 29534), (383, 29648), (389, 29684), (420, 29810),

Gene: Elfy\_38 Start: 25811, Stop: 28348, Start Num: 66

Candidate Starts for Elfy\_38:

(Start: 66 @25811 has 85 MA's), (82, 25946), (89, 26003), (91, 26021), (103, 26090), (117, 26147), (119, 26153), (125, 26183), (128, 26213), (140, 26276), (145, 26300), (152, 26348), (183, 26579), (184, 26582), (196, 26684), (200, 26702), (202, 26708), (204, 26717), (206, 26729), (209, 26777), (216, 26807), (244, 26954), (259, 27014), (261, 27023), (268, 27053), (271, 27062), (287, 27176), (288, 27185), (289, 27194), (296, 27254), (297, 27257), (303, 27302), (318, 27398), (320, 27410), (323, 27422), (333, 27500), (337, 27524), (350, 27629), (353, 27659), (355, 27671), (361, 27716), (367, 27761), (372, 27818), (381, 27920), (389, 27968), (418, 28079), (430, 28163), (472, 28277),

Gene: Elva\_43 Start: 27927, Stop: 30533, Start Num: 23

Candidate Starts for Elva\_43:

(Start: 23 @27927 has 1 MA's), (37, 27975), (85, 28251), (86, 28254), (91, 28293), (136, 28494), (156, 28590), (185, 28794), (186, 28803), (203, 28914), (204, 28920), (217, 29013), (255, 29187), (297, 29415), (318, 29556), (320, 29568), (326, 29616), (352, 29814), (353, 29817), (357, 29841), (367, 29919), (378, 30045), (383, 30090), (392, 30138), (408, 30222), (440, 30384), (461, 30483), (464, 30486), (472, 30507),

Gene: Emotion\_42 Start: 27485, Stop: 29995, Start Num: 66

Candidate Starts for Emotion\_42:

(32, 27365), (Start: 66 @27485 has 85 MA's), (89, 27677), (91, 27695), (103, 27764), (119, 27815), (163, 28055), (186, 28214), (192, 28280), (196, 28298), (283, 28769), (298, 28868), (301, 28886), (315, 28982), (318, 29003), (320, 29015), (323, 29027), (349, 29231), (353, 29264), (361, 29321), (402, 29639), (410, 29669), (451, 29849),

Gene: Eraser\_37 Start: 27584, Stop: 30073, Start Num: 66

Candidate Starts for Eraser\_37:

(21, 27431), (Start: 66 @27584 has 85 MA's), (81, 27713), (89, 27776), (91, 27794), (116, 27905), (148, 28037), (184, 28298), (186, 28316), (193, 28385), (200, 28418), (202, 28424), (206, 28445), (283, 28871), (320, 29117), (350, 29336), (353, 29366), (361, 29423), (365, 29462), (372, 29525), (383, 29639), (389, 29675), (420, 29801),

Gene: Eula\_42 Start: 27109, Stop: 29574, Start Num: 46

Candidate Starts for Eula\_42:

(Start: 46 @27109 has 79 MA's), (79, 27259), (80, 27265), (85, 27325), (86, 27328), (91, 27367), (136, 27568), (156, 27664), (185, 27868), (186, 27877), (203, 27988), (204, 27994), (296, 28486), (297, 28489), (318, 28630), (320, 28642), (326, 28690), (330, 28699), (343, 28819), (353, 28891), (367, 28993), (378, 29119), (383, 29164), (401, 29263), (440, 29449),

Gene: Euratis\_32 Start: 23230, Stop: 25665, Start Num: 65

Candidate Starts for Euratis\_32:

(Start: 65 @23230 has 1 MA's), (69, 23245), (74, 23266), (85, 23401), (86, 23404), (101, 23485), (111, 23533), (122, 23575), (148, 23692), (149, 23695), (152, 23719), (155, 23746), (164, 23818), (167, 23845), (176, 23908), (184, 23950), (189, 23986), (193, 24037), (207, 24112), (218, 24205), (227, 24247), (233, 24274), (239, 24322), (244, 24349), (275, 24478), (277, 24493), (282, 24532), (284, 24556), (288, 24574), (290, 24589), (296, 24643), (303, 24691), (308, 24712), (319, 24790), (323, 24811), (350, 25021), (353, 25051), (366, 25150), (371, 25198), (380, 25300), (381, 25312), (398, 25405), (405, 25426), (413, 25450), (415, 25453), (425, 25522), (430, 25552), (433, 25567), (448, 25615),

Gene: Exile\_35 Start: 28159, Stop: 30654, Start Num: 66

Candidate Starts for Exile\_35:

(Start: 66 @28159 has 85 MA's), (82, 28294), (88, 28345), (89, 28351), (91, 28369), (107, 28453), (148, 28606), (169, 28765), (186, 28885), (190, 28906), (255, 29278), (275, 29350), (283, 29440), (288, 29461), (297, 29533), (303, 29578), (320, 29686), (330, 29743), (349, 29902), (353, 29935), (361, 29992), (372, 30094), (381, 30196), (383, 30208), (410, 30340), (423, 30394), (451, 30520),

Gene: Finalfrontier\_42 Start: 27968, Stop: 30433, Start Num: 46

Candidate Starts for Finalfrontier\_42:

(Start: 46 @27968 has 79 MA's), (79, 28118), (80, 28124), (85, 28184), (86, 28187), (91, 28226), (136, 28427), (156, 28523), (186, 28736), (191, 28760), (203, 28847), (204, 28853), (288, 29276), (296, 29345), (297, 29348), (318, 29489), (320, 29501), (326, 29549), (330, 29558), (343, 29678), (353, 29750), (367, 29852), (378, 29978), (383, 30023), (401, 30122), (440, 30308),

Gene: FiveHead\_46 Start: 27633, Stop: 30119, Start Num: 66

Candidate Starts for FiveHead\_46:

(Start: 66 @27633 has 85 MA's), (89, 27825), (91, 27843), (93, 27858), (103, 27912), (122, 27954), (125, 27969), (163, 28185), (183, 28323), (186, 28344), (187, 28347), (191, 28368), (204, 28461), (211, 28527), (271, 28806), (283, 28899), (287, 28911), (320, 29145), (349, 29361), (353, 29394), (361, 29451), (378, 29622), (402, 29769), (462, 30021),

Gene: FlameThrower\_39 Start: 27335, Stop: 29791, Start Num: 46

Candidate Starts for FlameThrower\_39:

(28, 27272), (30, 27281), (36, 27293), (40, 27317), (Start: 46 @27335 has 79 MA's), (73, 27407), (81, 27506), (86, 27548), (88, 27563), (91, 27587), (136, 27788), (180, 28061), (186, 28097), (198, 28193), (204, 28214), (258, 28499), (267, 28538), (281, 28589), (297, 28709), (311, 28811), (318, 28850), (320, 28862), (326, 28910), (330, 28919), (343, 29039), (353, 29111), (357, 29135), (367, 29213), (378, 29339), (381, 29372), (383, 29384), (392, 29432), (412, 29528), (430, 29627), (439, 29666), (440, 29669), (474, 29771),

Gene: Floop\_47 Start: 29012, Stop: 31516, Start Num: 66

Candidate Starts for Floop\_47:

(2, 28439), (3, 28448), (5, 28523), (14, 28742), (Start: 66 @29012 has 85 MA's), (74, 29048), (79, 29117), (86, 29183), (89, 29204), (91, 29222), (137, 29462), (184, 29750), (187, 29771), (191, 29792), (204, 29885), (238, 30089), (252, 30143), (261, 30191), (268, 30221), (283, 30332), (288, 30353), (297, 30425), (307, 30485), (318, 30566), (320, 30578), (323, 30590), (329, 30632), (350, 30797), (353, 30827), (355, 30839), (361, 30884), (367, 30929), (374, 30995), (410, 31232), (446, 31388), (467, 31454),

Gene: Flutur\_37 Start: 26957, Stop: 29449, Start Num: 66

Candidate Starts for Flutur\_37:

(Start: 66 @26957 has 85 MA's), (80, 27068), (81, 27086), (89, 27149), (91, 27167), (148, 27410), (157, 27482), (168, 27566), (170, 27572), (186, 27689), (193, 27758), (202, 27797), (217, 27899), (283, 28244), (296, 28334), (320, 28490), (350, 28709), (353, 28739), (361, 28796), (365, 28835), (372, 28898), (383, 29012), (417, 29156), (439, 29276),

Gene: Forester\_45 Start: 29945, Stop: 32449, Start Num: 66

Candidate Starts for Forester\_45:

(10, 29624), (48, 29894), (56, 29918), (Start: 66 @29945 has 85 MA's), (74, 29981), (79, 30050), (81, 30074), (86, 30116), (89, 30137), (91, 30155), (97, 30185), (107, 30239), (137, 30395), (184, 30683), (191, 30725), (204, 30818), (259, 31115), (261, 31124), (283, 31265), (296, 31355), (307, 31418), (318, 31499), (320, 31511), (350, 31730), (353, 31760), (355, 31772), (357, 31784), (361, 31817), (367, 31862), (374, 31928), (446, 32321), (467, 32387),

Gene: Franklin22\_40 Start: 25581, Stop: 28034, Start Num: 46

Candidate Starts for Franklin22\_40:

(Start: 46 @25581 has 79 MA's), (50, 25593), (86, 25797), (91, 25836), (108, 25923), (166, 26208), (185, 26337), (186, 26346), (188, 26361), (203, 26457), (204, 26463), (214, 26541), (255, 26730), (281, 26838), (284, 26868), (296, 26955), (297, 26958), (318, 27099), (320, 27111), (329, 27165), (349, 27327), (350, 27330), (353, 27360), (357, 27384), (367, 27462), (378, 27588), (383, 27633), (390, 27672), (416, 27777), (440, 27918), (455, 27981),

Gene: Gack\_38 Start: 25365, Stop: 27821, Start Num: 46

Candidate Starts for Gack\_38:

(35, 25323), (Start: 46 @25365 has 79 MA's), (50, 25377), (81, 25539), (86, 25581), (91, 25620), (148, 25854), (149, 25857), (180, 26094), (186, 26130), (188, 26145), (191, 26154), (204, 26247), (297, 26742), (313, 26853), (318, 26883), (320, 26895), (329, 26949), (349, 27111), (350, 27114), (353, 27144), (357, 27168), (367, 27246), (381, 27405), (383, 27417), (390, 27456), (405, 27537), (453,

27759),

Gene: Gambol\_37 Start: 24805, Stop: 27333, Start Num: 64

Candidate Starts for Gambol\_37:

(Start: 64 @24805 has 19 MA's), (81, 24937), (82, 24943), (85, 24976), (89, 25000), (91, 25018), (117, 25132), (157, 25336), (183, 25519), (186, 25540), (190, 25561), (193, 25609), (217, 25750), (283, 26101), (288, 26122), (295, 26179), (296, 26191), (304, 26242), (333, 26437), (353, 26596), (355, 26608), (358, 26635), (361, 26653), (366, 26695), (372, 26755), (402, 26971), (403, 26977), (418, 27013), (460, 27226),

Gene: GardenState\_45 Start: 28152, Stop: 30674, Start Num: 66

Candidate Starts for GardenState\_45:

(Start: 66 @28152 has 85 MA's), (79, 28257), (83, 28302), (85, 28320), (89, 28344), (91, 28362), (107, 28446), (148, 28632), (204, 29025), (214, 29103), (283, 29472), (318, 29706), (320, 29718), (350, 29937), (353, 29967), (355, 29979), (361, 30024), (410, 30375), (449, 30549),

Gene: Giorgio\_36 Start: 24913, Stop: 27438, Start Num: 64

Candidate Starts for Giorgio\_36:

(Start: 64 @24913 has 19 MA's), (74, 24952), (81, 25045), (82, 25051), (85, 25084), (89, 25108), (157, 25444), (183, 25627), (186, 25648), (190, 25669), (193, 25717), (217, 25858), (283, 26209), (295, 26287), (296, 26299), (304, 26350), (315, 26422), (333, 26545), (340, 26587), (353, 26704), (355, 26716), (358, 26743), (361, 26761), (366, 26803), (372, 26863), (403, 27085), (418, 27121),

Gene: Gretchen\_46 Start: 29630, Stop: 32134, Start Num: 66

Candidate Starts for Gretchen\_46:

(48, 29579), (56, 29603), (Start: 66 @29630 has 85 MA's), (74, 29666), (79, 29735), (81, 29759), (86, 29801), (89, 29822), (91, 29840), (97, 29870), (107, 29924), (137, 30080), (184, 30368), (191, 30410), (204, 30503), (259, 30800), (261, 30809), (283, 30950), (296, 31040), (307, 31103), (318, 31184), (320, 31196), (350, 31415), (353, 31445), (355, 31457), (357, 31469), (361, 31502), (367, 31547), (374, 31613), (446, 32006), (467, 32072),

Gene: GrimEater\_34 Start: 25030, Stop: 27510, Start Num: 66

Candidate Starts for GrimEater\_34:

(Start: 66 @25030 has 85 MA's), (89, 25222), (91, 25240), (93, 25255), (107, 25324), (125, 25378), (129, 25405), (148, 25474), (183, 25732), (185, 25744), (186, 25753), (190, 25774), (262, 26179), (283, 26308), (289, 26338), (297, 26401), (303, 26446), (307, 26461), (320, 26554), (323, 26566), (349, 26770), (353, 26803), (361, 26860), (372, 26962), (381, 27064), (403, 27184), (410, 27208), (435, 27325), (451, 27388), (473, 27445),

Gene: Gumpizza\_36 Start: 24869, Stop: 27394, Start Num: 64

Candidate Starts for Gumpizza\_36:

(Start: 64 @24869 has 19 MA's), (74, 24908), (81, 25001), (82, 25007), (85, 25040), (89, 25064), (157, 25400), (183, 25583), (186, 25604), (190, 25625), (193, 25673), (217, 25814), (283, 26165), (295, 26243), (296, 26255), (304, 26306), (315, 26378), (333, 26501), (340, 26543), (353, 26660), (355, 26672), (358, 26699), (361, 26717), (366, 26759), (372, 26819), (403, 27041), (418, 27077),

Gene: Halsey\_36 Start: 24934, Stop: 27459, Start Num: 64

Candidate Starts for Halsey\_36:

(Start: 64 @24934 has 19 MA's), (74, 24973), (81, 25066), (82, 25072), (85, 25105), (89, 25129), (157, 25465), (183, 25648), (186, 25669), (190, 25690), (193, 25738), (217, 25879), (283, 26230), (295, 26308), (296, 26320), (304, 26371), (315, 26443), (333, 26566), (340, 26608), (353, 26725), (355, 26737), (357, 26749), (358, 26764), (361, 26782), (366, 26824), (372, 26884), (403, 27106), (418, 27142),

Gene: Heather\_34 Start: 24177, Stop: 26735, Start Num: 66

Candidate Starts for Heather\_34:

(Start: 66 @24177 has 85 MA's), (74, 24213), (85, 24348), (102, 24435), (107, 24465), (130, 24588), (152, 24711), (154, 24723), (164, 24810), (170, 24846), (210, 25149), (213, 25161), (217, 25179), (218, 25182), (226, 25221), (227, 25224), (233, 25251), (244, 25326), (249, 25344), (275, 25455), (277, 25470), (278, 25473), (282, 25509), (284, 25533), (288, 25551), (289, 25560), (290, 25566), (296, 25620), (299, 25641), (303, 25668), (319, 25767), (320, 25776), (330, 25833), (350, 25995), (353, 26025), (355, 26037), (359, 26067), (361, 26082), (366, 26124), (372, 26184), (380, 26274), (381, 26286), (388, 26319), (405, 26418), (413, 26442), (415, 26445), (430, 26544), (433, 26559), (443, 26592), (465, 26688),

Gene: Honk\_42 Start: 25280, Stop: 27757, Start Num: 63

Candidate Starts for Honk\_42:

(51, 25241), (Start: 63 @25280 has 2 MA's), (81, 25412), (107, 25574), (137, 25694), (149, 25727), (168, 25880), (170, 25886), (190, 26021), (202, 26108), (204, 26117), (249, 26366), (255, 26393), (283, 26567), (289, 26597), (318, 26801), (330, 26870), (350, 27032), (353, 27062), (355, 27074), (361, 27119), (373, 27227), (397, 27413), (417, 27476), (451, 27647),

Gene: IAmGroot\_45 Start: 28619, Stop: 31141, Start Num: 66

Candidate Starts for IAmGroot\_45:

(Start: 66 @28619 has 85 MA's), (79, 28724), (83, 28769), (89, 28811), (91, 28829), (107, 28913), (148, 29099), (204, 29492), (214, 29570), (283, 29939), (318, 30173), (320, 30185), (350, 30404), (353, 30434), (355, 30446), (361, 30491), (410, 30842), (449, 31016),

Gene: IUFootball\_39 Start: 27757, Stop: 30252, Start Num: 66

Candidate Starts for IUFootball\_39:

(Start: 66 @27757 has 85 MA's), (80, 27868), (82, 27892), (89, 27949), (91, 27967), (93, 27982), (100, 28015), (152, 28231), (180, 28447), (183, 28462), (185, 28474), (186, 28483), (190, 28504), (200, 28585), (217, 28693), (244, 28837), (276, 28966), (287, 29059), (294, 29119), (315, 29260), (333, 29383), (349, 29506), (350, 29509), (353, 29539), (361, 29596), (366, 29638), (372, 29698), (381, 29800), (389, 29848), (418, 29956), (442, 30088), (479, 30205),

Gene: Icarian\_44 Start: 28469, Stop: 30943, Start Num: 46

Candidate Starts for Icarian\_44:

(Start: 46 @28469 has 79 MA's), (86, 28688), (91, 28727), (136, 28928), (149, 28964), (156, 29024), (174, 29162), (185, 29228), (186, 29237), (191, 29261), (203, 29348), (204, 29354), (217, 29447), (255, 29621), (296, 29846), (297, 29849), (301, 29873), (318, 29990), (320, 30002), (330, 30059), (353, 30251), (357, 30275), (367, 30353), (378, 30479), (379, 30497), (383, 30524), (401, 30623), (439, 30806), (440, 30809), (453, 30866), (474, 30923),

Gene: IndyLu\_41 Start: 27325, Stop: 29808, Start Num: 46

Candidate Starts for IndyLu\_41:

(Start: 46 @27325 has 79 MA's), (81, 27502), (86, 27544), (91, 27583), (151, 27835), (186, 28093), (203, 28204), (204, 28210), (221, 28324), (255, 28477), (259, 28498), (297, 28705), (318, 28846), (320, 28858), (353, 29107), (367, 29209), (378, 29335), (383, 29380), (399, 29464), (401, 29479), (408, 29512),

Gene: Iperia\_45 Start: 31317, Stop: 28753, Start Num: 68

Candidate Starts for Iperia\_45:

(19, 31488), (38, 31404), (42, 31380), (45, 31368), (47, 31365), (53, 31359), (54, 31353), (Start: 68 @31317 has 2 MA's), (84, 31161), (146, 30873), (150, 30852), (173, 30675), (179, 30639), (181, 30624), (204, 30480), (240, 30243), (250, 30201), (268, 30132), (279, 30081), (288, 30000), (293,

29952), (302, 29889), (306, 29871), (312, 29823), (316, 29808), (320, 29784), (327, 29733), (329, 29727), (342, 29625), (345, 29592), (347, 29583), (361, 29478), (374, 29367), (396, 29181), (409, 29106), (413, 29091), (431, 28968), (432, 28962), (438, 28941), (457, 28848), (481, 28770),

Gene: Iter\_39 Start: 26762, Stop: 29257, Start Num: 62

Candidate Starts for Iter\_39:

(Start: 62 @26762 has 2 MA's), (80, 26876), (81, 26894), (89, 26957), (91, 26975), (157, 27290), (186, 27497), (193, 27566), (202, 27605), (206, 27626), (283, 28052), (297, 28145), (320, 28298), (350, 28517), (353, 28547), (361, 28604), (365, 28643), (372, 28706), (381, 28808), (383, 28820), (403, 28928), (417, 28964), (439, 29084),

Gene: IttyBittyPiggy\_38 Start: 26195, Stop: 28678, Start Num: 66

Candidate Starts for IttyBittyPiggy\_38:

(34, 26084), (Start: 66 @26195 has 85 MA's), (80, 26306), (81, 26324), (82, 26330), (89, 26387), (91, 26405), (163, 26765), (170, 26807), (183, 26903), (186, 26924), (202, 27032), (206, 27053), (283, 27479), (296, 27569), (320, 27725), (346, 27923), (350, 27944), (353, 27974), (361, 28031), (383, 28247), (433, 28493), (451, 28559),

Gene: Jabb\_42 Start: 27123, Stop: 29588, Start Num: 46

Candidate Starts for Jabb\_42:

(Start: 46 @27123 has 79 MA's), (79, 27273), (80, 27279), (85, 27339), (86, 27342), (91, 27381), (136, 27582), (156, 27678), (185, 27882), (186, 27891), (203, 28002), (204, 28008), (296, 28500), (297, 28503), (318, 28644), (320, 28656), (326, 28704), (330, 28713), (343, 28833), (353, 28905), (367, 29007), (378, 29133), (383, 29178), (401, 29277), (440, 29463),

Gene: Janeemi\_40 Start: 28271, Stop: 30760, Start Num: 66

Candidate Starts for Janeemi\_40:

(31, 28154), (43, 28202), (Start: 66 @28271 has 85 MA's), (81, 28400), (89, 28463), (91, 28481), (186, 29003), (193, 29072), (202, 29111), (217, 29213), (283, 29558), (307, 29711), (320, 29804), (350, 30023), (353, 30053), (361, 30110), (372, 30212), (381, 30314), (417, 30470), (433, 30572), (451, 30638), (476, 30695),

Gene: Jankie\_35 Start: 25211, Stop: 27691, Start Num: 66

Candidate Starts for Jankie\_35:

(Start: 66 @25211 has 85 MA's), (89, 25403), (91, 25421), (93, 25436), (103, 25490), (107, 25505), (125, 25559), (129, 25586), (183, 25913), (185, 25925), (186, 25934), (190, 25955), (222, 26168), (262, 26360), (283, 26489), (289, 26519), (297, 26582), (303, 26627), (307, 26642), (320, 26735), (323, 26747), (349, 26951), (353, 26984), (361, 27041), (372, 27143), (381, 27245), (403, 27365), (410, 27389), (435, 27506), (451, 27569), (473, 27626),

Gene: JasmineDragon\_42 Start: 27490, Stop: 30000, Start Num: 66

Candidate Starts for JasmineDragon\_42:

(Start: 23 @27337 has 1 MA's), (29, 27364), (Start: 66 @27490 has 85 MA's), (81, 27619), (89, 27682), (91, 27700), (129, 27871), (163, 28060), (173, 28138), (190, 28240), (196, 28303), (198, 28315), (283, 28783), (315, 28996), (320, 29029), (349, 29245), (353, 29278), (361, 29335), (372, 29437), (391, 29593), (402, 29653),

Gene: Joemato\_38 Start: 26730, Stop: 29222, Start Num: 66

Candidate Starts for Joemato\_38:

(Start: 66 @26730 has 85 MA's), (80, 26841), (81, 26859), (89, 26922), (91, 26940), (148, 27183), (157, 27255), (168, 27339), (170, 27345), (186, 27462), (193, 27531), (202, 27570), (217, 27672), (283, 28017), (296, 28107), (320, 28263), (350, 28482), (353, 28512), (361, 28569), (365, 28608), (372, 28671), (383, 28785), (417, 28929), (439, 29049),

Gene: JohnDoe\_38 Start: 26722, Stop: 29214, Start Num: 66

Candidate Starts for JohnDoe\_38:

(Start: 66 @26722 has 85 MA's), (80, 26833), (81, 26851), (89, 26914), (91, 26932), (148, 27175), (157, 27247), (168, 27331), (170, 27337), (186, 27454), (193, 27523), (202, 27562), (217, 27664), (283, 28009), (296, 28099), (320, 28255), (350, 28474), (353, 28504), (361, 28561), (365, 28600), (372, 28663), (383, 28777), (417, 28921), (439, 29041),

Gene: JohnThicc\_45 Start: 27633, Stop: 30119, Start Num: 66

Candidate Starts for JohnThicc\_45:

(Start: 66 @27633 has 85 MA's), (89, 27825), (91, 27843), (93, 27858), (103, 27912), (122, 27954), (125, 27969), (163, 28185), (183, 28323), (186, 28344), (187, 28347), (191, 28368), (204, 28461), (211, 28527), (271, 28806), (283, 28899), (287, 28911), (320, 29145), (349, 29361), (353, 29394), (361, 29451), (372, 29553), (378, 29622), (402, 29769), (462, 30021),

Gene: Johnathan\_40 Start: 26360, Stop: 28864, Start Num: 46

Candidate Starts for Johnathan\_40:

(Start: 46 @26360 has 79 MA's), (79, 26510), (85, 26576), (86, 26579), (91, 26618), (149, 26855), (156, 26915), (185, 27119), (186, 27128), (203, 27239), (204, 27245), (296, 27737), (297, 27740), (318, 27881), (320, 27893), (326, 27941), (330, 27950), (343, 28070), (353, 28142), (367, 28244), (378, 28370), (383, 28415), (401, 28514), (408, 28547), (440, 28700), (453, 28757), (466, 28793), (470, 28805), (471, 28808), (478, 28829),

Gene: Jovita\_42 Start: 27138, Stop: 29603, Start Num: 46

Candidate Starts for Jovita\_42:

(Start: 46 @27138 has 79 MA's), (79, 27288), (80, 27294), (85, 27354), (86, 27357), (91, 27396), (156, 27693), (185, 27897), (186, 27906), (188, 27921), (191, 27930), (203, 28017), (204, 28023), (296, 28515), (297, 28518), (318, 28659), (320, 28671), (326, 28719), (330, 28728), (343, 28848), (353, 28920), (367, 29022), (378, 29148), (383, 29193), (401, 29292), (440, 29478),

Gene: Jstan\_39 Start: 27578, Stop: 30067, Start Num: 66

Candidate Starts for Jstan\_39:

(21, 27425), (Start: 66 @27578 has 85 MA's), (81, 27707), (89, 27770), (91, 27788), (116, 27899), (148, 28031), (184, 28292), (186, 28310), (193, 28379), (200, 28412), (202, 28418), (283, 28865), (320, 29111), (350, 29330), (353, 29360), (361, 29417), (365, 29456), (372, 29519), (383, 29633), (389, 29669), (420, 29795),

Gene: JuneStar\_39 Start: 28323, Stop: 30806, Start Num: 66

Candidate Starts for JuneStar\_39:

(Start: 66 @28323 has 85 MA's), (80, 28434), (89, 28515), (91, 28533), (93, 28548), (129, 28704), (168, 28929), (186, 29052), (190, 29073), (206, 29181), (283, 29607), (320, 29853), (346, 30051), (350, 30072), (353, 30102), (361, 30159), (372, 30261), (382, 30366),

Gene: Kalimba\_36 Start: 24783, Stop: 27311, Start Num: 64

Candidate Starts for Kalimba\_36:

(Start: 64 @24783 has 19 MA's), (81, 24915), (82, 24921), (85, 24954), (89, 24978), (91, 24996), (117, 25110), (157, 25314), (183, 25497), (186, 25518), (190, 25539), (193, 25587), (217, 25728), (283, 26079), (288, 26100), (295, 26157), (296, 26169), (304, 26220), (333, 26415), (353, 26574), (355, 26586), (358, 26613), (361, 26631), (366, 26673), (372, 26733), (402, 26949), (403, 26955), (418, 26991), (460, 27204),

Gene: Kamdara\_39 Start: 27473, Stop: 29929, Start Num: 46

Candidate Starts for Kamdara\_39:

(Start: 46 @27473 has 79 MA's), (80, 27623), (86, 27686), (91, 27725), (136, 27926), (186, 28235), (191, 28259), (204, 28352), (217, 28445), (255, 28619), (263, 28655), (281, 28727), (297, 28847), (311, 28949), (318, 28988), (320, 29000), (326, 29048), (330, 29057), (353, 29249), (357, 29273), (367, 29351), (378, 29477), (392, 29570), (401, 29621), (412, 29666), (424, 29723), (440, 29807), (455, 29870),

Gene: Kate33\_42 Start: 27049, Stop: 29553, Start Num: 46

Candidate Starts for Kate33\_42:

(Start: 46 @27049 has 79 MA's), (81, 27226), (86, 27268), (91, 27307), (151, 27559), (185, 27808), (186, 27817), (191, 27841), (203, 27928), (204, 27934), (221, 28048), (255, 28201), (259, 28222), (297, 28429), (318, 28570), (320, 28582), (353, 28831), (367, 28933), (378, 29059), (383, 29104), (399, 29188), (401, 29203), (408, 29236), (469, 29503), (477, 29527),

Gene: Katzastrophic\_40 Start: 27464, Stop: 29920, Start Num: 46

Candidate Starts for Katzastrophic\_40:

(28, 27401), (30, 27410), (36, 27422), (40, 27446), (Start: 46 @27464 has 79 MA's), (73, 27536), (81, 27635), (86, 27677), (88, 27692), (91, 27716), (136, 27917), (180, 28190), (186, 28226), (198, 28322), (204, 28343), (258, 28628), (281, 28718), (297, 28838), (311, 28940), (318, 28979), (320, 28991), (326, 29039), (330, 29048), (343, 29168), (353, 29240), (357, 29264), (367, 29342), (378, 29468), (381, 29501), (383, 29513), (392, 29561), (412, 29657), (424, 29714), (440, 29798), (474, 29900),

Gene: Kaylissa\_38 Start: 26665, Stop: 29157, Start Num: 66

Candidate Starts for Kaylissa\_38:

(Start: 66 @26665 has 85 MA's), (80, 26776), (81, 26794), (89, 26857), (91, 26875), (148, 27118), (157, 27190), (168, 27274), (170, 27280), (186, 27397), (193, 27466), (202, 27505), (217, 27607), (283, 27952), (296, 28042), (320, 28198), (350, 28417), (353, 28447), (361, 28504), (365, 28543), (383, 28720), (417, 28864), (439, 28984), (472, 29086),

Gene: KeAlii\_37 Start: 26690, Stop: 29197, Start Num: 64

Candidate Starts for KeAlii\_37:

(Start: 64 @26690 has 19 MA's), (89, 26885), (91, 26903), (186, 27428), (190, 27449), (202, 27536), (242, 27767), (283, 27992), (292, 28034), (320, 28238), (348, 28451), (350, 28457), (353, 28487), (361, 28544), (372, 28646), (376, 28697), (403, 28868), (417, 28904), (435, 29009), (451, 29072),

Gene: Kenzers\_42 Start: 27182, Stop: 29647, Start Num: 46

Candidate Starts for Kenzers\_42:

(Start: 46 @27182 has 79 MA's), (79, 27332), (85, 27398), (86, 27401), (91, 27440), (149, 27677), (156, 27737), (185, 27941), (186, 27950), (203, 28061), (204, 28067), (296, 28559), (297, 28562), (318, 28703), (320, 28715), (353, 28964), (367, 29066), (378, 29192), (383, 29237), (401, 29336), (440, 29522),

Gene: Kieran\_39 Start: 27476, Stop: 29932, Start Num: 46

Candidate Starts for Kieran\_39:

(36, 27434), (Start: 46 @27476 has 79 MA's), (80, 27626), (86, 27689), (91, 27728), (136, 27929), (186, 28238), (191, 28262), (204, 28355), (217, 28448), (263, 28658), (281, 28730), (297, 28850), (311, 28952), (318, 28991), (320, 29003), (326, 29051), (330, 29060), (353, 29252), (357, 29276), (367, 29354), (378, 29480), (392, 29573), (401, 29624), (412, 29669), (424, 29726), (440, 29810), (455, 29873),

Gene: LadyAstra\_45 Start: 27733, Stop: 30219, Start Num: 66

Candidate Starts for LadyAstra\_45:

(Start: 66 @27733 has 85 MA's), (89, 27925), (91, 27943), (103, 28012), (122, 28054), (125, 28069), (163, 28285), (183, 28423), (186, 28444), (187, 28447), (191, 28468), (204, 28561), (211, 28627),

(271, 28906), (283, 28999), (287, 29011), (320, 29245), (349, 29461), (353, 29494), (361, 29551), (378, 29722), (402, 29869), (462, 30121),

Gene: Lahqtemish\_41 Start: 27351, Stop: 29834, Start Num: 46

Candidate Starts for Lahqtemish\_41:

(Start: 46 @27351 has 79 MA's), (81, 27528), (86, 27570), (91, 27609), (151, 27861), (186, 28119), (191, 28143), (203, 28230), (204, 28236), (213, 28311), (221, 28350), (255, 28503), (297, 28731), (318, 28872), (320, 28884), (353, 29133), (367, 29235), (378, 29361), (383, 29406), (401, 29505), (408, 29538),

Gene: Lego\_38 Start: 26611, Stop: 29103, Start Num: 66

Candidate Starts for Lego\_38:

(Start: 66 @26611 has 85 MA's), (80, 26722), (81, 26740), (89, 26803), (91, 26821), (148, 27064), (157, 27136), (168, 27220), (170, 27226), (186, 27343), (193, 27412), (202, 27451), (217, 27553), (283, 27898), (296, 27988), (320, 28144), (350, 28363), (353, 28393), (361, 28450), (365, 28489), (383, 28666), (417, 28810), (439, 28930), (472, 29032),

Gene: Liebe\_39 Start: 27757, Stop: 30252, Start Num: 66

Candidate Starts for Liebe\_39:

(Start: 66 @27757 has 85 MA's), (80, 27868), (82, 27892), (89, 27949), (91, 27967), (93, 27982), (100, 28015), (152, 28231), (180, 28447), (183, 28462), (185, 28474), (186, 28483), (190, 28504), (200, 28585), (217, 28693), (244, 28837), (276, 28966), (287, 29059), (294, 29119), (315, 29260), (333, 29383), (349, 29506), (350, 29509), (353, 29539), (361, 29596), (366, 29638), (372, 29698), (381, 29800), (389, 29848), (418, 29956), (442, 30088), (479, 30205),

Gene: Lilbooboo\_31 Start: 23280, Stop: 25706, Start Num: 66

Candidate Starts for Lilbooboo\_31:

(Start: 66 @23280 has 85 MA's), (101, 23535), (105, 23556), (109, 23568), (143, 23715), (147, 23745), (152, 23775), (180, 23988), (184, 24006), (189, 24042), (191, 24048), (195, 24105), (200, 24126), (204, 24141), (213, 24219), (233, 24309), (239, 24357), (244, 24384), (248, 24399), (256, 24441), (260, 24453), (263, 24465), (265, 24474), (269, 24492), (275, 24513), (282, 24567), (284, 24591), (288, 24609), (289, 24618), (290, 24624), (294, 24660), (303, 24726), (305, 24735), (307, 24741), (319, 24825), (333, 24924), (350, 25056), (353, 25086), (361, 25143), (366, 25185), (372, 25245), (373, 25251), (380, 25335), (381, 25347), (398, 25440), (405, 25461), (413, 25488), (415, 25491), (430, 25590), (433, 25605), (434, 25608), (446, 25647), (448, 25653),

Gene: Lilo27\_42 Start: 27017, Stop: 29482, Start Num: 46

Candidate Starts for Lilo27\_42:

(Start: 46 @27017 has 79 MA's), (79, 27167), (80, 27173), (85, 27233), (86, 27236), (91, 27275), (136, 27476), (156, 27572), (186, 27785), (191, 27809), (203, 27896), (204, 27902), (288, 28325), (296, 28394), (297, 28397), (318, 28538), (320, 28550), (326, 28598), (330, 28607), (343, 28727), (353, 28799), (367, 28901), (378, 29027), (383, 29072), (401, 29171), (440, 29357),

Gene: LimaBean\_41 Start: 26701, Stop: 29166, Start Num: 46

Candidate Starts for LimaBean\_41:

(Start: 46 @26701 has 79 MA's), (79, 26851), (85, 26917), (86, 26920), (91, 26959), (149, 27196), (156, 27256), (185, 27460), (186, 27469), (203, 27580), (204, 27586), (215, 27673), (296, 28078), (297, 28081), (318, 28222), (320, 28234), (353, 28483), (367, 28585), (378, 28711), (383, 28756), (401, 28855), (440, 29041), (453, 29098),

Gene: LisoBros\_38 Start: 28109, Stop: 30592, Start Num: 66

Candidate Starts for LisoBros\_38:

(24, 27959), (25, 27962), (57, 28082), (Start: 66 @28109 has 85 MA's), (74, 28145), (81, 28238), (82, 28244), (89, 28301), (91, 28319), (93, 28334), (107, 28403), (149, 28562), (169, 28718), (173, 28757), (183, 28817), (192, 28904), (200, 28940), (204, 28955), (213, 29030), (238, 29159), (249, 29204), (255, 29231), (259, 29252), (283, 29393), (287, 29405), (289, 29423), (297, 29486), (298, 29492), (300, 29507), (303, 29531), (307, 29546), (315, 29606), (318, 29627), (337, 29753), (350, 29858), (353, 29888), (361, 29945), (389, 30197), (423, 30347), (425, 30362), (433, 30407), (441, 30434), (451, 30473), (472, 30524),

Gene: Lizalica\_36 Start: 25808, Stop: 28300, Start Num: 66

Candidate Starts for Lizalica\_36:

(Start: 66 @25808 has 85 MA's), (80, 25919), (81, 25937), (89, 26000), (91, 26018), (126, 26177), (148, 26261), (168, 26417), (170, 26423), (183, 26519), (186, 26540), (191, 26564), (193, 26609), (202, 26648), (206, 26669), (283, 27095), (297, 27188), (320, 27341), (350, 27560), (353, 27590), (355, 27602), (361, 27647), (365, 27686), (372, 27749), (417, 28007), (439, 28127),

Gene: London\_37 Start: 27593, Stop: 30082, Start Num: 66

Candidate Starts for London\_37:

(21, 27440), (Start: 66 @27593 has 85 MA's), (81, 27722), (89, 27785), (91, 27803), (116, 27914), (148, 28046), (184, 28307), (186, 28325), (193, 28394), (200, 28427), (202, 28433), (206, 28454), (283, 28880), (320, 29126), (350, 29345), (353, 29375), (361, 29432), (365, 29471), (372, 29534), (383, 29648), (389, 29684), (420, 29810),

Gene: Loviatar\_42 Start: 29058, Stop: 31532, Start Num: 46

Candidate Starts for Loviatar\_42:

(Start: 46 @29058 has 79 MA's), (86, 29277), (91, 29316), (136, 29517), (149, 29553), (156, 29613), (157, 29622), (185, 29817), (186, 29826), (191, 29850), (203, 29937), (204, 29943), (217, 30036), (255, 30210), (296, 30435), (297, 30438), (318, 30579), (320, 30591), (330, 30648), (353, 30840), (357, 30864), (367, 30942), (378, 31068), (379, 31086), (383, 31113), (401, 31212), (439, 31395), (440, 31398), (453, 31455), (474, 31512),

Gene: Lynlen\_42 Start: 27182, Stop: 29647, Start Num: 46

Candidate Starts for Lynlen\_42:

(Start: 46 @27182 has 79 MA's), (79, 27332), (85, 27398), (86, 27401), (91, 27440), (149, 27677), (156, 27737), (185, 27941), (186, 27950), (203, 28061), (204, 28067), (296, 28559), (297, 28562), (318, 28703), (320, 28715), (353, 28964), (367, 29066), (378, 29192), (383, 29237), (401, 29336), (440, 29522),

Gene: MaGuCo\_37 Start: 26603, Stop: 29098, Start Num: 66

Candidate Starts for MaGuCo\_37:

(Start: 66 @26603 has 85 MA's), (78, 26702), (80, 26714), (82, 26738), (86, 26774), (89, 26795), (91, 26813), (100, 26861), (135, 27011), (152, 27077), (180, 27293), (183, 27308), (186, 27329), (190, 27350), (200, 27431), (217, 27539), (255, 27722), (276, 27812), (287, 27905), (294, 27965), (315, 28106), (349, 28352), (350, 28355), (353, 28385), (361, 28442), (366, 28484), (372, 28544), (381, 28646), (389, 28694), (418, 28802), (442, 28934),

Gene: Mabodamaca\_45 Start: 29211, Stop: 31718, Start Num: 66

Candidate Starts for Mabodamaca\_45:

(Start: 66 @29211 has 85 MA's), (83, 29361), (89, 29403), (91, 29421), (103, 29487), (107, 29502), (137, 29658), (184, 29946), (204, 30081), (283, 30528), (293, 30597), (308, 30687), (318, 30762), (320, 30774), (350, 30993), (353, 31023), (355, 31035), (361, 31080), (390, 31335), (391, 31338), (442, 31575), (467, 31653),

Gene: Maureen\_39 Start: 27757, Stop: 30252, Start Num: 66

Candidate Starts for Maureen\_39:

(Start: 66 @27757 has 85 MA's), (80, 27868), (82, 27892), (89, 27949), (91, 27967), (93, 27982), (100, 28015), (152, 28231), (180, 28447), (183, 28462), (185, 28474), (186, 28483), (190, 28504), (200, 28585), (217, 28693), (244, 28837), (276, 28966), (287, 29059), (294, 29119), (315, 29260), (333, 29383), (349, 29506), (350, 29509), (353, 29539), (361, 29596), (366, 29638), (372, 29698), (381, 29800), (389, 29848), (418, 29956), (442, 30088), (479, 30205),

Gene: Michkear\_39 Start: 27253, Stop: 29793, Start Num: 66

Candidate Starts for Michkear\_39:

(Start: 66 @27253 has 85 MA's), (82, 27388), (89, 27445), (91, 27463), (95, 27484), (107, 27547), (119, 27583), (186, 28012), (190, 28033), (192, 28078), (200, 28114), (217, 28222), (242, 28351), (283, 28576), (307, 28729), (320, 28822), (340, 28954), (350, 29041), (353, 29071), (361, 29128), (366, 29170), (372, 29230),

Gene: Milomuff\_41 Start: 26916, Stop: 29390, Start Num: 46

Candidate Starts for Milomuff\_41:

(Start: 46 @26916 has 79 MA's), (79, 27066), (85, 27132), (86, 27135), (91, 27174), (149, 27411), (156, 27471), (185, 27675), (186, 27684), (203, 27795), (204, 27801), (296, 28293), (297, 28296), (318, 28437), (320, 28449), (349, 28665), (353, 28698), (367, 28800), (378, 28926), (383, 28971), (401, 29070), (408, 29103), (440, 29256), (474, 29370),

Gene: MiniMommy\_43 Start: 27491, Stop: 30001, Start Num: 66

Candidate Starts for MiniMommy\_43:

(Start: 23 @27338 has 1 MA's), (29, 27365), (Start: 66 @27491 has 85 MA's), (81, 27620), (89, 27683), (91, 27701), (95, 27722), (129, 27872), (163, 28061), (173, 28139), (190, 28241), (196, 28304), (198, 28316), (283, 28784), (315, 28997), (320, 29030), (349, 29246), (353, 29279), (361, 29336), (372, 29438), (391, 29594), (402, 29654),

Gene: MissSwiss\_37 Start: 24879, Stop: 27389, Start Num: 66

Candidate Starts for MissSwiss\_37:

(49, 24828), (Start: 66 @24879 has 85 MA's), (82, 25014), (89, 25071), (91, 25089), (120, 25209), (148, 25329), (186, 25608), (193, 25677), (196, 25692), (202, 25716), (283, 26172), (288, 26193), (320, 26418), (350, 26637), (353, 26667), (361, 26724), (364, 26760), (372, 26826), (383, 26940), (385, 26955), (389, 26976), (403, 27048), (417, 27084), (472, 27315),

Gene: Moss\_36 Start: 24875, Stop: 27400, Start Num: 64

Candidate Starts for Moss\_36:

(Start: 64 @24875 has 19 MA's), (74, 24914), (81, 25007), (82, 25013), (85, 25046), (89, 25070), (100, 25133), (157, 25406), (183, 25589), (186, 25610), (190, 25631), (193, 25679), (217, 25820), (283, 26171), (295, 26249), (296, 26261), (304, 26312), (315, 26384), (333, 26507), (340, 26549), (353, 26666), (355, 26678), (357, 26690), (358, 26705), (361, 26723), (366, 26765), (372, 26825), (403, 27047), (418, 27083),

Gene: MsUbiquitous\_42 Start: 27123, Stop: 29588, Start Num: 46

Candidate Starts for MsUbiquitous\_42:

(Start: 46 @27123 has 79 MA's), (79, 27273), (80, 27279), (85, 27339), (86, 27342), (91, 27381), (136, 27582), (156, 27678), (185, 27882), (186, 27891), (203, 28002), (204, 28008), (296, 28500), (297, 28503), (318, 28644), (320, 28656), (326, 28704), (330, 28713), (343, 28833), (353, 28905), (367, 29007), (378, 29133), (383, 29178), (401, 29277), (440, 29463),

Gene: Mudpuppy\_36 Start: 26477, Stop: 28969, Start Num: 66

Candidate Starts for Mudpuppy\_36:

(Start: 66 @26477 has 85 MA's), (80, 26588), (81, 26606), (89, 26669), (91, 26687), (103, 26756), (126, 26846), (157, 27002), (168, 27086), (170, 27092), (183, 27188), (186, 27209), (191, 27233), (193, 27278), (202, 27317), (206, 27338), (243, 27560), (283, 27764), (320, 28010), (350, 28229), (353, 28259), (361, 28316), (365, 28355), (383, 28532), (417, 28676), (439, 28796), (472, 28898),

Gene: Mysterium\_36 Start: 24895, Stop: 27420, Start Num: 64

Candidate Starts for Mysterium\_36:

(Start: 64 @24895 has 19 MA's), (74, 24934), (81, 25027), (82, 25033), (85, 25066), (89, 25090), (157, 25426), (183, 25609), (186, 25630), (190, 25651), (193, 25699), (217, 25840), (283, 26191), (295, 26269), (296, 26281), (304, 26332), (315, 26404), (333, 26527), (340, 26569), (353, 26686), (355, 26698), (358, 26725), (361, 26743), (366, 26785), (372, 26845), (403, 27067), (418, 27103),

Gene: Nesbitt\_40 Start: 26930, Stop: 29377, Start Num: 66

Candidate Starts for Nesbitt\_40:

(7, 26480), (11, 26609), (Start: 23 @26771 has 1 MA's), (Start: 66 @26930 has 85 MA's), (81, 27062), (87, 27113), (101, 27185), (110, 27224), (121, 27290), (123, 27296), (125, 27308), (130, 27344), (144, 27386), (150, 27425), (158, 27494), (164, 27539), (170, 27575), (172, 27608), (185, 27680), (191, 27713), (203, 27800), (225, 27944), (228, 27950), (235, 27992), (249, 28067), (260, 28118), (275, 28178), (277, 28193), (282, 28241), (284, 28265), (289, 28292), (290, 28298), (297, 28355), (300, 28376), (303, 28400), (308, 28421), (323, 28520), (330, 28565), (337, 28622), (350, 28727), (353, 28757), (359, 28799), (361, 28814), (366, 28856), (373, 28922), (381, 29018), (383, 29030), (406, 29135), (430, 29261), (448, 29324), (449, 29339),

Gene: Nicky22\_42 Start: 27571, Stop: 30036, Start Num: 46

Candidate Starts for Nicky22\_42:

(Start: 46 @27571 has 79 MA's), (79, 27721), (80, 27727), (85, 27787), (86, 27790), (91, 27829), (156, 28126), (185, 28330), (186, 28339), (191, 28363), (203, 28450), (204, 28456), (296, 28948), (297, 28951), (318, 29092), (320, 29104), (326, 29152), (343, 29281), (353, 29353), (367, 29455), (378, 29581), (383, 29626), (401, 29725), (440, 29911),

Gene: Niobe\_37 Start: 27578, Stop: 30067, Start Num: 66

Candidate Starts for Niobe\_37:

(21, 27425), (Start: 66 @27578 has 85 MA's), (81, 27707), (89, 27770), (91, 27788), (116, 27899), (148, 28031), (184, 28292), (186, 28310), (193, 28379), (200, 28412), (202, 28418), (283, 28865), (320, 29111), (350, 29330), (353, 29360), (361, 29417), (365, 29456), (372, 29519), (383, 29633), (389, 29669), (420, 29795),

Gene: Nitro\_38 Start: 27372, Stop: 29885, Start Num: 66

Candidate Starts for Nitro\_38:

(Start: 66 @27372 has 85 MA's), (80, 27483), (81, 27501), (89, 27564), (91, 27582), (157, 27897), (186, 28104), (202, 28212), (206, 28233), (283, 28668), (297, 28761), (320, 28914), (350, 29133), (353, 29163), (361, 29220), (364, 29256), (365, 29259), (372, 29322), (378, 29391), (383, 29436), (385, 29451), (389, 29472), (417, 29580), (441, 29709), (472, 29811),

Gene: ObiToo\_43 Start: 27542, Stop: 30019, Start Num: 66

Candidate Starts for ObiToo\_43:

(Start: 66 @27542 has 85 MA's), (80, 27653), (81, 27671), (89, 27734), (91, 27752), (157, 28052), (163, 28100), (170, 28142), (183, 28238), (186, 28259), (206, 28388), (283, 28814), (292, 28856), (297, 28907), (307, 28967), (320, 29060), (350, 29279), (353, 29309), (361, 29366), (372, 29468), (383, 29582), (417, 29726), (433, 29828), (451, 29894), (483, 29987),

Gene: Olliecat\_38 Start: 25636, Stop: 28113, Start Num: 46

Candidate Starts for Olliecat\_38:

(Start: 46 @25636 has 79 MA's), (50, 25648), (67, 25693), (73, 25720), (79, 25792), (81, 25819), (86, 25861), (89, 25882), (91, 25900), (136, 26101), (156, 26197), (160, 26224), (168, 26290), (169, 26293), (170, 26296), (172, 26329), (188, 26425), (191, 26434), (198, 26506), (204, 26527), (211, 26593), (213, 26602), (217, 26620), (238, 26722), (251, 26773), (281, 26902), (296, 27019), (297, 27022), (315, 27142), (318, 27163), (320, 27175), (322, 27184), (323, 27187), (330, 27232), (335, 27277), (353, 27424), (367, 27526), (378, 27652), (379, 27670), (381, 27685), (387, 27718), (399, 27781), (419, 27871), (430, 27940), (440, 27982),

Gene: Origami\_44 Start: 27525, Stop: 30011, Start Num: 66

Candidate Starts for Origami\_44:

(Start: 66 @27525 has 85 MA's), (89, 27717), (91, 27735), (103, 27804), (122, 27846), (125, 27861), (163, 28077), (183, 28215), (186, 28236), (187, 28239), (191, 28260), (204, 28353), (211, 28419), (271, 28698), (283, 28791), (287, 28803), (320, 29037), (349, 29253), (353, 29286), (361, 29343), (378, 29514), (402, 29661), (462, 29913),

Gene: OscarSo\_49 Start: 32561, Stop: 30030, Start Num: 71

Candidate Starts for OscarSo\_49:

(16, 32840), (Start: 71 @32561 has 1 MA's), (86, 32402), (106, 32291), (146, 32123), (150, 32102), (158, 32036), (171, 31949), (176, 31904), (181, 31871), (204, 31727), (224, 31580), (234, 31535), (240, 31496), (250, 31454), (257, 31436), (268, 31397), (279, 31346), (293, 31217), (310, 31097), (321, 31043), (324, 31028), (328, 30995), (334, 30950), (341, 30893), (345, 30857), (347, 30848), (354, 30794), (361, 30743), (370, 30674), (374, 30632), (375, 30611), (384, 30536), (395, 30473), (396, 30467), (400, 30446), (413, 30377), (431, 30254), (432, 30248), (438, 30227), (444, 30206), (457, 30134), (482, 30047),

Gene: PandaPo\_37 Start: 24882, Stop: 27395, Start Num: 66

Candidate Starts for PandaPo\_37:

(49, 24831), (Start: 66 @24882 has 85 MA's), (82, 25017), (89, 25074), (91, 25092), (129, 25266), (184, 25596), (186, 25614), (190, 25635), (202, 25722), (206, 25743), (283, 26178), (288, 26199), (320, 26424), (350, 26643), (353, 26673), (361, 26730), (364, 26766), (372, 26832), (383, 26946), (385, 26961), (389, 26982), (403, 27054), (417, 27090), (472, 27321),

Gene: PastaFagioli\_41 Start: 27351, Stop: 29855, Start Num: 46

Candidate Starts for PastaFagioli\_41:

(Start: 46 @27351 has 79 MA's), (81, 27528), (86, 27570), (91, 27609), (151, 27861), (185, 28110), (186, 28119), (191, 28143), (203, 28230), (204, 28236), (221, 28350), (255, 28503), (297, 28731), (318, 28872), (320, 28884), (349, 29100), (353, 29133), (367, 29235), (378, 29361), (383, 29406), (399, 29490), (401, 29505), (408, 29538), (418, 29574), (480, 29850),

Gene: Pecas\_42 Start: 27323, Stop: 29788, Start Num: 46

Candidate Starts for Pecas\_42:

(Start: 46 @27323 has 79 MA's), (79, 27473), (80, 27479), (85, 27539), (86, 27542), (91, 27581), (136, 27782), (156, 27878), (186, 28091), (191, 28115), (203, 28202), (204, 28208), (296, 28700), (297, 28703), (318, 28844), (320, 28856), (326, 28904), (330, 28913), (343, 29033), (353, 29105), (367, 29207), (378, 29333), (383, 29378), (401, 29477), (440, 29663),

Gene: Percival\_47 Start: 29465, Stop: 31969, Start Num: 66

Candidate Starts for Percival\_47:

(48, 29414), (56, 29438), (Start: 66 @29465 has 85 MA's), (74, 29501), (79, 29570), (81, 29594), (86, 29636), (89, 29657), (91, 29675), (97, 29705), (107, 29759), (137, 29915), (184, 30203), (191, 30245), (204, 30338), (259, 30635), (261, 30644), (283, 30785), (296, 30875), (307, 30938), (318, 31019), (320, 31031), (350, 31250), (353, 31280), (355, 31292), (357, 31304), (361, 31337), (367, 31382), (374, 31448), (467, 31907),

Gene: PhigPhack\_42 Start: 26934, Stop: 29408, Start Num: 46

Candidate Starts for PhigPhack\_42:

(Start: 46 @26934 has 79 MA's), (79, 27084), (86, 27153), (91, 27192), (156, 27489), (185, 27693), (186, 27702), (203, 27813), (204, 27819), (215, 27906), (296, 28311), (297, 28314), (318, 28455), (320, 28467), (343, 28644), (349, 28683), (353, 28716), (367, 28818), (378, 28944), (383, 28989), (401, 29088), (408, 29121), (440, 29274), (474, 29388),

Gene: Phisb\_42 Start: 27168, Stop: 29633, Start Num: 46

Candidate Starts for Phisb\_42:

(Start: 46 @27168 has 79 MA's), (79, 27318), (80, 27324), (85, 27384), (86, 27387), (91, 27426), (136, 27627), (156, 27723), (185, 27927), (186, 27936), (191, 27960), (203, 28047), (204, 28053), (296, 28545), (297, 28548), (318, 28689), (320, 28701), (326, 28749), (330, 28758), (343, 28878), (353, 28950), (367, 29052), (378, 29178), (383, 29223), (401, 29322), (440, 29508),

Gene: Phives\_40 Start: 28117, Stop: 30603, Start Num: 66

Candidate Starts for Phives\_40:

(Start: 66 @28117 has 85 MA's), (80, 28228), (81, 28246), (89, 28309), (91, 28327), (120, 28447), (148, 28567), (184, 28828), (186, 28846), (193, 28915), (202, 28954), (283, 29401), (320, 29647), (323, 29659), (350, 29866), (353, 29896), (361, 29953), (372, 30055), (383, 30169), (389, 30205), (451, 30481),

Gene: Pixelle\_38 Start: 27559, Stop: 30045, Start Num: 66

Candidate Starts for Pixelle\_38:

(Start: 66 @27559 has 85 MA's), (80, 27670), (81, 27688), (89, 27751), (91, 27769), (148, 28012), (183, 28270), (186, 28291), (193, 28360), (200, 28393), (283, 28846), (292, 28888), (320, 29092), (350, 29311), (353, 29341), (361, 29398), (365, 29437), (372, 29500), (383, 29614),

Gene: PondAmelia\_52 Start: 27976, Stop: 30453, Start Num: 46

Candidate Starts for PondAmelia\_52:

(Start: 46 @27976 has 79 MA's), (86, 28195), (91, 28234), (136, 28435), (155, 28522), (156, 28531), (174, 28669), (185, 28735), (186, 28744), (188, 28759), (191, 28768), (203, 28855), (204, 28861), (217, 28954), (255, 29128), (296, 29353), (297, 29356), (318, 29497), (320, 29509), (353, 29758), (357, 29782), (367, 29860), (378, 29986), (379, 30004), (383, 30031), (399, 30115), (401, 30130), (439, 30313), (440, 30316), (453, 30373), (474, 30433),

Gene: Powerpuff\_40 Start: 27814, Stop: 30306, Start Num: 66

Candidate Starts for Powerpuff\_40:

(Start: 66 @27814 has 85 MA's), (80, 27925), (81, 27943), (89, 28006), (91, 28024), (148, 28267), (168, 28423), (170, 28429), (186, 28546), (193, 28615), (202, 28654), (217, 28756), (283, 29101), (296, 29191), (320, 29347), (350, 29566), (353, 29596), (361, 29653), (365, 29692), (372, 29755), (383, 29869), (417, 30013), (439, 30133), (472, 30235),

Gene: Pumpkins\_37 Start: 26872, Stop: 29361, Start Num: 66

Candidate Starts for Pumpkins\_37:

(Start: 66 @26872 has 85 MA's), (80, 26983), (81, 27001), (89, 27064), (91, 27082), (125, 27229), (152, 27352), (163, 27445), (185, 27595), (186, 27604), (190, 27625), (191, 27628), (202, 27712), (259, 28018), (283, 28159), (320, 28405), (346, 28603), (350, 28624), (353, 28654), (361, 28711), (439, 29191), (472, 29293),

Gene: QMacho\_44 Start: 27806, Stop: 30271, Start Num: 46

Candidate Starts for QMacho\_44:

(Start: 46 @27806 has 79 MA's), (79, 27956), (80, 27962), (85, 28022), (86, 28025), (91, 28064), (136, 28265), (156, 28361), (186, 28574), (191, 28598), (203, 28685), (204, 28691), (296, 29183), (297, 29186), (318, 29327), (320, 29339), (326, 29387), (330, 29396), (343, 29516), (353, 29588), (367, 29690), (378, 29816), (383, 29861), (401, 29960), (440, 30146),

Gene: Quenya\_40 Start: 27220, Stop: 29703, Start Num: 46

Candidate Starts for Quenya\_40:

(36, 27178), (Start: 46 @27220 has 79 MA's), (81, 27391), (86, 27433), (88, 27448), (91, 27472), (136, 27673), (180, 27946), (185, 27973), (186, 27982), (198, 28078), (204, 28099), (217, 28192), (249, 28339), (258, 28384), (281, 28474), (297, 28594), (311, 28696), (318, 28735), (320, 28747), (326, 28795), (330, 28804), (343, 28924), (353, 28996), (367, 29098), (378, 29224), (381, 29257), (383, 29269), (392, 29317), (412, 29413), (424, 29470), (430, 29512), (440, 29554), (455, 29617), (474, 29683),

Gene: Reedo\_37 Start: 24946, Stop: 27432, Start Num: 66

Candidate Starts for Reedo\_37:

(27, 24814), (52, 24907), (Start: 66 @24946 has 85 MA's), (82, 25081), (89, 25138), (91, 25156), (148, 25396), (155, 25450), (186, 25675), (193, 25744), (202, 25783), (281, 26203), (283, 26230), (292, 26272), (307, 26383), (320, 26476), (350, 26695), (353, 26725), (361, 26782), (372, 26884), (417, 27142), (430, 27229), (439, 27262), (472, 27361),

Gene: RemusLoopin\_33 Start: 24371, Stop: 26932, Start Num: 66

Candidate Starts for RemusLoopin\_33:

(Start: 66 @24371 has 85 MA's), (74, 24407), (102, 24629), (107, 24659), (127, 24776), (130, 24785), (154, 24920), (164, 25007), (170, 25043), (210, 25346), (213, 25358), (217, 25376), (218, 25379), (227, 25421), (233, 25448), (244, 25523), (275, 25652), (282, 25706), (284, 25730), (288, 25748), (289, 25757), (290, 25763), (296, 25817), (303, 25865), (319, 25964), (320, 25973), (350, 26192), (353, 26222), (355, 26234), (356, 26237), (359, 26264), (366, 26321), (374, 26390), (380, 26471), (381, 26483), (388, 26516), (405, 26615), (407, 26621), (413, 26639), (415, 26642), (419, 26672), (430, 26741), (433, 26756), (438, 26771), (443, 26789), (446, 26798), (448, 26804), (465, 26885),

Gene: RockScotty\_36 Start: 24893, Stop: 27418, Start Num: 64

Candidate Starts for RockScotty\_36:

(Start: 64 @24893 has 19 MA's), (74, 24932), (81, 25025), (82, 25031), (85, 25064), (89, 25088), (100, 25151), (157, 25424), (183, 25607), (186, 25628), (190, 25649), (193, 25697), (217, 25838), (283, 26189), (295, 26267), (296, 26279), (304, 26330), (315, 26402), (333, 26525), (340, 26567), (353, 26684), (355, 26696), (358, 26723), (361, 26741), (366, 26783), (372, 26843), (403, 27065), (418, 27101),

Gene: Rollins\_39 Start: 25056, Stop: 27527, Start Num: 46

Candidate Starts for Rollins\_39:

(Start: 46 @25056 has 79 MA's), (86, 25272), (87, 25281), (91, 25311), (172, 25740), (180, 25785), (185, 25812), (186, 25821), (188, 25836), (203, 25932), (204, 25938), (214, 26016), (296, 26430), (297, 26433), (314, 26547), (320, 26586), (329, 26640), (343, 26763), (349, 26802), (350, 26805), (353, 26835), (357, 26859), (367, 26937), (416, 27261), (440, 27402), (453, 27459), (455, 27465), (459, 27492),

Gene: Rona\_39 Start: 27459, Stop: 29915, Start Num: 46

Candidate Starts for Rona\_39:

(30, 27405), (36, 27417), (Start: 46 @27459 has 79 MA's), (80, 27609), (86, 27672), (91, 27711), (136, 27912), (186, 28221), (191, 28245), (204, 28338), (217, 28431), (255, 28605), (263, 28641), (281, 28713), (297, 28833), (311, 28935), (318, 28974), (320, 28986), (326, 29034), (330, 29043), (353, 29235), (357, 29259), (367, 29337), (378, 29463), (386, 29523), (392, 29556), (401, 29607), (412,

29652), (424, 29709), (440, 29793), (455, 29856),

Gene: Rowa\_40 Start: 27173, Stop: 29611, Start Num: 66

Candidate Starts for Rowa\_40:

(Start: 66 @27173 has 85 MA's), (70, 27188), (74, 27209), (102, 27431), (110, 27467), (125, 27548), (138, 27599), (147, 27650), (154, 27692), (174, 27854), (175, 27866), (176, 27869), (177, 27872), (180, 27893), (184, 27911), (205, 28055), (217, 28148), (232, 28217), (233, 28220), (244, 28295), (248, 28310), (256, 28352), (269, 28403), (275, 28424), (277, 28439), (282, 28478), (283, 28499), (284, 28502), (290, 28535), (293, 28568), (297, 28592), (303, 28637), (304, 28640), (320, 28745), (330, 28802), (331, 28805), (349, 28961), (350, 28964), (353, 28994), (355, 29006), (357, 29018), (358, 29033), (366, 29093), (373, 29159), (378, 29222), (383, 29267), (405, 29369), (415, 29396), (425, 29465), (430, 29495), (437, 29519), (441, 29537),

Gene: Sabourin\_36 Start: 24783, Stop: 27311, Start Num: 64

Candidate Starts for Sabourin\_36:

(Start: 64 @24783 has 19 MA's), (81, 24915), (82, 24921), (85, 24954), (89, 24978), (91, 24996), (117, 25110), (157, 25314), (183, 25497), (186, 25518), (190, 25539), (193, 25587), (217, 25728), (283, 26079), (288, 26100), (295, 26157), (296, 26169), (304, 26220), (333, 26415), (353, 26574), (355, 26586), (358, 26613), (361, 26631), (366, 26673), (372, 26733), (402, 26949), (403, 26955), (418, 26991), (460, 27204),

Gene: Samora\_33 Start: 23879, Stop: 26296, Start Num: 66

Candidate Starts for Samora\_33:

(Start: 66 @23879 has 85 MA's), (Start: 68 @23888 has 2 MA's), (76, 23948), (81, 24011), (101, 24134), (104, 24152), (109, 24167), (142, 24305), (147, 24341), (152, 24371), (164, 24470), (172, 24539), (180, 24584), (184, 24602), (191, 24644), (195, 24701), (200, 24722), (217, 24827), (233, 24899), (238, 24944), (244, 24977), (256, 25034), (260, 25046), (263, 25058), (265, 25067), (269, 25085), (275, 25106), (282, 25160), (288, 25202), (289, 25211), (290, 25217), (294, 25253), (303, 25319), (305, 25328), (320, 25427), (330, 25484), (333, 25517), (350, 25649), (353, 25679), (372, 25838), (380, 25928), (381, 25940), (398, 26033), (415, 26084), (430, 26183), (433, 26198), (446, 26240),

Gene: Samy\_63 Start: 38490, Stop: 40973, Start Num: 66

Candidate Starts for Samy\_63:

(Start: 66 @38490 has 85 MA's), (77, 38565), (88, 38679), (109, 38784), (152, 38988), (161, 39057), (164, 39087), (165, 39090), (176, 39177), (184, 39219), (194, 39312), (199, 39336), (200, 39339), (213, 39432), (217, 39450), (223, 39480), (236, 39540), (241, 39579), (249, 39609), (254, 39630), (260, 39660), (269, 39699), (275, 39720), (288, 39825), (303, 39942), (320, 40050), (344, 40242), (349, 40269), (357, 40326), (359, 40344), (360, 40356), (362, 40383), (372, 40461), (374, 40470), (414, 40713), (422, 40773), (427, 40797), (428, 40803),

Gene: SanaSana\_44 Start: 28667, Stop: 31141, Start Num: 46

Candidate Starts for SanaSana\_44:

(Start: 46 @28667 has 79 MA's), (85, 28883), (86, 28886), (91, 28925), (136, 29126), (156, 29222), (185, 29426), (186, 29435), (188, 29450), (191, 29459), (203, 29546), (204, 29552), (217, 29645), (255, 29819), (296, 30044), (297, 30047), (318, 30188), (320, 30200), (323, 30212), (330, 30257), (353, 30449), (357, 30473), (367, 30551), (378, 30677), (379, 30695), (383, 30722), (401, 30821), (439, 31004), (440, 31007), (453, 31064), (474, 31121),

Gene: SansAfet\_42 Start: 27021, Stop: 29495, Start Num: 46

Candidate Starts for SansAfet\_42:

(Start: 46 @27021 has 79 MA's), (79, 27171), (85, 27237), (86, 27240), (91, 27279), (149, 27516), (156, 27576), (185, 27780), (186, 27789), (203, 27900), (204, 27906), (215, 27993), (296, 28398),

(297, 28401), (318, 28542), (320, 28554), (343, 28731), (349, 28770), (353, 28803), (367, 28905), (378, 29031), (383, 29076), (401, 29175), (440, 29361), (474, 29475),

Gene: SarBear\_41 Start: 26816, Stop: 29281, Start Num: 46

Candidate Starts for SarBear\_41:

(Start: 46 @26816 has 79 MA's), (79, 26966), (80, 26972), (86, 27035), (91, 27074), (136, 27275), (156, 27371), (185, 27575), (186, 27584), (191, 27608), (203, 27695), (204, 27701), (296, 28193), (297, 28196), (318, 28337), (320, 28349), (326, 28397), (330, 28406), (343, 28526), (353, 28598), (367, 28700), (378, 28826), (383, 28871), (401, 28970), (440, 29156),

Gene: Schaffner\_38 Start: 27101, Stop: 29602, Start Num: 66

Candidate Starts for Schaffner\_38:

(Start: 66 @27101 has 85 MA's), (80, 27212), (82, 27236), (89, 27293), (91, 27311), (113, 27422), (125, 27467), (170, 27725), (186, 27842), (190, 27863), (283, 28397), (292, 28439), (297, 28490), (307, 28550), (320, 28643), (350, 28862), (353, 28892), (361, 28949), (383, 29165), (433, 29411), (451, 29477),

Gene: Sebastisaurus\_33 Start: 24165, Stop: 26657, Start Num: 66

Candidate Starts for Sebastisaurus\_33:

(Start: 66 @24165 has 85 MA's), (74, 24201), (96, 24399), (102, 24423), (107, 24453), (127, 24570), (130, 24579), (133, 24594), (154, 24720), (164, 24807), (170, 24843), (210, 25146), (213, 25158), (217, 25176), (218, 25179), (226, 25218), (227, 25221), (233, 25248), (244, 25323), (260, 25392), (275, 25452), (277, 25467), (278, 25470), (282, 25506), (284, 25530), (288, 25548), (289, 25557), (290, 25563), (299, 25638), (303, 25665), (319, 25764), (320, 25773), (350, 25992), (353, 26022), (356, 26037), (359, 26064), (366, 26121), (374, 26190), (380, 26271), (381, 26283), (413, 26439), (415, 26442), (430, 26541), (433, 26556), (438, 26571), (443, 26589),

Gene: ShakeltOph\_42 Start: 27490, Stop: 30000, Start Num: 66

Candidate Starts for ShakeltOph\_42:

(Start: 23 @27337 has 1 MA's), (29, 27364), (Start: 66 @27490 has 85 MA's), (81, 27619), (89, 27682), (91, 27700), (129, 27871), (163, 28060), (173, 28138), (190, 28240), (196, 28303), (198, 28315), (283, 28783), (315, 28996), (320, 29029), (349, 29245), (353, 29278), (361, 29335), (372, 29437), (391, 29593), (402, 29653),

Gene: Sharkboy\_40 Start: 27558, Stop: 30014, Start Num: 46

Candidate Starts for Sharkboy\_40:

(Start: 46 @27558 has 79 MA's), (80, 27708), (86, 27771), (91, 27810), (136, 28011), (186, 28320), (191, 28344), (204, 28437), (217, 28530), (255, 28704), (263, 28740), (281, 28812), (297, 28932), (311, 29034), (318, 29073), (320, 29085), (326, 29133), (330, 29142), (353, 29334), (357, 29358), (365, 29430), (367, 29436), (378, 29562), (392, 29655), (401, 29706), (412, 29751), (424, 29808), (440, 29892), (455, 29955),

Gene: Shawty\_31 Start: 23762, Stop: 26218, Start Num: 66

Candidate Starts for Shawty\_31:

(Start: 66 @23762 has 85 MA's), (90, 23966), (96, 23996), (102, 24020), (107, 24050), (124, 24122), (147, 24242), (164, 24371), (185, 24512), (189, 24539), (195, 24602), (200, 24623), (212, 24725), (213, 24731), (233, 24821), (244, 24896), (260, 24965), (263, 24977), (269, 25004), (275, 25025), (282, 25079), (284, 25103), (289, 25130), (303, 25238), (318, 25334), (320, 25346), (330, 25403), (337, 25460), (350, 25568), (353, 25598), (355, 25610), (357, 25622), (361, 25655), (372, 25757), (413, 26000), (415, 26003), (425, 26072), (430, 26102), (446, 26159), (448, 26165),

Gene: Shayna\_41 Start: 26390, Stop: 28852, Start Num: 46

Candidate Starts for Shayna\_41:

(Start: 46 @26390 has 79 MA's), (Start: 66 @26435 has 85 MA's), (79, 26540), (86, 26609), (91, 26648), (148, 26882), (174, 27083), (186, 27158), (191, 27182), (198, 27254), (203, 27269), (204, 27275), (238, 27470), (249, 27515), (318, 27911), (320, 27923), (330, 27980), (349, 28139), (353, 28172), (367, 28274), (378, 28400), (392, 28493), (440, 28730), (458, 28808),

Gene: Simpson\_40 Start: 26730, Stop: 29222, Start Num: 66

Candidate Starts for Simpson\_40:

(Start: 66 @26730 has 85 MA's), (80, 26841), (81, 26859), (89, 26922), (91, 26940), (148, 27183), (157, 27255), (168, 27339), (170, 27345), (186, 27462), (193, 27531), (202, 27570), (217, 27672), (283, 28017), (296, 28107), (320, 28263), (350, 28482), (353, 28512), (361, 28569), (365, 28608), (372, 28671), (383, 28785), (417, 28929), (439, 29049),

Gene: SirBeanington\_41 Start: 27330, Stop: 29795, Start Num: 46

Candidate Starts for SirBeanington\_41:

(Start: 46 @27330 has 79 MA's), (79, 27480), (85, 27546), (86, 27549), (91, 27588), (156, 27885), (185, 28089), (186, 28098), (203, 28209), (204, 28215), (296, 28707), (297, 28710), (318, 28851), (320, 28863), (326, 28911), (330, 28920), (343, 29040), (353, 29112), (367, 29214), (378, 29340), (383, 29385), (401, 29484), (408, 29517), (440, 29670), (453, 29727),

Gene: Skelbel\_38 Start: 27578, Stop: 30067, Start Num: 66

Candidate Starts for Skelbel\_38:

(21, 27425), (Start: 66 @27578 has 85 MA's), (81, 27707), (89, 27770), (91, 27788), (116, 27899), (148, 28031), (184, 28292), (186, 28310), (193, 28379), (200, 28412), (202, 28418), (283, 28865), (320, 29111), (350, 29330), (353, 29360), (361, 29417), (365, 29456), (372, 29519), (383, 29633), (389, 29669), (420, 29795),

Gene: Skylord\_39 Start: 24987, Stop: 27458, Start Num: 46

Candidate Starts for Skylord\_39:

(Start: 46 @24987 has 79 MA's), (86, 25203), (87, 25212), (91, 25242), (172, 25671), (180, 25716), (185, 25743), (186, 25752), (188, 25767), (203, 25863), (204, 25869), (214, 25947), (296, 26361), (297, 26364), (314, 26478), (320, 26517), (329, 26571), (343, 26694), (349, 26733), (350, 26736), (353, 26766), (357, 26790), (367, 26868), (416, 27192), (440, 27333), (453, 27390), (455, 27396), (459, 27423),

Gene: Slay\_42 Start: 27544, Stop: 30009, Start Num: 46

Candidate Starts for Slay\_42:

(Start: 46 @27544 has 79 MA's), (79, 27694), (80, 27700), (85, 27760), (86, 27763), (91, 27802), (136, 28003), (156, 28099), (185, 28303), (186, 28312), (191, 28336), (203, 28423), (204, 28429), (288, 28852), (296, 28921), (318, 29065), (320, 29077), (326, 29125), (330, 29134), (343, 29254), (353, 29326), (367, 29428), (378, 29554), (383, 29599), (401, 29698), (440, 29884),

Gene: Snek\_37 Start: 25209, Stop: 27740, Start Num: 66

Candidate Starts for Snek\_37:

(Start: 66 @25209 has 85 MA's), (81, 25338), (82, 25344), (89, 25401), (91, 25419), (183, 25953), (186, 25974), (188, 25989), (200, 26076), (202, 26082), (221, 26205), (283, 26529), (297, 26622), (320, 26775), (350, 26994), (353, 27024), (361, 27081), (365, 27120), (372, 27183), (381, 27285), (391, 27339), (423, 27483), (439, 27561), (475, 27678),

Gene: Softsoap\_41 Start: 26932, Stop: 29406, Start Num: 46

Candidate Starts for Softsoap\_41:

(Start: 46 @26932 has 79 MA's), (79, 27082), (85, 27148), (86, 27151), (91, 27190), (149, 27427), (156, 27487), (186, 27700), (203, 27811), (204, 27817), (215, 27904), (296, 28309), (297, 28312), (318, 28453), (320, 28465), (349, 28681), (353, 28714), (367, 28816), (378, 28942), (383, 28987),

(401, 29086), (408, 29119), (440, 29272), (474, 29386),

Gene: Solea\_42 Start: 26916, Stop: 29390, Start Num: 46

Candidate Starts for Solea\_42:

(Start: 46 @26916 has 79 MA's), (79, 27066), (85, 27132), (86, 27135), (91, 27174), (149, 27411), (156, 27471), (185, 27675), (186, 27684), (203, 27795), (204, 27801), (296, 28293), (297, 28296), (318, 28437), (320, 28449), (349, 28665), (353, 28698), (367, 28800), (378, 28926), (383, 28971), (401, 29070), (408, 29103), (440, 29256), (474, 29370),

Gene: Soondubu\_35 Start: 28160, Stop: 30655, Start Num: 66

Candidate Starts for Soondubu\_35:

(Start: 66 @28160 has 85 MA's), (82, 28295), (89, 28352), (91, 28370), (107, 28454), (148, 28607), (169, 28766), (186, 28886), (192, 28952), (255, 29279), (275, 29351), (283, 29441), (288, 29462), (297, 29534), (303, 29579), (320, 29687), (330, 29744), (349, 29903), (353, 29936), (361, 29993), (364, 30029), (372, 30095), (381, 30197), (383, 30209), (410, 30341), (423, 30395), (451, 30521),

Gene: Sooty\_36 Start: 24798, Stop: 27326, Start Num: 64

Candidate Starts for Sooty\_36:

(Start: 64 @24798 has 19 MA's), (80, 24912), (81, 24930), (82, 24936), (85, 24969), (89, 24993), (91, 25011), (117, 25125), (157, 25329), (183, 25512), (186, 25533), (190, 25554), (193, 25602), (217, 25743), (283, 26094), (288, 26115), (295, 26172), (296, 26184), (304, 26235), (333, 26430), (353, 26589), (355, 26601), (358, 26628), (361, 26646), (366, 26688), (372, 26748), (402, 26964), (403, 26970), (418, 27006), (460, 27219),

Gene: SpecialK\_36 Start: 24784, Stop: 27309, Start Num: 64

Candidate Starts for SpecialK\_36:

(18, 24583), (43, 24709), (Start: 64 @24784 has 19 MA's), (74, 24823), (81, 24916), (82, 24922), (85, 24955), (89, 24979), (100, 25042), (157, 25315), (183, 25498), (186, 25519), (190, 25540), (193, 25588), (217, 25729), (283, 26080), (295, 26158), (296, 26170), (304, 26221), (315, 26293), (333, 26416), (340, 26458), (353, 26575), (355, 26587), (357, 26599), (358, 26614), (361, 26632), (366, 26674), (372, 26734), (403, 26956), (418, 26992),

Gene: Squirle\_38 Start: 25635, Stop: 28112, Start Num: 46

Candidate Starts for Squirle\_38:

(Start: 46 @25635 has 79 MA's), (50, 25647), (67, 25692), (73, 25719), (79, 25791), (81, 25818), (86, 25860), (89, 25881), (91, 25899), (136, 26100), (156, 26196), (160, 26223), (168, 26289), (169, 26292), (170, 26295), (172, 26328), (188, 26424), (191, 26433), (198, 26505), (204, 26526), (211, 26592), (213, 26601), (217, 26619), (238, 26721), (251, 26772), (281, 26901), (296, 27018), (297, 27021), (315, 27141), (318, 27162), (320, 27174), (322, 27183), (323, 27186), (330, 27231), (335, 27276), (353, 27423), (367, 27525), (378, 27651), (379, 27669), (381, 27684), (387, 27717), (399, 27780), (419, 27870), (430, 27939), (440, 27981),

Gene: Stoor\_42 Start: 28336, Stop: 30810, Start Num: 46

Candidate Starts for Stoor\_42:

(Start: 46 @28336 has 79 MA's), (85, 28552), (86, 28555), (91, 28594), (136, 28795), (149, 28831), (156, 28891), (185, 29095), (186, 29104), (188, 29119), (191, 29128), (203, 29215), (204, 29221), (217, 29314), (255, 29488), (296, 29713), (297, 29716), (318, 29857), (320, 29869), (323, 29881), (330, 29926), (353, 30118), (357, 30142), (367, 30220), (378, 30346), (379, 30364), (383, 30391), (401, 30490), (439, 30673), (440, 30676), (453, 30733), (474, 30790),

Gene: Stromboli\_42 Start: 28198, Stop: 30672, Start Num: 46

Candidate Starts for Stromboli\_42:

(Start: 46 @28198 has 79 MA's), (85, 28414), (86, 28417), (91, 28456), (136, 28657), (149, 28693), (156, 28753), (185, 28957), (186, 28966), (188, 28981), (191, 28990), (203, 29077), (204, 29083), (217, 29176), (255, 29350), (296, 29575), (297, 29578), (311, 29680), (318, 29719), (320, 29731), (330, 29788), (353, 29980), (367, 30082), (378, 30208), (379, 30226), (383, 30253), (401, 30352), (439, 30535), (440, 30538), (453, 30595), (474, 30652),

Gene: Stuu\_36 Start: 24895, Stop: 27420, Start Num: 64

Candidate Starts for Stuu\_36:

(Start: 64 @24895 has 19 MA's), (74, 24934), (81, 25027), (82, 25033), (85, 25066), (89, 25090), (100, 25153), (157, 25426), (183, 25609), (186, 25630), (190, 25651), (193, 25699), (217, 25840), (283, 26191), (289, 26221), (295, 26269), (296, 26281), (304, 26332), (315, 26404), (333, 26527), (340, 26569), (353, 26686), (355, 26698), (358, 26725), (361, 26743), (366, 26785), (372, 26845), (403, 27067), (418, 27103),

Gene: SuMoo\_47 Start: 28874, Stop: 31381, Start Num: 66

Candidate Starts for SuMoo\_47:

(Start: 66 @28874 has 85 MA's), (83, 29024), (89, 29066), (91, 29084), (107, 29165), (137, 29321), (184, 29609), (204, 29744), (249, 29993), (283, 30191), (308, 30350), (318, 30425), (320, 30437), (350, 30656), (353, 30686), (355, 30698), (361, 30743), (442, 31238), (467, 31316),

Gene: Subaru\_38 Start: 27593, Stop: 30082, Start Num: 66

Candidate Starts for Subaru\_38:

(21, 27440), (Start: 66 @27593 has 85 MA's), (81, 27722), (89, 27785), (91, 27803), (116, 27914), (148, 28046), (184, 28307), (186, 28325), (193, 28394), (200, 28427), (202, 28433), (206, 28454), (283, 28880), (320, 29126), (350, 29345), (353, 29375), (361, 29432), (365, 29471), (372, 29534), (383, 29648), (389, 29684), (420, 29810),

Gene: Sue2\_38 Start: 27023, Stop: 29533, Start Num: 64

Candidate Starts for Sue2\_38:

(Start: 64 @27023 has 19 MA's), (81, 27155), (89, 27218), (91, 27236), (93, 27251), (157, 27551), (163, 27599), (186, 27758), (190, 27779), (202, 27866), (242, 28100), (283, 28328), (303, 28466), (320, 28574), (350, 28793), (353, 28823), (361, 28880), (372, 28982), (376, 29033), (403, 29204), (417, 29240), (433, 29342),

Gene: SunnyD\_41 Start: 26395, Stop: 28857, Start Num: 46

Candidate Starts for SunnyD\_41:

(Start: 46 @26395 has 79 MA's), (Start: 66 @26440 has 85 MA's), (79, 26545), (86, 26614), (91, 26653), (148, 26887), (174, 27088), (186, 27163), (191, 27187), (198, 27259), (203, 27274), (204, 27280), (238, 27475), (249, 27520), (318, 27916), (320, 27928), (330, 27985), (349, 28144), (353, 28177), (367, 28279), (378, 28405), (392, 28498), (440, 28735),

Gene: SuperHands\_45 Start: 29963, Stop: 32467, Start Num: 66

Candidate Starts for SuperHands\_45:

(1, 29393), (4, 29459), (Start: 66 @29963 has 85 MA's), (79, 30068), (86, 30134), (89, 30155), (91, 30173), (97, 30203), (107, 30257), (137, 30413), (149, 30446), (184, 30701), (191, 30743), (204, 30836), (238, 31040), (259, 31133), (261, 31142), (283, 31283), (296, 31373), (307, 31436), (318, 31517), (320, 31529), (329, 31583), (350, 31748), (353, 31778), (355, 31790), (361, 31835), (367, 31880), (374, 31946), (446, 32339), (467, 32405),

Gene: Swervy\_42 Start: 27088, Stop: 29553, Start Num: 46

Candidate Starts for Swervy\_42:

(Start: 46 @27088 has 79 MA's), (79, 27238), (80, 27244), (85, 27304), (86, 27307), (91, 27346), (136, 27547), (156, 27643), (185, 27847), (186, 27856), (191, 27880), (203, 27967), (204, 27973), (296,

28465), (297, 28468), (318, 28609), (320, 28621), (326, 28669), (330, 28678), (343, 28798), (353, 28870), (367, 28972), (378, 29098), (383, 29143), (401, 29242), (440, 29428),

Gene: TG1\_30 Start: 23323, Stop: 25728, Start Num: 66

Candidate Starts for TG1\_30:

(42, 23245), (Start: 66 @23323 has 85 MA's), (76, 23392), (86, 23497), (91, 23536), (96, 23557), (104, 23596), (109, 23611), (139, 23719), (143, 23737), (149, 23773), (152, 23797), (164, 23896), (172, 23965), (183, 24025), (185, 24037), (191, 24070), (204, 24163), (217, 24259), (227, 24304), (232, 24328), (233, 24331), (239, 24379), (244, 24406), (260, 24475), (263, 24487), (275, 24535), (277, 24550), (282, 24589), (284, 24613), (288, 24631), (289, 24640), (294, 24682), (296, 24700), (303, 24748), (304, 24751), (318, 24844), (320, 24856), (330, 24913), (350, 25078), (353, 25108), (355, 25120), (367, 25210), (372, 25267), (381, 25369), (408, 25492),

Gene: Tallboi\_38 Start: 27745, Stop: 30258, Start Num: 66

Candidate Starts for Tallboi\_38:

(Start: 66 @27745 has 85 MA's), (81, 27874), (82, 27880), (89, 27937), (91, 27955), (103, 28024), (148, 28198), (157, 28270), (186, 28477), (193, 28546), (196, 28561), (202, 28585), (206, 28606), (283, 29041), (297, 29134), (320, 29287), (350, 29506), (353, 29536), (361, 29593), (378, 29764), (383, 29809), (385, 29824), (389, 29845), (403, 29917), (417, 29953), (472, 30184),

Gene: Tbone\_37 Start: 26525, Stop: 29017, Start Num: 66

Candidate Starts for Tbone\_37:

(Start: 66 @26525 has 85 MA's), (80, 26636), (81, 26654), (89, 26717), (91, 26735), (103, 26804), (126, 26894), (157, 27050), (168, 27134), (170, 27140), (183, 27236), (186, 27257), (191, 27281), (193, 27326), (202, 27365), (206, 27386), (283, 27812), (320, 28058), (350, 28277), (353, 28307), (361, 28364), (365, 28403), (383, 28580), (417, 28724), (439, 28844), (472, 28946),

Gene: Teagster\_42 Start: 27288, Stop: 29750, Start Num: 46

Candidate Starts for Teagster\_42:

(Start: 46 @27288 has 79 MA's), (Start: 66 @27333 has 85 MA's), (79, 27438), (86, 27507), (91, 27546), (148, 27780), (174, 27981), (186, 28056), (191, 28080), (198, 28152), (203, 28167), (204, 28173), (238, 28368), (249, 28413), (259, 28461), (318, 28809), (320, 28821), (330, 28878), (349, 29037), (353, 29070), (367, 29172), (378, 29298), (392, 29391), (440, 29628),

Gene: TforTroy\_39 Start: 26738, Stop: 29230, Start Num: 66

Candidate Starts for TforTroy\_39:

(Start: 66 @26738 has 85 MA's), (80, 26849), (81, 26867), (89, 26930), (91, 26948), (93, 26963), (152, 27218), (168, 27347), (186, 27470), (190, 27491), (202, 27578), (283, 28025), (296, 28115), (297, 28118), (320, 28271), (346, 28469), (350, 28490), (353, 28520), (361, 28577), (383, 28793), (439, 29057), (472, 29159),

Gene: ThursdayNight\_41 Start: 27625, Stop: 30120, Start Num: 66

Candidate Starts for ThursdayNight\_41:

(Start: 66 @27625 has 85 MA's), (67, 27631), (86, 27796), (89, 27817), (91, 27835), (98, 27871), (185, 28342), (186, 28351), (190, 28372), (200, 28453), (283, 28906), (303, 29044), (308, 29065), (315, 29119), (333, 29242), (337, 29266), (350, 29371), (353, 29401), (361, 29458), (366, 29500), (372, 29560), (381, 29662), (418, 29818),

Gene: Tian\_37 Start: 27537, Stop: 30023, Start Num: 66

Candidate Starts for Tian\_37:

(Start: 66 @27537 has 85 MA's), (80, 27648), (81, 27666), (89, 27729), (91, 27747), (157, 28062), (183, 28248), (186, 28269), (193, 28338), (200, 28371), (283, 28824), (320, 29070), (350, 29289), (353, 29319), (361, 29376), (365, 29415), (372, 29478), (383, 29592),

Gene: Tuck\_41 Start: 28669, Stop: 31155, Start Num: 66

Candidate Starts for Tuck\_41:

(8, 28249), (12, 28393), (15, 28408), (18, 28477), (Start: 66 @28669 has 85 MA's), (80, 28780), (81, 28798), (89, 28861), (91, 28879), (120, 28999), (184, 29380), (186, 29398), (193, 29467), (202, 29506), (283, 29953), (292, 29995), (320, 30199), (350, 30418), (353, 30448), (361, 30505), (372, 30607), (383, 30721), (389, 30757), (451, 31033),

Gene: TukTuk\_42 Start: 27096, Stop: 29561, Start Num: 46

Candidate Starts for TukTuk\_42:

(Start: 46 @27096 has 79 MA's), (79, 27246), (80, 27252), (85, 27312), (86, 27315), (91, 27354), (136, 27555), (156, 27651), (186, 27864), (191, 27888), (203, 27975), (204, 27981), (288, 28404), (296, 28473), (297, 28476), (318, 28617), (320, 28629), (326, 28677), (330, 28686), (343, 28806), (353, 28878), (367, 28980), (378, 29106), (383, 29151), (401, 29250), (440, 29436),

Gene: Turab\_35 Start: 26008, Stop: 28521, Start Num: 66

Candidate Starts for Turab\_35:

(Start: 66 @26008 has 85 MA's), (82, 26143), (89, 26200), (91, 26218), (186, 26740), (202, 26848), (206, 26869), (270, 27199), (283, 27304), (297, 27397), (320, 27550), (350, 27769), (353, 27799), (361, 27856), (367, 27901), (372, 27958), (378, 28027), (383, 28072), (385, 28087), (389, 28108), (403, 28180), (417, 28216),

Gene: Tutumahutu\_38 Start: 26696, Stop: 29188, Start Num: 66

Candidate Starts for Tutumahutu\_38:

(Start: 66 @26696 has 85 MA's), (80, 26807), (81, 26825), (89, 26888), (91, 26906), (157, 27221), (168, 27305), (170, 27311), (186, 27428), (193, 27497), (202, 27536), (217, 27638), (283, 27983), (296, 28073), (320, 28229), (350, 28448), (353, 28478), (361, 28535), (365, 28574), (372, 28637), (383, 28751), (417, 28895), (439, 29015), (472, 29117),

Gene: Tweety19\_37 Start: 25209, Stop: 27740, Start Num: 66

Candidate Starts for Tweety19\_37:

(Start: 66 @25209 has 85 MA's), (81, 25338), (82, 25344), (89, 25401), (91, 25419), (183, 25953), (186, 25974), (188, 25989), (200, 26076), (202, 26082), (221, 26205), (283, 26529), (297, 26622), (320, 26775), (350, 26994), (353, 27024), (361, 27081), (365, 27120), (372, 27183), (381, 27285), (391, 27339), (423, 27483), (439, 27561), (475, 27678),

Gene: UtzChips\_44 Start: 27914, Stop: 30424, Start Num: 66

Candidate Starts for UtzChips\_44:

(Start: 66 @27914 has 85 MA's), (81, 28043), (83, 28064), (89, 28106), (91, 28124), (107, 28205), (180, 28631), (283, 29231), (307, 29384), (318, 29465), (320, 29477), (350, 29696), (353, 29726), (355, 29738), (361, 29783), (390, 30038), (410, 30134),

Gene: VResidence\_38 Start: 26148, Stop: 28664, Start Num: 66

Candidate Starts for VResidence\_38:

(50, 26100), (Start: 66 @26148 has 85 MA's), (80, 26259), (82, 26283), (89, 26340), (91, 26358), (148, 26628), (163, 26748), (169, 26787), (186, 26907), (193, 26976), (206, 27036), (283, 27462), (304, 27603), (320, 27708), (323, 27720), (348, 27921), (350, 27927), (353, 27957), (361, 28014), (365, 28053), (367, 28059), (372, 28116), (403, 28338), (433, 28476), (439, 28494), (472, 28596),

Gene: Vash\_31 Start: 23128, Stop: 25548, Start Num: 66

Candidate Starts for Vash\_31:

(Start: 66 @23128 has 85 MA's), (76, 23197), (101, 23383), (105, 23404), (109, 23416), (131, 23512), (147, 23593), (152, 23623), (170, 23758), (172, 23791), (184, 23854), (185, 23863), (189, 23890),

(191, 23896), (195, 23953), (200, 23974), (207, 24004), (233, 24151), (239, 24199), (244, 24226), (256, 24283), (260, 24295), (263, 24307), (269, 24334), (275, 24355), (282, 24409), (284, 24433), (288, 24451), (289, 24460), (290, 24466), (294, 24502), (303, 24568), (304, 24571), (305, 24577), (333, 24766), (350, 24898), (353, 24928), (366, 25027), (367, 25030), (372, 25087), (380, 25177), (381, 25189), (398, 25282), (405, 25303), (413, 25330), (415, 25333), (430, 25432), (446, 25489),

Gene: Vitas\_39 Start: 24969, Stop: 27440, Start Num: 46

Candidate Starts for Vitas\_39:

(Start: 46 @24969 has 79 MA's), (86, 25185), (87, 25194), (91, 25224), (172, 25653), (180, 25698), (185, 25725), (186, 25734), (188, 25749), (203, 25845), (204, 25851), (214, 25929), (296, 26343), (297, 26346), (314, 26460), (320, 26499), (329, 26553), (343, 26676), (349, 26715), (350, 26718), (353, 26748), (357, 26772), (367, 26850), (416, 27174), (440, 27315), (453, 27372), (455, 27378), (459, 27405),

Gene: VroomVroom\_42 Start: 27635, Stop: 30127, Start Num: 66

Candidate Starts for VroomVroom\_42:

(44, 27563), (Start: 66 @27635 has 85 MA's), (81, 27764), (89, 27827), (91, 27845), (149, 28070), (163, 28187), (183, 28322), (191, 28367), (196, 28427), (202, 28451), (204, 28460), (268, 28796), (283, 28907), (287, 28919), (315, 29120), (320, 29153), (323, 29165), (337, 29267), (349, 29369), (353, 29402), (361, 29459), (377, 29627), (391, 29717), (402, 29777),

Gene: WalkingDead\_43 Start: 28574, Stop: 31048, Start Num: 46

Candidate Starts for WalkingDead\_43:

(Start: 46 @28574 has 79 MA's), (85, 28790), (86, 28793), (91, 28832), (136, 29033), (149, 29069), (156, 29129), (185, 29333), (186, 29342), (188, 29357), (191, 29366), (203, 29453), (204, 29459), (217, 29552), (255, 29726), (296, 29951), (297, 29954), (318, 30095), (320, 30107), (326, 30155), (330, 30164), (343, 30284), (353, 30356), (367, 30458), (378, 30584), (379, 30602), (383, 30629), (439, 30911), (440, 30914), (453, 30971), (474, 31028),

Gene: Warda\_38 Start: 26701, Stop: 29193, Start Num: 66

Candidate Starts for Warda\_38:

(Start: 66 @26701 has 85 MA's), (80, 26812), (81, 26830), (89, 26893), (91, 26911), (103, 26980), (126, 27070), (157, 27226), (168, 27310), (170, 27316), (183, 27412), (186, 27433), (191, 27457), (193, 27502), (202, 27541), (206, 27562), (283, 27988), (320, 28234), (350, 28453), (353, 28483), (361, 28540), (365, 28579), (383, 28756), (417, 28900), (439, 29020), (472, 29122),

Gene: Wildwest\_37 Start: 26141, Stop: 28639, Start Num: 66

Candidate Starts for Wildwest\_37:

(22, 25991), (39, 26048), (Start: 66 @26141 has 85 MA's), (81, 26270), (89, 26333), (91, 26351), (103, 26420), (148, 26594), (186, 26873), (193, 26942), (200, 26975), (283, 27437), (288, 27458), (320, 27683), (350, 27902), (353, 27932), (361, 27989), (365, 28028), (372, 28091), (383, 28205),

Gene: Wyvern\_46 Start: 32534, Stop: 29901, Start Num: 72

Candidate Starts for Wyvern\_46:

(55, 32585), (59, 32573), (60, 32570), (Start: 72 @32534 has 1 MA's), (84, 32387), (86, 32378), (146, 32030), (150, 32009), (173, 31835), (176, 31814), (179, 31799), (181, 31784), (184, 31772), (191, 31730), (201, 31652), (204, 31640), (240, 31403), (250, 31361), (268, 31280), (279, 31229), (302, 31037), (306, 31019), (312, 30971), (320, 30932), (327, 30881), (331, 30869), (336, 30824), (345, 30740), (347, 30731), (348, 30719), (361, 30626), (363, 30596), (370, 30557), (374, 30515), (394, 30341), (396, 30329), (408, 30263), (409, 30254), (413, 30239), (431, 30116), (432, 30110), (438, 30089), (444, 30068), (468, 29972),

Gene: Yang\_38 Start: 26235, Stop: 28721, Start Num: 66

Candidate Starts for Yang\_38:

(Start: 66 @26235 has 85 MA's), (80, 26346), (81, 26364), (89, 26427), (91, 26445), (125, 26592), (168, 26844), (186, 26967), (190, 26988), (283, 27522), (320, 27768), (346, 27966), (350, 27987), (353, 28017), (361, 28074), (382, 28281),

Gene: YesChef\_38 Start: 26673, Stop: 29165, Start Num: 66

Candidate Starts for YesChef\_38:

(Start: 66 @26673 has 85 MA's), (80, 26784), (81, 26802), (89, 26865), (91, 26883), (148, 27126), (168, 27282), (170, 27288), (186, 27405), (193, 27474), (202, 27513), (217, 27615), (283, 27960), (296, 28050), (320, 28206), (350, 28425), (353, 28455), (361, 28512), (365, 28551), (372, 28614), (383, 28728), (417, 28872), (439, 28992), (472, 29094),

Gene: phiBT1\_9a Start: 24587, Stop: 27013, Start Num: 66

Candidate Starts for phiBT1\_9a:

(Start: 66 @24587 has 85 MA's), (Start: 68 @24596 has 2 MA's), (76, 24656), (81, 24719), (101, 24842), (104, 24860), (109, 24875), (141, 25013), (143, 25022), (147, 25052), (148, 25055), (149, 25058), (153, 25085), (155, 25109), (172, 25250), (184, 25313), (185, 25322), (191, 25355), (195, 25412), (233, 25616), (244, 25691), (260, 25760), (263, 25772), (265, 25781), (275, 25820), (282, 25874), (284, 25898), (289, 25925), (294, 25967), (296, 25985), (303, 26033), (307, 26048), (318, 26129), (320, 26141), (349, 26360), (350, 26363), (353, 26393), (364, 26486), (381, 26654), (383, 26666), (398, 26747), (413, 26795), (415, 26798), (430, 26897), (433, 26912), (434, 26915), (446, 26954),

Gene: phiSASD1\_11 Start: 25621, Stop: 28125, Start Num: 66

Candidate Starts for phiSASD1\_11:

(61, 25606), (Start: 66 @25621 has 85 MA's), (67, 25627), (85, 25792), (90, 25825), (91, 25834), (103, 25894), (125, 25999), (149, 26134), (152, 26158), (153, 26161), (155, 26185), (158, 26212), (159, 26218), (162, 26236), (172, 26326), (184, 26389), (207, 26545), (208, 26569), (231, 26671), (234, 26692), (269, 26860), (272, 26869), (273, 26872), (290, 27046), (297, 27103), (311, 27205), (315, 27223), (317, 27235), (318, 27244), (323, 27268), (330, 27313), (333, 27346), (350, 27475), (353, 27505), (366, 27604), (373, 27670), (381, 27766), (383, 27778), (430, 28009),