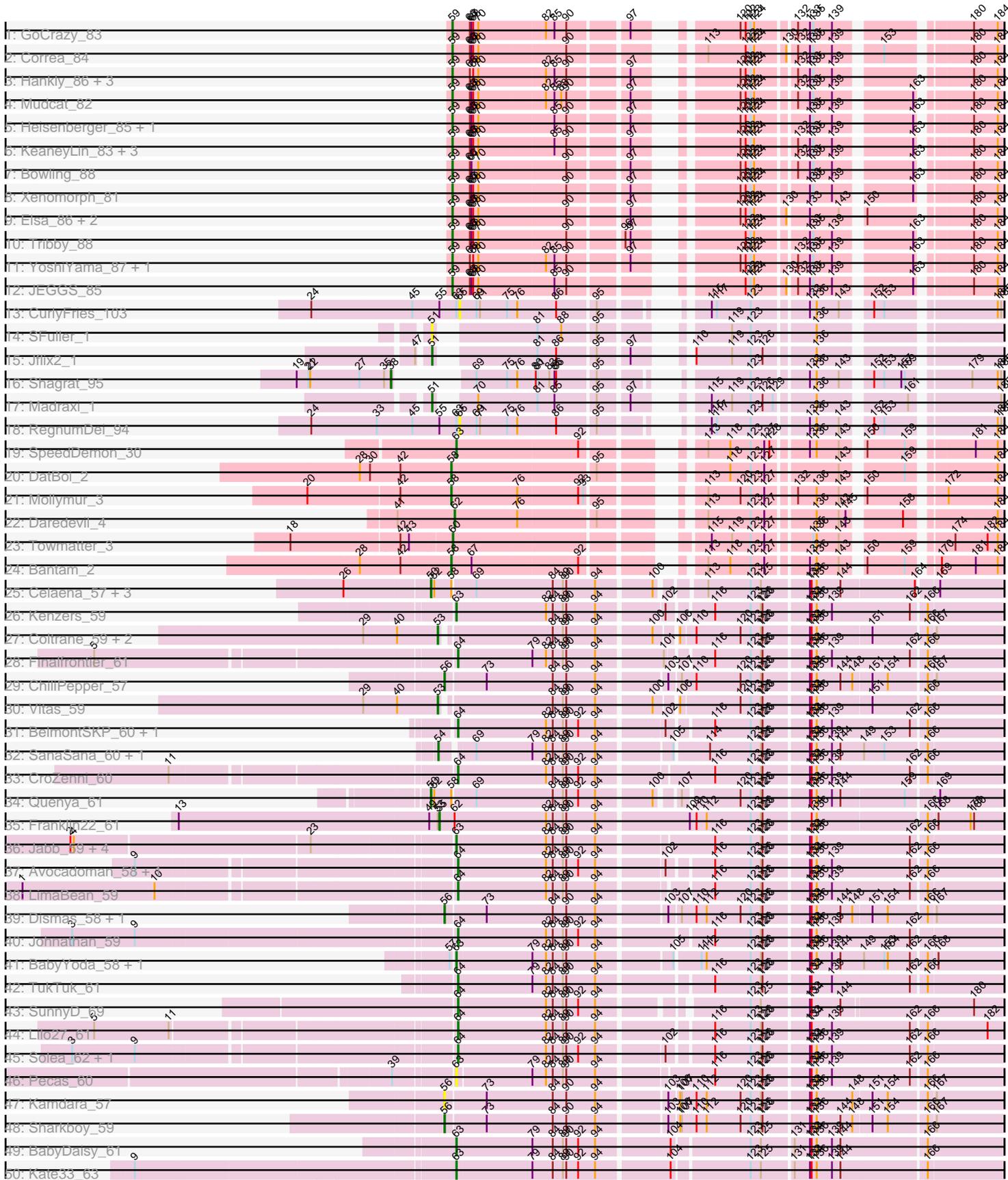
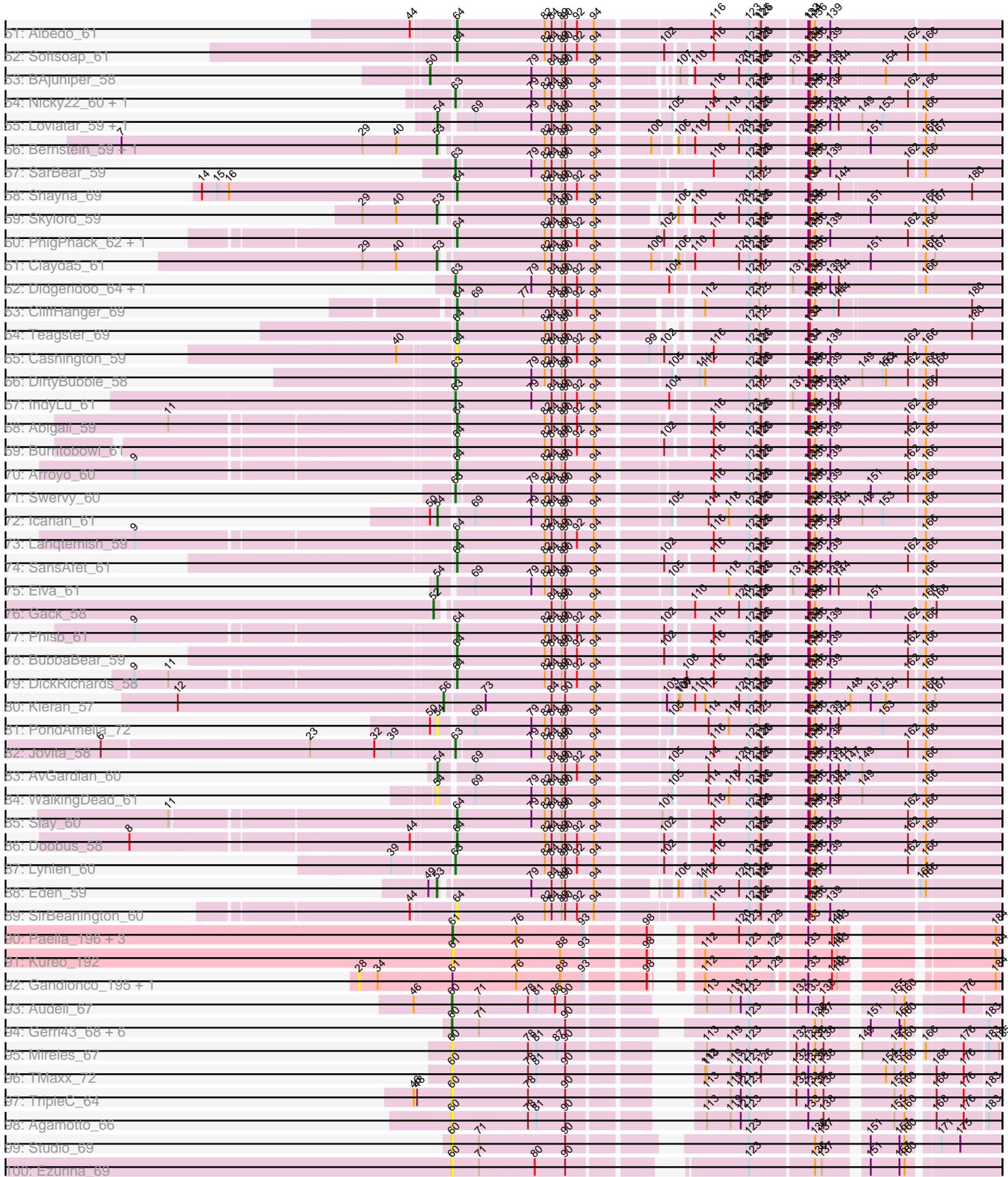


Pham 285349



Pham 285349





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 285349 Report

This analysis was run 03/28/26 on database version 641.

Pham number 285349 has 148 members, 31 are drafts.

Phages represented in each track:

- Track 1 : GoCrazy\_83
- Track 2 : Correa\_84
- Track 3 : Hankly\_86, Kardesai\_86, Mooshroom\_87, Benllo\_83
- Track 4 : Mudcat\_82
- Track 5 : Heisenberger\_85, Cheesy\_87
- Track 6 : KeaneyLin\_83, NapoleonB\_87, Dynamite\_86, Circum\_86
- Track 7 : Bowling\_88
- Track 8 : Xenomorph\_81
- Track 9 : Elsa\_86, Arcadia\_86, Nason\_86
- Track 10 : Tribby\_88
- Track 11 : YoshiYama\_87, BenitoAntonio\_86
- Track 12 : JEGGS\_85
- Track 13 : CurlyFries\_103
- Track 14 : SFuller\_1
- Track 15 : Jflix2\_1
- Track 16 : Shagrat\_95
- Track 17 : Madraxi\_1
- Track 18 : RegnumDei\_94
- Track 19 : SpeedDemon\_30
- Track 20 : DatBoi\_2
- Track 21 : Mollymur\_3
- Track 22 : Daredevil\_4
- Track 23 : Towmatter\_3
- Track 24 : Bantam\_2
- Track 25 : Celaena\_57, Bachaco\_57, Katzastrophic\_58, FlameThrower\_56
- Track 26 : Kenzers\_59
- Track 27 : Coltrane\_59, Armstrong\_59, Brahms\_59
- Track 28 : Finalfrontier\_61
- Track 29 : ChiliPepper\_57
- Track 30 : Vitas\_59
- Track 31 : BelmontSKP\_60, AnnaLie\_60
- Track 32 : SanaSana\_60, Stoor\_58
- Track 33 : CroZenni\_60
- Track 34 : Quenya\_61
- Track 35 : Franklin22\_61
- Track 36 : Jabb\_59, Eula\_59, MsUbiquitous\_59, AylexOG\_61, CupcakePrincess\_59
- Track 37 : Avocadoman\_58, Albright\_57

- Track 38 : LimaBean\_59
- Track 39 : Dismas\_58, Rona\_57
- Track 40 : Johnathan\_59
- Track 41 : BabyYoda\_58, Stromboli\_58
- Track 42 : TukTuk\_61
- Track 43 : SunnyD\_69
- Track 44 : Lilo27\_61
- Track 45 : Solea\_62, Milomuff\_61
- Track 46 : Pecas\_60
- Track 47 : Kamdara\_57
- Track 48 : Sharkboy\_59
- Track 49 : BabyDaisy\_61
- Track 50 : Kate33\_63
- Track 51 : Albedo\_61
- Track 52 : Softsoap\_61
- Track 53 : BAjuniper\_58
- Track 54 : Nicky22\_60, QMacho\_61
- Track 55 : Loviatar\_59, Akino08\_59
- Track 56 : Bernstein\_59, Rollins\_59
- Track 57 : SarBear\_59
- Track 58 : Shayna\_69
- Track 59 : Skylord\_59
- Track 60 : PhigPhack\_62, Bengal\_62
- Track 61 : Clayda5\_61
- Track 62 : Didgeridoo\_64, PastaFagioli\_60
- Track 63 : CliffHanger\_69
- Track 64 : Teagster\_69
- Track 65 : Cashington\_59
- Track 66 : DirtyBubble\_58
- Track 67 : IndyLu\_61
- Track 68 : Abigail\_59
- Track 69 : Burritobowl\_61
- Track 70 : Arroyo\_60
- Track 71 : Swervy\_60
- Track 72 : Icarian\_61
- Track 73 : Lahqtemish\_59
- Track 74 : SansAfet\_61
- Track 75 : Elva\_61
- Track 76 : Gack\_58
- Track 77 : Phisb\_61
- Track 78 : BubbaBear\_59
- Track 79 : DickRichards\_58
- Track 80 : Kieran\_57
- Track 81 : PondAmelia\_72
- Track 82 : Jovita\_58
- Track 83 : AvGardian\_60
- Track 84 : WalkingDead\_61
- Track 85 : Slay\_60
- Track 86 : Doobus\_58
- Track 87 : Lynlen\_60
- Track 88 : Eden\_59
- Track 89 : SirBeanington\_60
- Track 90 : Paella\_196, JeNeSaisPas\_190, Qui\_196, Elver\_195

- Track 91 : Kureo\_192
- Track 92 : Gandionco\_195, Marianna39\_194
- Track 93 : Audell\_67
- Track 94 : Gerri43\_68, Neuville\_67, AnnabelLee\_69, CardboardBox\_69, ChipsNGuac\_68, Roberts\_67, ChamoyPickle\_69
- Track 95 : Mireles\_67
- Track 96 : TMaxx\_72
- Track 97 : TripleC\_64
- Track 98 : Agamoto\_66
- Track 99 : Studio\_69
- Track 100 : Ezurina\_69
- Track 101 : LastNadiia\_65
- Track 102 : Makima\_66
- Track 103 : RomansRevenge\_40, Boise\_39
- Track 104 : Triscuit\_67
- Track 105 : Huwbert\_68
- Track 106 : Magritte\_52
- Track 107 : Cantare\_49

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

The start number called the most often in the published annotations is 64, it was called in 29 of the 117 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail\_59, Albedo\_61, Albright\_57, AnnaLie\_60, Arroyo\_60, Avocadoman\_58, BelmontSKP\_60, Bengal\_62, BubbaBear\_59, Burritobowl\_61, Cashington\_59, CliffHanger\_69, CroZenni\_60, DickRichards\_58, Doobus\_58, Finalfrontier\_61, Johnathan\_59, Lahqtemish\_59, Lilo27\_61, LimaBean\_59, Milomuff\_61, PhigPhack\_62, Phisb\_61, SansAfet\_61, Shayna\_69, SirBeanington\_60, Slay\_60, Softsoap\_61, Solea\_62, SunnyD\_69, Teagster\_69, TukTuk\_61,

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

- Boise\_39, RomansRevenge\_40,

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

- Agamoto\_66, Akino08\_59, AnnabelLee\_69, Arcadia\_86, Armstrong\_59, Audell\_67, AvGuardian\_60, AylexOG\_61, BAjuniper\_58, BabyDaisy\_61, BabyYoda\_58, Bachaco\_57, Bantam\_2, BenitoAntonio\_86, Benllo\_83, Bernstein\_59, Bowling\_88, Brahms\_59, Cantare\_49, CardboardBox\_69, Celaena\_57, ChamoyPickle\_69, Cheesy\_87, ChiliPepper\_57, ChipsNGuac\_68, Circum\_86, Clayda5\_61, Coltrane\_59, Correa\_84, CupcakePrincess\_59, CurlyFries\_103, Daredevil\_4, DatBoi\_2, Didgeridoo\_64, DirtyBubble\_58, Dismas\_58, Dynamite\_86, Eden\_59, Elsa\_86, Elva\_61, Elver\_195, Eula\_59, Ezurina\_69, FlameThrower\_56, Franklin22\_61, Gack\_58, Gandionco\_195, Gerri43\_68, GoCrazy\_83, Hankly\_86, Heisenberger\_85, Huwbert\_68, Icarian\_61, IndyLu\_61, JEGGS\_85, Jabb\_59, JeNeSaisPas\_190, Jflix2\_1, Jovita\_58, Kamdara\_57, Kardesai\_86, Kate33\_63, Katzastrophic\_58, KeaneyLin\_83, Kenzers\_59, Kieran\_57, Kureo\_192, LastNadiia\_65, Loviatar\_59, Lynlen\_60, Madraxi\_1, Magritte\_52, Makima\_66, Marianna39\_194, Mireles\_67, Mollymur\_3, Mooshroom\_87, MsUbiquitous\_59, Mudcat\_82, NapoleonB\_87,

Nason\_86, Neuville\_67, Nicky22\_60, Paella\_196, PastaFagioli\_60, Pecas\_60, PondAmelia\_72, QMacho\_61, Quenya\_61, Qui\_196, RegnumDei\_94, Roberts\_67, Rollins\_59, Rona\_57, SFuller\_1, SanaSana\_60, SarBear\_59, Shagrat\_95, Sharkboy\_59, Skylord\_59, SpeedDemon\_30, Stoor\_58, Stromboli\_58, Studio\_69, Swervy\_60, TMaxx\_72, Towmatter\_3, Tribby\_88, TripleC\_64, Triscuit\_67, Vitas\_59, WalkingDead\_61, Xenomorph\_81, YoshiYama\_87,

### Summary by start number:

#### Start 28:

- Found in 4 of 148 ( 2.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Gandionco\_195 (FK), Marianna39\_194 (FK),

#### Start 38:

- Found in 1 of 148 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shagrat\_95 (CF),

#### Start 50:

- Found in 8 of 148 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 6 of 117
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BAjuniper\_58 (EB), Bachaco\_57 (EB), Celaena\_57 (EB), FlameThrower\_56 (EB), Katzastrophic\_58 (EB), Quenya\_61 (EB),

#### Start 51:

- Found in 3 of 148 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 2 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jflix2\_1 (CF), Madraxi\_1 (CF), SFuller\_1 (CF),

#### Start 52:

- Found in 6 of 148 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Gack\_58 (EB),

#### Start 53:

- Found in 10 of 148 ( 6.8% ) of genes in pham
- Manual Annotations of this start: 9 of 117
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Armstrong\_59 (EB), Bernstein\_59 (EB), Brahms\_59 (EB), Clayda5\_61 (EB), Coltrane\_59 (EB), Eden\_59 (EB), Rollins\_59 (EB), Skylord\_59 (EB), Vitas\_59 (EB),

#### Start 54:

- Found in 9 of 148 ( 6.1% ) of genes in pham
- Manual Annotations of this start: 7 of 117

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akino08\_59 (EB), AvGardian\_60 (EB), Elva\_61 (EB), Icarian\_61 (EB), Loviatar\_59 (EB), PondAmelia\_72 (EB), SanaSana\_60 (EB), Stoor\_58 (EB), WalkingDead\_61 (EB),

#### Start 55:

- Found in 5 of 148 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 2 of 117
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Boise\_39 (FT), Franklin22\_61 (EB), RomansRevenge\_40 (FT),

#### Start 56:

- Found in 6 of 148 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 5 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChiliPepper\_57 (EB), Dismas\_58 (EB), Kamdara\_57 (EB), Kieran\_57 (EB), Rona\_57 (EB), Sharkboy\_59 (EB),

#### Start 58:

- Found in 11 of 148 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 5 of 117
- Called 45.5% of time when present
- Phage (with cluster) where this start called: Bantam\_2 (DL), Cantare\_49 (singleton), DatBoi\_2 (DL), Huwburt\_68 (GG), Mollymur\_3 (DL),

#### Start 59:

- Found in 22 of 148 ( 14.9% ) of genes in pham
- Manual Annotations of this start: 21 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arcadia\_86 (AM), BenitoAntonio\_86 (AM), Benllo\_83 (AM), Bowling\_88 (AM), Cheesy\_87 (AM), Circum\_86 (AM), Correa\_84 (AM), Dynamite\_86 (AM), Elsa\_86 (AM), GoCrazy\_83 (AM), Hankly\_86 (AM), Heisenberger\_85 (AM), JEGGS\_85 (AM), Kardesai\_86 (AM), KeaneyLin\_83 (AM), Mooshroom\_87 (AM), Mudcat\_82 (AM), NapoleonB\_87 (AM), Nason\_86 (AM), Tribby\_88 (AM), Xenomorph\_81 (AM), YoshiYama\_87 (AM),

#### Start 60:

- Found in 17 of 148 ( 11.5% ) of genes in pham
- Manual Annotations of this start: 3 of 117
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agamoto\_66 (FR), AnnabelLee\_69 (FR), Audell\_67 (FR), CardboardBox\_69 (FR), ChamoyPickle\_69 (FR), ChipsNGuac\_68 (FR), Ezurina\_69 (FR), Gerri43\_68 (FR), LastNadiia\_65 (FR), Makima\_66 (FR), Mireles\_67 (FR), Neuville\_67 (FR), Roberts\_67 (FR), Studio\_69 (FR), TMaxx\_72 (FR), Towmatter\_3 (DL), TripleC\_64 (FR),

#### Start 61:

- Found in 7 of 148 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 3 of 117
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Elver\_195 (FK), JeNeSaisPas\_190 (FK), Kureo\_192 (FK), Paella\_196 (FK), Qui\_196 (FK),

Start 62:

- Found in 2 of 148 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 117
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Daredevil\_4 (DL),

Start 63:

- Found in 27 of 148 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 22 of 117
- Called 88.9% of time when present
- Phage (with cluster) where this start called: AylexOG\_61 (EB), BabyDaisy\_61 (EB), BabyYoda\_58 (EB), CupcakePrincess\_59 (EB), Didgeridoo\_64 (EB), DirtyBubble\_58 (EB), Eula\_59 (EB), IndyLu\_61 (EB), Jabb\_59 (EB), Jovita\_58 (EB), Kate33\_63 (EB), Kenzers\_59 (EB), Lynlen\_60 (EB), Magritte\_52 (singleton), MsUbiquitous\_59 (EB), Nicky22\_60 (EB), PastaFagioli\_60 (EB), Pecas\_60 (EB), QMacho\_61 (EB), SarBear\_59 (EB), SpeedDemon\_30 (DL), Stromboli\_58 (EB), Swervy\_60 (EB), Triscuit\_67 (GG),

Start 64:

- Found in 34 of 148 ( 23.0% ) of genes in pham
- Manual Annotations of this start: 29 of 117
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Abigail\_59 (EB), Albedo\_61 (EB), Albright\_57 (EB), AnnaLie\_60 (EB), Arroyo\_60 (EB), Avocadoman\_58 (EB), BelmontSKP\_60 (EB), Bengal\_62 (EB), BubbaBear\_59 (EB), Burritobowl\_61 (EB), Cashington\_59 (EB), CliffHanger\_69 (EB), CroZenni\_60 (EB), DickRichards\_58 (EB), Doobus\_58 (EB), Finalfrontier\_61 (EB), Johnathan\_59 (EB), Lahqtemish\_59 (EB), Lilo27\_61 (EB), LimaBean\_59 (EB), Milomuff\_61 (EB), PhigPhack\_62 (EB), Phisb\_61 (EB), SansAfet\_61 (EB), Shayna\_69 (EB), SirBeanington\_60 (EB), Slay\_60 (EB), Softsoap\_61 (EB), Solea\_62 (EB), SunnyD\_69 (EB), Teagster\_69 (EB), TukTuk\_61 (EB),

Start 65:

- Found in 2 of 148 ( 1.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CurlyFries\_103 (CF), RegnumDei\_94 (CF),

**Summary by clusters:**

There are 9 clusters represented in this pham: FR, FT, DL, AM, singleton, CF, GG, FK, EB,

Info for manual annotations of cluster AM:

- Start number 59 was manually annotated 21 times for cluster AM.

Info for manual annotations of cluster CF:

- Start number 38 was manually annotated 1 time for cluster CF.
- Start number 51 was manually annotated 2 times for cluster CF.

Info for manual annotations of cluster DL:

- Start number 58 was manually annotated 3 times for cluster DL.
- Start number 60 was manually annotated 1 time for cluster DL.
- Start number 62 was manually annotated 1 time for cluster DL.
- Start number 63 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster EB:

- Start number 50 was manually annotated 6 times for cluster EB.
- Start number 52 was manually annotated 1 time for cluster EB.
- Start number 53 was manually annotated 9 times for cluster EB.
- Start number 54 was manually annotated 7 times for cluster EB.
- Start number 55 was manually annotated 1 time for cluster EB.
- Start number 56 was manually annotated 5 times for cluster EB.
- Start number 63 was manually annotated 19 times for cluster EB.
- Start number 64 was manually annotated 29 times for cluster EB.

Info for manual annotations of cluster FK:

- Start number 61 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster FR:

- Start number 60 was manually annotated 2 times for cluster FR.

Info for manual annotations of cluster FT:

- Start number 55 was manually annotated 1 time for cluster FT.

Info for manual annotations of cluster GG:

- Start number 58 was manually annotated 1 time for cluster GG.
- Start number 63 was manually annotated 1 time for cluster GG.

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

Gene: Abigail\_59 Start: 37497, Stop: 38399, Start Num: 64

Candidate Starts for Abigail\_59:

(11, 37032), (Start: 64 @37497 has 29 MA's), (82, 37650), (84, 37662), (89, 37680), (90, 37686), (92, 37707), (94, 37737), (116, 37911), (123, 37974), (125, 37992), (126, 37995), (133, 38070), (134, 38073), (136, 38082), (139, 38109), (162, 38244), (166, 38268),

Gene: Agamoto\_66 Start: 40968, Stop: 41777, Start Num: 60

Candidate Starts for Agamoto\_66:

(Start: 60 @40968 has 3 MA's), (78, 41100), (81, 41115), (90, 41166), (113, 41316), (119, 41358), (121, 41376), (123, 41391), (133, 41487), (138, 41514), (155, 41616), (160, 41634), (168, 41670), (176, 41718), (183, 41754),

Gene: Akino08\_59 Start: 39149, Stop: 40081, Start Num: 54

Candidate Starts for Akino08\_59:

(Start: 54 @39149 has 7 MA's), (69, 39200), (79, 39299), (84, 39335), (89, 39353), (90, 39359), (94, 39410), (105, 39530), (114, 39584), (118, 39620), (123, 39656), (125, 39674), (126, 39677), (133, 39752), (134, 39755), (136, 39764), (139, 39791), (144, 39806), (149, 39845), (153, 39881), (166, 39950),

Gene: Albedo\_61 Start: 38402, Stop: 39319, Start Num: 64

Candidate Starts for Albedo\_61:

(44, 38333), (Start: 64 @38402 has 29 MA's), (82, 38558), (84, 38570), (89, 38588), (90, 38594), (92, 38615), (94, 38645), (116, 38831), (123, 38894), (125, 38912), (126, 38915), (133, 38990), (134, 38993), (136, 39002), (139, 39029),

Gene: Albright\_57 Start: 36898, Stop: 37803, Start Num: 64

Candidate Starts for Albright\_57:

(9, 36373), (Start: 64 @36898 has 29 MA's), (82, 37051), (84, 37063), (89, 37081), (90, 37087), (92, 37108), (94, 37138), (102, 37246), (116, 37315), (123, 37378), (125, 37396), (126, 37399), (133, 37474), (134, 37477), (136, 37486), (139, 37513), (162, 37648), (166, 37672),

Gene: AnnaLie\_60 Start: 38333, Stop: 39238, Start Num: 64

Candidate Starts for AnnaLie\_60:

(Start: 64 @38333 has 29 MA's), (82, 38486), (84, 38498), (89, 38516), (90, 38522), (92, 38543), (94, 38573), (102, 38681), (116, 38750), (123, 38813), (125, 38831), (126, 38834), (133, 38909), (134, 38912), (136, 38921), (139, 38948), (162, 39083), (166, 39107),

Gene: AnnabelLee\_69 Start: 38383, Stop: 39231, Start Num: 60

Candidate Starts for AnnabelLee\_69:

(Start: 60 @38383 has 3 MA's), (71, 38431), (90, 38581), (123, 38836), (136, 38944), (137, 38956), (151, 39019), (157, 39070), (160, 39079), (183, 39208),

Gene: Arcadia\_86 Start: 50975, Stop: 51781, Start Num: 59

Candidate Starts for Arcadia\_86:

(Start: 59 @50975 has 21 MA's), (66, 51005), (67, 51008), (68, 51011), (70, 51020), (90, 51170), (97, 51263), (120, 51389), (122, 51398), (123, 51407), (124, 51413), (130, 51461), (133, 51494), (143, 51545), (150, 51572), (180, 51731), (184, 51770),

Gene: Armstrong\_59 Start: 36227, Stop: 37141, Start Num: 53

Candidate Starts for Armstrong\_59:

(29, 36095), (40, 36155), (Start: 53 @36227 has 9 MA's), (84, 36410), (89, 36428), (90, 36434), (94, 36485), (100, 36572), (106, 36602), (110, 36623), (120, 36701), (123, 36719), (125, 36737), (126, 36740), (133, 36815), (134, 36818), (136, 36827), (151, 36920), (166, 37010), (167, 37022),

Gene: Arroyo\_60 Start: 38445, Stop: 39356, Start Num: 64

Candidate Starts for Arroyo\_60:

(9, 37914), (Start: 64 @38445 has 29 MA's), (82, 38598), (84, 38610), (89, 38628), (90, 38634), (94, 38685), (116, 38868), (123, 38931), (125, 38949), (126, 38952), (133, 39027), (134, 39030), (136, 39039), (139, 39066), (162, 39201), (166, 39225),

Gene: Audell\_67 Start: 41020, Stop: 41829, Start Num: 60

Candidate Starts for Audell\_67:

(46, 40954), (Start: 60 @41020 has 3 MA's), (71, 41068), (78, 41152), (81, 41167), (86, 41200), (90, 41218), (113, 41368), (119, 41410), (121, 41428), (123, 41443), (132, 41518), (133, 41539), (138, 41566), (155, 41668), (160, 41686), (176, 41770),

Gene: AvGardian\_60 Start: 38063, Stop: 38998, Start Num: 54

Candidate Starts for AvGardian\_60:

(Start: 54 @38063 has 7 MA's), (69, 38114), (84, 38249), (89, 38267), (90, 38273), (92, 38294), (94, 38324), (105, 38444), (114, 38498), (120, 38552), (123, 38570), (125, 38588), (126, 38591), (133, 38666), (134, 38669), (136, 38678), (139, 38705), (144, 38720), (147, 38738), (149, 38762), (166, 38867),

Gene: Avocadoman\_58 Start: 37099, Stop: 38004, Start Num: 64

Candidate Starts for Avocadoman\_58:

(9, 36574), (Start: 64 @37099 has 29 MA's), (82, 37252), (84, 37264), (89, 37282), (90, 37288), (92, 37309), (94, 37339), (102, 37447), (116, 37516), (123, 37579), (125, 37597), (126, 37600), (133, 37675), (134, 37678), (136, 37687), (139, 37714), (162, 37849), (166, 37873),

Gene: AylexOG\_61 Start: 37948, Stop: 38862, Start Num: 63

Candidate Starts for AylexOG\_61:

(2, 37315), (4, 37321), (23, 37720), (Start: 63 @37948 has 22 MA's), (82, 38104), (84, 38116), (89, 38134), (90, 38140), (94, 38191), (116, 38374), (123, 38437), (125, 38455), (126, 38458), (133, 38533), (134, 38536), (136, 38545), (162, 38707), (166, 38731),

Gene: BAjuniper\_58 Start: 38409, Stop: 39332, Start Num: 50

Candidate Starts for BAjuniper\_58:

(Start: 50 @38409 has 6 MA's), (79, 38580), (84, 38616), (89, 38634), (90, 38640), (94, 38691), (107, 38799), (110, 38814), (120, 38892), (123, 38910), (125, 38928), (126, 38931), (131, 38979), (133, 39006), (134, 39009), (139, 39045), (144, 39060), (154, 39138),

Gene: BabyDaisy\_61 Start: 38618, Stop: 39529, Start Num: 63

Candidate Starts for BabyDaisy\_61:

(Start: 63 @38618 has 22 MA's), (79, 38750), (84, 38786), (89, 38804), (90, 38810), (92, 38831), (94, 38861), (104, 38981), (123, 39107), (125, 39125), (131, 39176), (133, 39203), (134, 39206), (136, 39215), (139, 39242), (144, 39257), (166, 39398),

Gene: BabyYoda\_58 Start: 38076, Stop: 38990, Start Num: 63

Candidate Starts for BabyYoda\_58:

(57, 38070), (Start: 63 @38076 has 22 MA's), (79, 38208), (82, 38232), (84, 38244), (89, 38262), (90, 38268), (94, 38319), (105, 38439), (111, 38478), (112, 38487), (123, 38565), (125, 38583), (126, 38586), (133, 38661), (134, 38664), (136, 38673), (139, 38700), (144, 38715), (149, 38754), (153, 38790), (154, 38796), (162, 38835), (166, 38859), (168, 38874),

Gene: Bachaco\_57 Start: 39107, Stop: 40042, Start Num: 50

Candidate Starts for Bachaco\_57:

(26, 38960), (Start: 50 @39107 has 6 MA's), (Start: 52 @39113 has 1 MA's), (Start: 58 @39140 has 5 MA's), (69, 39179), (84, 39314), (89, 39332), (90, 39338), (94, 39389), (100, 39479), (113, 39545), (123, 39620), (125, 39638), (133, 39716), (134, 39719), (136, 39728), (144, 39770), (164, 39896), (169, 39929),

Gene: Bantam\_2 Start: 764, Stop: 1576, Start Num: 58

Candidate Starts for Bantam\_2:

(28, 605), (42, 674), (Start: 58 @764 has 5 MA's), (67, 800), (92, 983), (113, 1130), (118, 1169), (123, 1205), (127, 1229), (133, 1292), (136, 1304), (143, 1343), (150, 1370), (159, 1436), (170, 1475), (181, 1529), (184, 1565),

Gene: BelmontSKP\_60 Start: 38333, Stop: 39238, Start Num: 64

Candidate Starts for BelmontSKP\_60:

(Start: 64 @38333 has 29 MA's), (82, 38486), (84, 38498), (89, 38516), (90, 38522), (92, 38543), (94, 38573), (102, 38681), (116, 38750), (123, 38813), (125, 38831), (126, 38834), (133, 38909), (134, 38912), (136, 38921), (139, 38948), (162, 39083), (166, 39107),

Gene: Bengal\_62 Start: 38209, Stop: 39114, Start Num: 64

Candidate Starts for Bengal\_62:

(Start: 64 @38209 has 29 MA's), (82, 38362), (84, 38374), (89, 38392), (90, 38398), (92, 38419), (94, 38449), (102, 38557), (116, 38626), (123, 38689), (125, 38707), (126, 38710), (133, 38785), (134,

38788), (136, 38797), (139, 38824), (162, 38959), (166, 38983),

Gene: BenitoAntonio\_86 Start: 50552, Stop: 51358, Start Num: 59

Candidate Starts for BenitoAntonio\_86:

(Start: 59 @50552 has 21 MA's), (66, 50582), (68, 50588), (70, 50597), (82, 50711), (85, 50726), (90, 50747), (97, 50840), (120, 50966), (122, 50975), (123, 50984), (124, 50990), (132, 51050), (133, 51071), (135, 51077), (139, 51110), (163, 51230), (180, 51308), (184, 51347),

Gene: Benllo\_83 Start: 50870, Stop: 51676, Start Num: 59

Candidate Starts for Benllo\_83:

(Start: 59 @50870 has 21 MA's), (66, 50900), (68, 50906), (70, 50915), (82, 51029), (85, 51044), (90, 51065), (97, 51158), (120, 51284), (122, 51293), (123, 51302), (124, 51308), (132, 51368), (133, 51389), (135, 51395), (139, 51428), (180, 51626), (184, 51665),

Gene: Bernstein\_59 Start: 36225, Stop: 37139, Start Num: 53

Candidate Starts for Bernstein\_59:

(7, 35667), (29, 36093), (40, 36153), (Start: 53 @36225 has 9 MA's), (82, 36396), (84, 36408), (89, 36426), (90, 36432), (94, 36483), (100, 36570), (106, 36600), (110, 36621), (120, 36699), (123, 36717), (125, 36735), (126, 36738), (133, 36813), (134, 36816), (136, 36825), (151, 36918), (166, 37008), (167, 37020),

Gene: Boise\_39 Start: 36241, Stop: 35375, Start Num: 55

Candidate Starts for Boise\_39:

(17, 36568), (25, 36433), (37, 36331), (40, 36316), (Start: 55 @36241 has 2 MA's), (Start: 64 @36214 has 29 MA's), (74, 36142), (85, 36049), (93, 35998), (95, 35980), (108, 35866), (112, 35842), (123, 35764), (124, 35758), (126, 35743), (127, 35740), (129, 35725), (132, 35680), (136, 35647), (143, 35608), (144, 35605), (146, 35593), (156, 35527), (173, 35464), (177, 35434),

Gene: Bowling\_88 Start: 51328, Stop: 52134, Start Num: 59

Candidate Starts for Bowling\_88:

(Start: 59 @51328 has 21 MA's), (66, 51358), (67, 51361), (70, 51373), (90, 51523), (97, 51616), (120, 51742), (122, 51751), (123, 51760), (124, 51766), (132, 51826), (133, 51847), (135, 51853), (139, 51886), (163, 52006), (180, 52084), (184, 52123),

Gene: Brahms\_59 Start: 36127, Stop: 37041, Start Num: 53

Candidate Starts for Brahms\_59:

(29, 35995), (40, 36055), (Start: 53 @36127 has 9 MA's), (84, 36310), (89, 36328), (90, 36334), (94, 36385), (100, 36472), (106, 36502), (110, 36523), (120, 36601), (123, 36619), (125, 36637), (126, 36640), (133, 36715), (134, 36718), (136, 36727), (151, 36820), (166, 36910), (167, 36922),

Gene: BubbaBear\_59 Start: 38098, Stop: 39003, Start Num: 64

Candidate Starts for BubbaBear\_59:

(Start: 64 @38098 has 29 MA's), (82, 38251), (84, 38263), (89, 38281), (90, 38287), (92, 38308), (94, 38338), (102, 38446), (116, 38515), (123, 38578), (125, 38596), (126, 38599), (133, 38674), (134, 38677), (136, 38686), (139, 38713), (162, 38848), (166, 38872),

Gene: Burritobowl\_61 Start: 37977, Stop: 38882, Start Num: 64

Candidate Starts for Burritobowl\_61:

(Start: 64 @37977 has 29 MA's), (82, 38130), (84, 38142), (89, 38160), (90, 38166), (92, 38187), (94, 38217), (102, 38325), (116, 38394), (123, 38457), (125, 38475), (126, 38478), (133, 38553), (134, 38556), (136, 38565), (139, 38592), (162, 38727), (166, 38751),

Gene: Cantare\_49 Start: 44954, Stop: 45802, Start Num: 58

Candidate Starts for Cantare\_49:

(Start: 58 @44954 has 5 MA's), (69, 44996), (77, 45077), (82, 45113), (89, 45143), (91, 45152), (123, 45413), (124, 45419), (126, 45434), (127, 45437), (132, 45497), (143, 45569), (144, 45572), (146, 45584), (161, 45668), (173, 45713), (174, 45722), (180, 45752),

Gene: CardboardBox\_69 Start: 38386, Stop: 39234, Start Num: 60

Candidate Starts for CardboardBox\_69:

(Start: 60 @38386 has 3 MA's), (71, 38434), (90, 38584), (123, 38839), (136, 38947), (137, 38959), (151, 39022), (157, 39073), (160, 39082), (183, 39211),

Gene: Cashington\_59 Start: 37553, Stop: 38458, Start Num: 64

Candidate Starts for Cashington\_59:

(40, 37460), (Start: 64 @37553 has 29 MA's), (82, 37706), (84, 37718), (89, 37736), (90, 37742), (92, 37763), (94, 37793), (99, 37880), (102, 37901), (116, 37970), (123, 38033), (125, 38051), (126, 38054), (133, 38129), (134, 38132), (139, 38168), (162, 38303), (166, 38327),

Gene: Celaena\_57 Start: 38869, Stop: 39804, Start Num: 50

Candidate Starts for Celaena\_57:

(26, 38722), (Start: 50 @38869 has 6 MA's), (Start: 52 @38875 has 1 MA's), (Start: 58 @38902 has 5 MA's), (69, 38941), (84, 39076), (89, 39094), (90, 39100), (94, 39151), (100, 39241), (113, 39307), (123, 39382), (125, 39400), (133, 39478), (134, 39481), (136, 39490), (144, 39532), (164, 39658), (169, 39691),

Gene: ChamoyPickle\_69 Start: 38926, Stop: 39774, Start Num: 60

Candidate Starts for ChamoyPickle\_69:

(Start: 60 @38926 has 3 MA's), (71, 38974), (90, 39124), (123, 39379), (136, 39487), (137, 39499), (151, 39562), (157, 39613), (160, 39622), (183, 39751),

Gene: Cheesy\_87 Start: 50767, Stop: 51573, Start Num: 59

Candidate Starts for Cheesy\_87:

(Start: 59 @50767 has 21 MA's), (66, 50797), (67, 50800), (68, 50803), (70, 50812), (85, 50941), (90, 50962), (97, 51055), (120, 51181), (122, 51190), (123, 51199), (124, 51205), (133, 51286), (135, 51292), (139, 51325), (163, 51445), (180, 51523), (184, 51562),

Gene: ChiliPepper\_57 Start: 38412, Stop: 39344, Start Num: 56

Candidate Starts for ChiliPepper\_57:

(Start: 56 @38412 has 5 MA's), (73, 38481), (84, 38598), (90, 38622), (94, 38673), (103, 38784), (107, 38802), (110, 38826), (120, 38904), (123, 38922), (125, 38940), (126, 38943), (133, 39018), (134, 39021), (136, 39030), (144, 39072), (148, 39093), (151, 39123), (154, 39150), (166, 39213), (167, 39225),

Gene: ChipsNGuac\_68 Start: 38386, Stop: 39234, Start Num: 60

Candidate Starts for ChipsNGuac\_68:

(Start: 60 @38386 has 3 MA's), (71, 38434), (90, 38584), (123, 38839), (136, 38947), (137, 38959), (151, 39022), (157, 39073), (160, 39082), (183, 39211),

Gene: Circum\_86 Start: 50824, Stop: 51630, Start Num: 59

Candidate Starts for Circum\_86:

(Start: 59 @50824 has 21 MA's), (66, 50854), (67, 50857), (68, 50860), (70, 50869), (85, 50998), (90, 51019), (97, 51112), (120, 51238), (122, 51247), (123, 51256), (124, 51262), (132, 51322), (133, 51343), (135, 51349), (139, 51382), (163, 51502), (180, 51580), (184, 51619),

Gene: Clayda5\_61 Start: 36192, Stop: 37106, Start Num: 53

Candidate Starts for Clayda5\_61:

(29, 36060), (40, 36120), (Start: 53 @36192 has 9 MA's), (82, 36363), (84, 36375), (89, 36393), (90, 36399), (94, 36450), (100, 36537), (106, 36567), (110, 36588), (120, 36666), (123, 36684), (125, 36702), (126, 36705), (133, 36780), (134, 36783), (136, 36792), (151, 36885), (166, 36975), (167, 36987),

Gene: CliffHanger\_69 Start: 37853, Stop: 38749, Start Num: 64

Candidate Starts for CliffHanger\_69:

(Start: 64 @37853 has 29 MA's), (69, 37883), (77, 37964), (84, 38015), (89, 38033), (90, 38039), (92, 38060), (94, 38090), (112, 38240), (123, 38318), (125, 38336), (133, 38414), (134, 38417), (136, 38426), (141, 38459), (144, 38468), (180, 38696),

Gene: Coltrane\_59 Start: 36127, Stop: 37041, Start Num: 53

Candidate Starts for Coltrane\_59:

(29, 35995), (40, 36055), (Start: 53 @36127 has 9 MA's), (84, 36310), (89, 36328), (90, 36334), (94, 36385), (100, 36472), (106, 36502), (110, 36523), (120, 36601), (123, 36619), (125, 36637), (126, 36640), (133, 36715), (134, 36718), (136, 36727), (151, 36820), (166, 36910), (167, 36922),

Gene: Correa\_84 Start: 50324, Stop: 51130, Start Num: 59

Candidate Starts for Correa\_84:

(Start: 59 @50324 has 21 MA's), (66, 50354), (67, 50357), (68, 50360), (70, 50369), (90, 50519), (113, 50681), (122, 50747), (123, 50756), (124, 50762), (130, 50810), (132, 50822), (133, 50843), (135, 50849), (139, 50882), (153, 50951), (180, 51080), (184, 51119),

Gene: CroZenni\_60 Start: 37761, Stop: 38672, Start Num: 64

Candidate Starts for CroZenni\_60:

(11, 37296), (Start: 64 @37761 has 29 MA's), (82, 37914), (84, 37926), (89, 37944), (90, 37950), (92, 37971), (94, 38001), (116, 38184), (123, 38247), (125, 38265), (126, 38268), (133, 38343), (134, 38346), (136, 38355), (139, 38382), (162, 38517), (166, 38541),

Gene: CupcakePrincess\_59 Start: 37419, Stop: 38333, Start Num: 63

Candidate Starts for CupcakePrincess\_59:

(2, 36786), (4, 36792), (23, 37191), (Start: 63 @37419 has 22 MA's), (82, 37575), (84, 37587), (89, 37605), (90, 37611), (94, 37662), (116, 37845), (123, 37908), (125, 37926), (126, 37929), (133, 38004), (134, 38007), (136, 38016), (162, 38178), (166, 38202),

Gene: CurlyFries\_103 Start: 49882, Stop: 50658, Start Num: 65

Candidate Starts for CurlyFries\_103:

(24, 49621), (45, 49798), (Start: 55 @49846 has 2 MA's), (Start: 63 @49876 has 22 MA's), (65, 49882), (69, 49912), (71, 49918), (75, 49966), (76, 49981), (86, 50047), (95, 50110), (115, 50218), (117, 50227), (123, 50287), (133, 50374), (136, 50386), (143, 50425), (152, 50464), (153, 50482), (184, 50647), (185, 50653),

Gene: Daredevil\_4 Start: 1040, Stop: 1846, Start Num: 62

Candidate Starts for Daredevil\_4:

(41, 941), (Start: 62 @1040 has 1 MA's), (76, 1148), (95, 1277), (113, 1397), (123, 1472), (127, 1496), (136, 1571), (143, 1610), (145, 1622), (158, 1700), (184, 1835),

Gene: DatBoi\_2 Start: 770, Stop: 1582, Start Num: 58

Candidate Starts for DatBoi\_2:

(28, 611), (30, 629), (42, 680), (Start: 58 @770 has 5 MA's), (95, 1013), (118, 1175), (123, 1211), (127, 1235), (143, 1349), (159, 1442), (184, 1571),

Gene: DickRichards\_58 Start: 37915, Stop: 38838, Start Num: 64

Candidate Starts for DickRichards\_58:

(9, 37390), (11, 37450), (Start: 64 @37915 has 29 MA's), (82, 38068), (84, 38080), (89, 38098), (90, 38104), (92, 38125), (94, 38155), (108, 38302), (116, 38350), (123, 38413), (125, 38431), (126, 38434), (133, 38509), (134, 38512), (136, 38521), (139, 38548), (162, 38683), (166, 38707),

Gene: Didgeridoo\_64 Start: 38737, Stop: 39648, Start Num: 63

Candidate Starts for Didgeridoo\_64:

(Start: 63 @38737 has 22 MA's), (79, 38869), (84, 38905), (89, 38923), (90, 38929), (92, 38950), (94, 38980), (104, 39100), (123, 39226), (125, 39244), (131, 39295), (133, 39322), (134, 39325), (136, 39334), (139, 39361), (144, 39376), (166, 39517),

Gene: DirtyBubble\_58 Start: 38114, Stop: 39028, Start Num: 63

Candidate Starts for DirtyBubble\_58:

(Start: 63 @38114 has 22 MA's), (79, 38246), (82, 38270), (84, 38282), (89, 38300), (90, 38306), (94, 38357), (105, 38477), (111, 38516), (112, 38525), (123, 38603), (125, 38621), (126, 38624), (133, 38699), (134, 38702), (136, 38711), (139, 38738), (149, 38792), (153, 38828), (154, 38834), (162, 38873), (166, 38897), (168, 38912),

Gene: Dismas\_58 Start: 38333, Stop: 39265, Start Num: 56

Candidate Starts for Dismas\_58:

(Start: 56 @38333 has 5 MA's), (73, 38402), (84, 38519), (90, 38543), (94, 38594), (103, 38705), (107, 38723), (110, 38747), (112, 38765), (120, 38825), (123, 38843), (125, 38861), (126, 38864), (133, 38939), (134, 38942), (136, 38951), (144, 38993), (148, 39014), (151, 39044), (154, 39071), (166, 39134), (167, 39146),

Gene: Doobus\_58 Start: 37608, Stop: 38513, Start Num: 64

Candidate Starts for Doobus\_58:

(8, 37074), (44, 37539), (Start: 64 @37608 has 29 MA's), (82, 37761), (84, 37773), (89, 37791), (90, 37797), (92, 37818), (94, 37848), (102, 37956), (116, 38025), (123, 38088), (125, 38106), (126, 38109), (133, 38184), (134, 38187), (136, 38196), (139, 38223), (162, 38358), (166, 38382),

Gene: Dynamite\_86 Start: 50343, Stop: 51149, Start Num: 59

Candidate Starts for Dynamite\_86:

(Start: 59 @50343 has 21 MA's), (66, 50373), (67, 50376), (68, 50379), (70, 50388), (85, 50517), (90, 50538), (97, 50631), (120, 50757), (122, 50766), (123, 50775), (124, 50781), (132, 50841), (133, 50862), (135, 50868), (139, 50901), (163, 51021), (180, 51099), (184, 51138),

Gene: Eden\_59 Start: 36997, Stop: 37890, Start Num: 53

Candidate Starts for Eden\_59:

(49, 36982), (Start: 53 @36997 has 9 MA's), (79, 37144), (84, 37180), (89, 37198), (90, 37204), (94, 37255), (106, 37360), (111, 37381), (112, 37390), (120, 37450), (123, 37468), (125, 37486), (126, 37489), (133, 37564), (134, 37567), (136, 37576), (165, 37750), (166, 37759),

Gene: Elsa\_86 Start: 50975, Stop: 51781, Start Num: 59

Candidate Starts for Elsa\_86:

(Start: 59 @50975 has 21 MA's), (66, 51005), (67, 51008), (68, 51011), (70, 51020), (90, 51170), (97, 51263), (120, 51389), (122, 51398), (123, 51407), (124, 51413), (130, 51461), (133, 51494), (143, 51545), (150, 51572), (180, 51731), (184, 51770),

Gene: Elva\_61 Start: 38508, Stop: 39437, Start Num: 54

Candidate Starts for Elva\_61:

(Start: 54 @38508 has 7 MA's), (69, 38559), (79, 38658), (82, 38682), (84, 38694), (89, 38712), (90, 38718), (94, 38769), (105, 38889), (118, 38979), (123, 39015), (125, 39033), (126, 39036), (131, 39084), (133, 39111), (134, 39114), (136, 39123), (139, 39150), (144, 39165), (166, 39306),

Gene: Elver\_195 Start: 93137, Stop: 93946, Start Num: 61

Candidate Starts for Elver\_195:

(Start: 61 @93137 has 3 MA's), (76, 93245), (93, 93359), (98, 93452), (120, 93554), (123, 93572), (129, 93611), (133, 93659), (140, 93701), (143, 93710), (184, 93935),

Gene: Eula\_59 Start: 37405, Stop: 38319, Start Num: 63

Candidate Starts for Eula\_59:

(2, 36772), (4, 36778), (23, 37177), (Start: 63 @37405 has 22 MA's), (82, 37561), (84, 37573), (89, 37591), (90, 37597), (94, 37648), (116, 37831), (123, 37894), (125, 37912), (126, 37915), (133, 37990), (134, 37993), (136, 38002), (162, 38164), (166, 38188),

Gene: Ezurina\_69 Start: 39372, Stop: 40202, Start Num: 60

Candidate Starts for Ezurina\_69:

(Start: 60 @39372 has 3 MA's), (71, 39420), (80, 39516), (90, 39570), (123, 39807), (136, 39915), (137, 39927), (151, 39990), (157, 40041), (160, 40050),

Gene: Finalfrontier\_61 Start: 38910, Stop: 39815, Start Num: 64

Candidate Starts for Finalfrontier\_61:

(5, 38307), (Start: 64 @38910 has 29 MA's), (79, 39039), (82, 39063), (84, 39075), (89, 39093), (90, 39099), (94, 39150), (101, 39258), (116, 39327), (123, 39390), (125, 39408), (126, 39411), (133, 39486), (134, 39489), (136, 39498), (139, 39525), (162, 39660), (166, 39684),

Gene: FlameThrower\_56 Start: 37906, Stop: 38841, Start Num: 50

Candidate Starts for FlameThrower\_56:

(26, 37759), (Start: 50 @37906 has 6 MA's), (Start: 52 @37912 has 1 MA's), (Start: 58 @37939 has 5 MA's), (69, 37978), (84, 38113), (89, 38131), (90, 38137), (94, 38188), (100, 38278), (113, 38344), (123, 38419), (125, 38437), (133, 38515), (134, 38518), (136, 38527), (144, 38569), (164, 38695), (169, 38728),

Gene: Franklin22\_61 Start: 36648, Stop: 37604, Start Num: 55

Candidate Starts for Franklin22\_61:

(13, 36195), (49, 36630), (Start: 53 @36645 has 9 MA's), (Start: 55 @36648 has 2 MA's), (Start: 62 @36675 has 1 MA's), (82, 36837), (84, 36849), (89, 36867), (90, 36873), (94, 36924), (109, 37074), (110, 37086), (112, 37104), (123, 37182), (125, 37200), (126, 37203), (134, 37281), (136, 37290), (166, 37473), (168, 37488), (178, 37545), (180, 37551),

Gene: Gack\_58 Start: 36593, Stop: 37522, Start Num: 52

Candidate Starts for Gack\_58:

(Start: 52 @36593 has 1 MA's), (84, 36782), (89, 36800), (90, 36806), (94, 36857), (110, 37004), (120, 37082), (123, 37100), (125, 37118), (126, 37121), (133, 37196), (134, 37199), (136, 37208), (151, 37301), (166, 37391), (168, 37406),

Gene: Gandionco\_195 Start: 92541, Stop: 93509, Start Num: 28

Candidate Starts for Gandionco\_195:

(28, 92541), (34, 92574), (Start: 61 @92706 has 3 MA's), (76, 92814), (88, 92889), (93, 92928), (98, 93021), (112, 93057), (123, 93135), (129, 93174), (133, 93222), (140, 93264), (143, 93273), (184, 93498),

Gene: Gerri43\_68 Start: 38386, Stop: 39234, Start Num: 60

Candidate Starts for Gerri43\_68:

(Start: 60 @38386 has 3 MA's), (71, 38434), (90, 38584), (123, 38839), (136, 38947), (137, 38959), (151, 39022), (157, 39073), (160, 39082), (183, 39211),

Gene: GoCrazy\_83 Start: 49603, Stop: 50409, Start Num: 59

Candidate Starts for GoCrazy\_83:

(Start: 59 @49603 has 21 MA's), (66, 49633), (67, 49636), (68, 49639), (70, 49648), (82, 49762), (85, 49777), (90, 49798), (97, 49891), (120, 50017), (122, 50026), (123, 50035), (124, 50041), (132, 50101), (133, 50122), (135, 50128), (139, 50161), (180, 50359), (184, 50398),

Gene: Hankly\_86 Start: 49981, Stop: 50787, Start Num: 59

Candidate Starts for Hankly\_86:

(Start: 59 @49981 has 21 MA's), (66, 50011), (68, 50017), (70, 50026), (82, 50140), (85, 50155), (90, 50176), (97, 50269), (120, 50395), (122, 50404), (123, 50413), (124, 50419), (132, 50479), (133, 50500), (135, 50506), (139, 50539), (180, 50737), (184, 50776),

Gene: Heisenberger\_85 Start: 50232, Stop: 51038, Start Num: 59

Candidate Starts for Heisenberger\_85:

(Start: 59 @50232 has 21 MA's), (66, 50262), (67, 50265), (68, 50268), (70, 50277), (85, 50406), (90, 50427), (97, 50520), (120, 50646), (122, 50655), (123, 50664), (124, 50670), (133, 50751), (135, 50757), (139, 50790), (163, 50910), (180, 50988), (184, 51027),

Gene: Huwbert\_68 Start: 42366, Stop: 43169, Start Num: 58

Candidate Starts for Huwbert\_68:

(31, 42228), (Start: 58 @42366 has 5 MA's), (Start: 63 @42375 has 22 MA's), (72, 42426), (81, 42513), (112, 42720), (119, 42765), (123, 42798), (126, 42819), (133, 42885), (142, 42933), (143, 42936), (169, 43065), (179, 43116), (184, 43158),

Gene: Icarian\_61 Start: 38747, Stop: 39679, Start Num: 54

Candidate Starts for Icarian\_61:

(Start: 50 @38741 has 6 MA's), (Start: 54 @38747 has 7 MA's), (69, 38798), (79, 38897), (82, 38921), (84, 38933), (89, 38951), (90, 38957), (94, 39008), (105, 39128), (114, 39182), (118, 39218), (123, 39254), (125, 39272), (126, 39275), (133, 39350), (134, 39353), (136, 39362), (139, 39389), (144, 39404), (149, 39443), (153, 39479), (166, 39548),

Gene: IndyLu\_61 Start: 38349, Stop: 39260, Start Num: 63

Candidate Starts for IndyLu\_61:

(Start: 63 @38349 has 22 MA's), (79, 38481), (84, 38517), (89, 38535), (90, 38541), (92, 38562), (94, 38592), (104, 38712), (123, 38838), (125, 38856), (131, 38907), (133, 38934), (134, 38937), (136, 38946), (139, 38973), (144, 38988), (166, 39129),

Gene: JEGGS\_85 Start: 50311, Stop: 51117, Start Num: 59

Candidate Starts for JEGGS\_85:

(Start: 59 @50311 has 21 MA's), (66, 50341), (67, 50344), (68, 50347), (70, 50356), (85, 50485), (90, 50506), (122, 50734), (123, 50743), (124, 50749), (130, 50797), (132, 50809), (133, 50830), (135, 50836), (139, 50869), (163, 50989), (180, 51067), (184, 51106),

Gene: Jabb\_59 Start: 37419, Stop: 38333, Start Num: 63

Candidate Starts for Jabb\_59:

(2, 36786), (4, 36792), (23, 37191), (Start: 63 @37419 has 22 MA's), (82, 37575), (84, 37587), (89, 37605), (90, 37611), (94, 37662), (116, 37845), (123, 37908), (125, 37926), (126, 37929), (133, 38004), (134, 38007), (136, 38016), (162, 38178), (166, 38202),

Gene: JeNeSaisPas\_190 Start: 93258, Stop: 94067, Start Num: 61

Candidate Starts for JeNeSaisPas\_190:

(Start: 61 @93258 has 3 MA's), (76, 93366), (93, 93480), (98, 93573), (120, 93675), (123, 93693), (129, 93732), (133, 93780), (140, 93822), (143, 93831), (184, 94056),

Gene: Jflix2\_1 Start: 198, Stop: 998, Start Num: 51

Candidate Starts for Jflix2\_1:

(47, 183), (Start: 51 @198 has 2 MA's), (81, 336), (86, 369), (95, 432), (97, 480), (110, 528), (119, 591), (123, 624), (126, 645), (136, 723),

Gene: Johnathan\_59 Start: 37470, Stop: 38381, Start Num: 64

Candidate Starts for Johnathan\_59:

(3, 36819), (9, 36930), (Start: 64 @37470 has 29 MA's), (82, 37623), (84, 37635), (89, 37653), (90, 37659), (92, 37680), (94, 37710), (116, 37893), (123, 37956), (125, 37974), (126, 37977), (133, 38052), (134, 38055), (136, 38064), (139, 38091), (162, 38226),

Gene: Jovita\_58 Start: 37280, Stop: 38191, Start Num: 63

Candidate Starts for Jovita\_58:

(6, 36695), (23, 37052), (32, 37160), (39, 37187), (Start: 63 @37280 has 22 MA's), (79, 37409), (82, 37433), (84, 37445), (89, 37463), (90, 37469), (94, 37520), (116, 37703), (123, 37766), (125, 37784), (126, 37787), (133, 37862), (134, 37865), (136, 37874), (139, 37901), (162, 38036), (166, 38060),

Gene: Kamdara\_57 Start: 38371, Stop: 39303, Start Num: 56

Candidate Starts for Kamdara\_57:

(Start: 56 @38371 has 5 MA's), (73, 38440), (84, 38557), (90, 38581), (94, 38632), (103, 38743), (106, 38758), (107, 38761), (110, 38785), (112, 38803), (120, 38863), (123, 38881), (125, 38899), (126, 38902), (133, 38977), (134, 38980), (136, 38989), (148, 39052), (151, 39082), (154, 39109), (166, 39172), (167, 39184),

Gene: Kardesai\_86 Start: 49918, Stop: 50724, Start Num: 59

Candidate Starts for Kardesai\_86:

(Start: 59 @49918 has 21 MA's), (66, 49948), (68, 49954), (70, 49963), (82, 50077), (85, 50092), (90, 50113), (97, 50206), (120, 50332), (122, 50341), (123, 50350), (124, 50356), (132, 50416), (133, 50437), (135, 50443), (139, 50476), (180, 50674), (184, 50713),

Gene: Kate33\_63 Start: 38085, Stop: 38996, Start Num: 63

Candidate Starts for Kate33\_63:

(9, 37551), (Start: 63 @38085 has 22 MA's), (79, 38217), (84, 38253), (89, 38271), (90, 38277), (92, 38298), (94, 38328), (104, 38448), (123, 38574), (125, 38592), (131, 38643), (133, 38670), (134, 38673), (136, 38682), (139, 38709), (144, 38724), (166, 38865),

Gene: Katzastrophic\_58 Start: 38416, Stop: 39351, Start Num: 50

Candidate Starts for Katzastrophic\_58:

(26, 38269), (Start: 50 @38416 has 6 MA's), (Start: 52 @38422 has 1 MA's), (Start: 58 @38449 has 5 MA's), (69, 38488), (84, 38623), (89, 38641), (90, 38647), (94, 38698), (100, 38788), (113, 38854), (123, 38929), (125, 38947), (133, 39025), (134, 39028), (136, 39037), (144, 39079), (164, 39205), (169, 39238),

Gene: KeaneyLin\_83 Start: 50046, Stop: 50852, Start Num: 59

Candidate Starts for KeaneyLin\_83:

(Start: 59 @50046 has 21 MA's), (66, 50076), (67, 50079), (68, 50082), (70, 50091), (85, 50220), (90, 50241), (97, 50334), (120, 50460), (122, 50469), (123, 50478), (124, 50484), (132, 50544), (133, 50565), (135, 50571), (139, 50604), (163, 50724), (180, 50802), (184, 50841),

Gene: Kenzers\_59 Start: 37344, Stop: 38252, Start Num: 63

Candidate Starts for Kenzers\_59:

(Start: 63 @37344 has 22 MA's), (82, 37500), (84, 37512), (89, 37530), (90, 37536), (94, 37587), (102, 37695), (116, 37764), (123, 37827), (125, 37845), (126, 37848), (133, 37923), (134, 37926), (136, 37935), (139, 37962), (162, 38097), (166, 38121),

Gene: Kieran\_57 Start: 38374, Stop: 39306, Start Num: 56

Candidate Starts for Kieran\_57:

(12, 37912), (Start: 56 @38374 has 5 MA's), (73, 38443), (84, 38560), (90, 38584), (94, 38635), (103, 38746), (106, 38761), (107, 38764), (110, 38788), (112, 38806), (120, 38866), (123, 38884), (125, 38902), (126, 38905), (133, 38980), (134, 38983), (136, 38992), (148, 39055), (151, 39085), (154, 39112), (166, 39175), (167, 39187),

Gene: Kureo\_192 Start: 91813, Stop: 92616, Start Num: 61

Candidate Starts for Kureo\_192:

(Start: 61 @91813 has 3 MA's), (76, 91921), (88, 91996), (93, 92035), (98, 92128), (112, 92164), (123, 92242), (129, 92281), (133, 92329), (140, 92371), (143, 92380), (184, 92605),

Gene: Lahqtemish\_59 Start: 38368, Stop: 39276, Start Num: 64

Candidate Starts for Lahqtemish\_59:

(9, 37837), (Start: 64 @38368 has 29 MA's), (82, 38521), (84, 38533), (89, 38551), (90, 38557), (92, 38578), (94, 38608), (116, 38791), (123, 38854), (125, 38872), (126, 38875), (133, 38950), (134, 38953), (136, 38962), (139, 38989), (166, 39145),

Gene: LastNadiia\_65 Start: 40425, Stop: 41234, Start Num: 60

Candidate Starts for LastNadiia\_65:

(46, 40359), (Start: 60 @40425 has 3 MA's), (71, 40473), (78, 40557), (81, 40572), (90, 40623), (113, 40773), (119, 40815), (121, 40833), (123, 40848), (133, 40944), (138, 40971), (155, 41073), (160, 41091), (176, 41175),

Gene: Lilo27\_61 Start: 37952, Stop: 38863, Start Num: 64

Candidate Starts for Lilo27\_61:

(5, 37355), (11, 37487), (Start: 64 @37952 has 29 MA's), (82, 38105), (84, 38117), (89, 38135), (90, 38141), (94, 38192), (116, 38375), (123, 38438), (125, 38456), (126, 38459), (133, 38534), (134, 38537), (139, 38573), (162, 38708), (166, 38732), (182, 38834),

Gene: LimaBean\_59 Start: 37374, Stop: 38276, Start Num: 64

Candidate Starts for LimaBean\_59:

(1, 36651), (10, 36885), (Start: 64 @37374 has 29 MA's), (82, 37527), (84, 37539), (89, 37557), (90, 37563), (94, 37614), (116, 37788), (123, 37851), (125, 37869), (126, 37872), (133, 37947), (134, 37950), (136, 37959), (139, 37986), (162, 38121), (166, 38145),

Gene: Loviatar\_59 Start: 39164, Stop: 40096, Start Num: 54

Candidate Starts for Loviatar\_59:

(Start: 54 @39164 has 7 MA's), (69, 39215), (79, 39314), (84, 39350), (89, 39368), (90, 39374), (94, 39425), (105, 39545), (114, 39599), (118, 39635), (123, 39671), (125, 39689), (126, 39692), (133, 39767), (134, 39770), (136, 39779), (139, 39806), (144, 39821), (149, 39860), (153, 39896), (166, 39965),

Gene: Lynlen\_60 Start: 37527, Stop: 38435, Start Num: 63

Candidate Starts for Lynlen\_60:

(39, 37437), (Start: 63 @37527 has 22 MA's), (82, 37683), (84, 37695), (89, 37713), (90, 37719), (92, 37740), (94, 37770), (102, 37878), (116, 37947), (123, 38010), (125, 38028), (126, 38031), (133, 38106), (134, 38109), (136, 38118), (139, 38145), (162, 38280), (166, 38304),

Gene: Madraxi\_1 Start: 197, Stop: 994, Start Num: 51

Candidate Starts for Madraxi\_1:

(Start: 51 @197 has 2 MA's), (70, 236), (81, 335), (85, 365), (95, 431), (97, 479), (115, 554), (119, 590), (123, 623), (126, 644), (129, 662), (136, 722), (161, 860), (185, 989),

Gene: Magritte\_52 Start: 50451, Stop: 51248, Start Num: 63

Candidate Starts for Magritte\_52:

(Start: 63 @50451 has 22 MA's), (122, 50868), (123, 50877), (133, 50964), (136, 50976), (142, 51012), (143, 51015), (144, 51018), (169, 51144),

Gene: Makima\_66 Start: 40428, Stop: 41237, Start Num: 60

Candidate Starts for Makima\_66:

(36, 40311), (Start: 60 @40428 has 3 MA's), (77, 40551), (78, 40560), (87, 40611), (90, 40626), (113, 40776), (119, 40818), (123, 40851), (129, 40890), (132, 40926), (133, 40947), (138, 40974), (155, 41076), (160, 41094), (176, 41178), (183, 41214), (185, 41232),

Gene: Marianna39\_194 Start: 93144, Stop: 94112, Start Num: 28

Candidate Starts for Marianna39\_194:

(28, 93144), (34, 93177), (Start: 61 @93309 has 3 MA's), (76, 93417), (88, 93492), (93, 93531), (98, 93624), (112, 93660), (123, 93738), (129, 93777), (133, 93825), (140, 93867), (143, 93876), (184, 94101),

Gene: Milomuff\_61 Start: 38066, Stop: 38971, Start Num: 64

Candidate Starts for Milomuff\_61:

(3, 37430), (9, 37541), (Start: 64 @38066 has 29 MA's), (82, 38219), (84, 38231), (89, 38249), (90, 38255), (92, 38276), (94, 38306), (102, 38414), (116, 38483), (123, 38546), (125, 38564), (126, 38567), (133, 38642), (134, 38645), (136, 38654), (139, 38681), (162, 38816), (166, 38840),

Gene: Mireles\_67 Start: 39986, Stop: 40795, Start Num: 60

Candidate Starts for Mireles\_67:

(Start: 60 @39986 has 3 MA's), (78, 40118), (81, 40133), (87, 40169), (90, 40184), (113, 40334), (119, 40376), (123, 40409), (132, 40484), (133, 40505), (136, 40517), (138, 40532), (149, 40577), (155, 40634), (160, 40652), (166, 40673), (176, 40736), (183, 40772), (185, 40790),

Gene: Mollymur\_3 Start: 852, Stop: 1661, Start Num: 58

Candidate Starts for Mollymur\_3:

(20, 603), (42, 762), (Start: 58 @852 has 5 MA's), (76, 966), (92, 1071), (93, 1080), (113, 1215), (120, 1272), (123, 1290), (127, 1314), (132, 1356), (136, 1389), (143, 1428), (150, 1455), (172, 1569), (184, 1650),

Gene: Mooshroom\_87 Start: 49918, Stop: 50724, Start Num: 59

Candidate Starts for Mooshroom\_87:

(Start: 59 @49918 has 21 MA's), (66, 49948), (68, 49954), (70, 49963), (82, 50077), (85, 50092), (90, 50113), (97, 50206), (120, 50332), (122, 50341), (123, 50350), (124, 50356), (132, 50416), (133, 50437), (135, 50443), (139, 50476), (180, 50674), (184, 50713),

Gene: MsUbiquitous\_59 Start: 37419, Stop: 38333, Start Num: 63

Candidate Starts for MsUbiquitous\_59:

(2, 36786), (4, 36792), (23, 37191), (Start: 63 @37419 has 22 MA's), (82, 37575), (84, 37587), (89, 37605), (90, 37611), (94, 37662), (116, 37845), (123, 37908), (125, 37926), (126, 37929), (133, 38004), (134, 38007), (136, 38016), (162, 38178), (166, 38202),

Gene: Mudcat\_82 Start: 51669, Stop: 52475, Start Num: 59

Candidate Starts for Mudcat\_82:

(Start: 59 @51669 has 21 MA's), (66, 51699), (67, 51702), (68, 51705), (70, 51714), (82, 51828), (85, 51843), (88, 51855), (90, 51864), (97, 51957), (120, 52083), (122, 52092), (123, 52101), (124, 52107), (132, 52167), (133, 52188), (135, 52194), (139, 52227), (163, 52347), (180, 52425), (184, 52464),

Gene: NapoleonB\_87 Start: 50343, Stop: 51149, Start Num: 59

Candidate Starts for NapoleonB\_87:

(Start: 59 @50343 has 21 MA's), (66, 50373), (67, 50376), (68, 50379), (70, 50388), (85, 50517), (90, 50538), (97, 50631), (120, 50757), (122, 50766), (123, 50775), (124, 50781), (132, 50841), (133, 50862), (135, 50868), (139, 50901), (163, 51021), (180, 51099), (184, 51138),

Gene: Nason\_86 Start: 50975, Stop: 51781, Start Num: 59

Candidate Starts for Nason\_86:

(Start: 59 @50975 has 21 MA's), (66, 51005), (67, 51008), (68, 51011), (70, 51020), (90, 51170), (97, 51263), (120, 51389), (122, 51398), (123, 51407), (124, 51413), (130, 51461), (133, 51494), (143, 51545), (150, 51572), (180, 51731), (184, 51770),

Gene: Neuville\_67 Start: 38386, Stop: 39234, Start Num: 60

Candidate Starts for Neuville\_67:

(Start: 60 @38386 has 3 MA's), (71, 38434), (90, 38584), (123, 38839), (136, 38947), (137, 38959), (151, 39022), (157, 39073), (160, 39082), (183, 39211),

Gene: Nicky22\_60 Start: 38174, Stop: 39073, Start Num: 63

Candidate Starts for Nicky22\_60:

(Start: 63 @38174 has 22 MA's), (79, 38303), (82, 38327), (84, 38339), (89, 38357), (90, 38363), (94, 38414), (116, 38585), (123, 38648), (125, 38666), (126, 38669), (133, 38744), (134, 38747), (136, 38756), (139, 38783), (162, 38918), (166, 38942),

Gene: Paella\_196 Start: 94013, Stop: 94822, Start Num: 61

Candidate Starts for Paella\_196:

(Start: 61 @94013 has 3 MA's), (76, 94121), (93, 94235), (98, 94328), (120, 94430), (123, 94448), (129, 94487), (133, 94535), (140, 94577), (143, 94586), (184, 94811),

Gene: PastaFagioli\_60 Start: 38263, Stop: 39174, Start Num: 63

Candidate Starts for PastaFagioli\_60:

(Start: 63 @38263 has 22 MA's), (79, 38395), (84, 38431), (89, 38449), (90, 38455), (92, 38476), (94, 38506), (104, 38626), (123, 38752), (125, 38770), (131, 38821), (133, 38848), (134, 38851), (136, 38860), (139, 38887), (144, 38902), (166, 39043),

Gene: Pecas\_60 Start: 37794, Stop: 38705, Start Num: 63

Candidate Starts for Pecas\_60:

(39, 37701), (Start: 63 @37794 has 22 MA's), (79, 37923), (82, 37947), (84, 37959), (89, 37977), (90, 37983), (94, 38034), (116, 38217), (123, 38280), (125, 38298), (126, 38301), (133, 38376), (134, 38379), (136, 38388), (139, 38415), (162, 38550), (166, 38574),

Gene: PhigPhack\_62 Start: 38073, Stop: 38978, Start Num: 64

Candidate Starts for PhigPhack\_62:

(Start: 64 @38073 has 29 MA's), (82, 38226), (84, 38238), (89, 38256), (90, 38262), (92, 38283), (94, 38313), (102, 38421), (116, 38490), (123, 38553), (125, 38571), (126, 38574), (133, 38649), (134, 38652), (136, 38661), (139, 38688), (162, 38823), (166, 38847),

Gene: Phisb\_61 Start: 38046, Stop: 38951, Start Num: 64

Candidate Starts for Phisb\_61:

(9, 37515), (Start: 64 @38046 has 29 MA's), (82, 38199), (84, 38211), (89, 38229), (90, 38235), (92, 38256), (94, 38286), (102, 38394), (116, 38463), (123, 38526), (125, 38544), (126, 38547), (133, 38622), (134, 38625), (136, 38634), (139, 38661), (162, 38796), (166, 38820),

Gene: PondAmelia\_72 Start: 38126, Stop: 39055, Start Num: 54

Candidate Starts for PondAmelia\_72:

(Start: 50 @38120 has 6 MA's), (Start: 54 @38126 has 7 MA's), (69, 38177), (79, 38276), (82, 38300), (84, 38312), (89, 38330), (90, 38336), (94, 38387), (105, 38507), (114, 38561), (118, 38597), (123, 38633), (125, 38651), (133, 38729), (134, 38732), (136, 38741), (139, 38768), (144, 38783), (153, 38855), (166, 38924),

Gene: QMacho\_61 Start: 38068, Stop: 38979, Start Num: 63

Candidate Starts for QMacho\_61:

(Start: 63 @38068 has 22 MA's), (79, 38197), (82, 38221), (84, 38233), (89, 38251), (90, 38257), (94, 38308), (116, 38491), (123, 38554), (125, 38572), (126, 38575), (133, 38650), (134, 38653), (136, 38662), (139, 38689), (162, 38824), (166, 38848),

Gene: Quenya\_61 Start: 38811, Stop: 39746, Start Num: 50

Candidate Starts for Quenya\_61:

(Start: 50 @38811 has 6 MA's), (Start: 52 @38817 has 1 MA's), (Start: 58 @38844 has 5 MA's), (69, 38883), (84, 39018), (89, 39036), (90, 39042), (92, 39063), (94, 39093), (100, 39183), (107, 39213), (120, 39306), (123, 39324), (125, 39342), (126, 39345), (133, 39420), (134, 39423), (136, 39432), (139, 39459), (144, 39474), (159, 39582), (169, 39633),

Gene: Qui\_196 Start: 94010, Stop: 94819, Start Num: 61

Candidate Starts for Qui\_196:

(Start: 61 @94010 has 3 MA's), (76, 94118), (93, 94232), (98, 94325), (120, 94427), (123, 94445), (129, 94484), (133, 94532), (140, 94574), (143, 94583), (184, 94808),

Gene: RegnumDei\_94 Start: 50472, Stop: 51248, Start Num: 65

Candidate Starts for RegnumDei\_94:

(24, 50211), (33, 50325), (45, 50388), (Start: 55 @50436 has 2 MA's), (Start: 63 @50466 has 22 MA's), (65, 50472), (69, 50502), (71, 50508), (75, 50556), (76, 50571), (86, 50637), (95, 50700), (115, 50808), (117, 50817), (123, 50877), (133, 50964), (136, 50976), (143, 51015), (152, 51054), (153, 51072), (184, 51237), (185, 51243),

Gene: Roberts\_67 Start: 38386, Stop: 39234, Start Num: 60

Candidate Starts for Roberts\_67:

(Start: 60 @38386 has 3 MA's), (71, 38434), (90, 38584), (123, 38839), (136, 38947), (137, 38959), (151, 39022), (157, 39073), (160, 39082), (183, 39211),

Gene: Rollins\_59 Start: 36225, Stop: 37139, Start Num: 53

Candidate Starts for Rollins\_59:

(7, 35667), (29, 36093), (40, 36153), (Start: 53 @36225 has 9 MA's), (82, 36396), (84, 36408), (89, 36426), (90, 36432), (94, 36483), (100, 36570), (106, 36600), (110, 36621), (120, 36699), (123, 36717), (125, 36735), (126, 36738), (133, 36813), (134, 36816), (136, 36825), (151, 36918), (166, 37008), (167, 37020),

Gene: RomansRevenge\_40 Start: 36241, Stop: 35375, Start Num: 55

Candidate Starts for RomansRevenge\_40:

(17, 36568), (25, 36433), (37, 36331), (40, 36316), (Start: 55 @36241 has 2 MA's), (Start: 64 @36214 has 29 MA's), (74, 36142), (85, 36049), (93, 35998), (95, 35980), (108, 35866), (112, 35842), (123, 35764), (124, 35758), (126, 35743), (127, 35740), (129, 35725), (132, 35680), (136, 35647), (143, 35608), (144, 35605), (146, 35593), (156, 35527), (173, 35464), (177, 35434),

Gene: Rona\_57 Start: 38324, Stop: 39256, Start Num: 56

Candidate Starts for Rona\_57:

(Start: 56 @38324 has 5 MA's), (73, 38393), (84, 38510), (90, 38534), (94, 38585), (103, 38696), (107, 38714), (110, 38738), (112, 38756), (120, 38816), (123, 38834), (125, 38852), (126, 38855), (133, 38930), (134, 38933), (136, 38942), (144, 38984), (148, 39005), (151, 39035), (154, 39062), (166, 39125), (167, 39137),

Gene: SFuller\_1 Start: 199, Stop: 999, Start Num: 51

Candidate Starts for SFuller\_1:

(Start: 51 @199 has 2 MA's), (81, 337), (88, 379), (95, 433), (119, 592), (123, 625), (136, 724),

Gene: SanaSana\_60 Start: 38507, Stop: 39439, Start Num: 54

Candidate Starts for SanaSana\_60:

(Start: 54 @38507 has 7 MA's), (69, 38558), (79, 38657), (82, 38681), (84, 38693), (89, 38711), (90, 38717), (94, 38768), (105, 38888), (114, 38942), (123, 39014), (125, 39032), (126, 39035), (133, 39110), (134, 39113), (136, 39122), (139, 39149), (144, 39164), (149, 39203), (153, 39239), (166, 39308),

Gene: SansAfet\_61 Start: 37872, Stop: 38777, Start Num: 64

Candidate Starts for SansAfet\_61:

(Start: 64 @37872 has 29 MA's), (82, 38025), (84, 38037), (89, 38055), (90, 38061), (94, 38112), (102, 38220), (116, 38289), (123, 38352), (125, 38370), (126, 38373), (133, 38448), (134, 38451), (136, 38460), (139, 38487), (162, 38622), (166, 38646),

Gene: SarBear\_59 Start: 37372, Stop: 38283, Start Num: 63

Candidate Starts for SarBear\_59:

(Start: 63 @37372 has 22 MA's), (79, 37501), (82, 37525), (84, 37537), (89, 37555), (90, 37561), (94, 37612), (116, 37795), (123, 37858), (125, 37876), (126, 37879), (133, 37954), (134, 37957), (136, 37966), (139, 37993), (162, 38128), (166, 38152),

Gene: Shagrat\_95 Start: 49780, Stop: 50556, Start Num: 38

Candidate Starts for Shagrat\_95:

(19, 49615), (21, 49636), (22, 49639), (27, 49726), (35, 49768), (Start: 38 @49780 has 1 MA's), (69, 49810), (75, 49864), (76, 49879), (80, 49909), (81, 49912), (83, 49933), (85, 49942), (86, 49945), (95, 50008), (123, 50185), (133, 50272), (136, 50284), (143, 50323), (152, 50362), (153, 50380), (157, 50410), (159, 50416), (179, 50503), (184, 50545), (185, 50551),

Gene: Sharkboy\_59 Start: 38698, Stop: 39630, Start Num: 56

Candidate Starts for Sharkboy\_59:

(Start: 56 @38698 has 5 MA's), (73, 38767), (84, 38884), (90, 38908), (94, 38959), (103, 39070), (106, 39085), (107, 39088), (110, 39112), (112, 39130), (120, 39190), (123, 39208), (125, 39226), (126, 39229), (133, 39304), (134, 39307), (136, 39316), (144, 39358), (148, 39379), (151, 39409), (154, 39436), (166, 39499), (167, 39511),

Gene: Shayna\_69 Start: 38654, Stop: 39547, Start Num: 64

Candidate Starts for Shayna\_69:

(14, 38210), (15, 38237), (16, 38258), (Start: 64 @38654 has 29 MA's), (82, 38807), (84, 38819), (89, 38837), (90, 38843), (92, 38864), (94, 38894), (123, 39119), (125, 39137), (133, 39215), (134, 39218), (144, 39269), (180, 39494),

Gene: SirBeanington\_60 Start: 38272, Stop: 39186, Start Num: 64

Candidate Starts for SirBeanington\_60:

(44, 38203), (Start: 64 @38272 has 29 MA's), (82, 38428), (84, 38440), (89, 38458), (90, 38464), (92, 38485), (94, 38515), (116, 38698), (123, 38761), (125, 38779), (126, 38782), (133, 38857), (134, 38860), (136, 38869), (139, 38896),

Gene: Skylord\_59 Start: 36166, Stop: 37056, Start Num: 53

Candidate Starts for Skylord\_59:

(29, 36034), (40, 36094), (Start: 53 @36166 has 9 MA's), (84, 36349), (89, 36367), (90, 36373), (94, 36424), (106, 36526), (110, 36538), (120, 36616), (123, 36634), (125, 36652), (126, 36655), (133, 36730), (134, 36733), (136, 36742), (151, 36835), (166, 36925), (167, 36937),

Gene: Slay\_60 Start: 38344, Stop: 39249, Start Num: 64

Candidate Starts for Slay\_60:

(11, 37879), (Start: 64 @38344 has 29 MA's), (79, 38473), (82, 38497), (84, 38509), (89, 38527), (90, 38533), (94, 38584), (101, 38692), (116, 38761), (123, 38824), (125, 38842), (126, 38845), (133, 38920), (134, 38923), (136, 38932), (139, 38959), (162, 39094), (166, 39118),

Gene: Softsoap\_61 Start: 38131, Stop: 39036, Start Num: 64

Candidate Starts for Softsoap\_61:

(Start: 64 @38131 has 29 MA's), (82, 38284), (84, 38296), (89, 38314), (90, 38320), (92, 38341), (94, 38371), (102, 38479), (116, 38548), (123, 38611), (125, 38629), (126, 38632), (133, 38707), (134, 38710), (136, 38719), (139, 38746), (162, 38881), (166, 38905),

Gene: Solea\_62 Start: 38065, Stop: 38970, Start Num: 64

Candidate Starts for Solea\_62:

(3, 37429), (9, 37540), (Start: 64 @38065 has 29 MA's), (82, 38218), (84, 38230), (89, 38248), (90, 38254), (92, 38275), (94, 38305), (102, 38413), (116, 38482), (123, 38545), (125, 38563), (126, 38566), (133, 38641), (134, 38644), (136, 38653), (139, 38680), (162, 38815), (166, 38839),

Gene: SpeedDemon\_30 Start: 715, Stop: 1518, Start Num: 63

Candidate Starts for SpeedDemon\_30:

(Start: 63 @715 has 22 MA's), (92, 925), (113, 1072), (118, 1111), (123, 1147), (127, 1171), (128, 1180), (133, 1234), (136, 1246), (143, 1285), (150, 1312), (159, 1378), (181, 1471), (184, 1507),

Gene: Stoor\_58 Start: 38294, Stop: 39226, Start Num: 54

Candidate Starts for Stoor\_58:

(Start: 54 @38294 has 7 MA's), (69, 38345), (79, 38444), (82, 38468), (84, 38480), (89, 38498), (90, 38504), (94, 38555), (105, 38675), (114, 38729), (123, 38801), (125, 38819), (126, 38822), (133, 38897), (134, 38900), (136, 38909), (139, 38936), (144, 38951), (149, 38990), (153, 39026), (166, 39095),

Gene: Stromboli\_58 Start: 38113, Stop: 39027, Start Num: 63

Candidate Starts for Stromboli\_58:

(57, 38107), (Start: 63 @38113 has 22 MA's), (79, 38245), (82, 38269), (84, 38281), (89, 38299), (90, 38305), (94, 38356), (105, 38476), (111, 38515), (112, 38524), (123, 38602), (125, 38620), (126, 38623), (133, 38698), (134, 38701), (136, 38710), (139, 38737), (144, 38752), (149, 38791), (153, 38827), (154, 38833), (162, 38872), (166, 38896), (168, 38911),

Gene: Studio\_69 Start: 39576, Stop: 40424, Start Num: 60

Candidate Starts for Studio\_69:

(Start: 60 @39576 has 3 MA's), (71, 39624), (90, 39774), (123, 40029), (136, 40137), (137, 40149), (151, 40212), (157, 40263), (160, 40272), (171, 40317), (175, 40350),

Gene: SunnyD\_69 Start: 38654, Stop: 39547, Start Num: 64

Candidate Starts for SunnyD\_69:

(Start: 64 @38654 has 29 MA's), (82, 38807), (84, 38819), (89, 38837), (90, 38843), (92, 38864), (94, 38894), (123, 39119), (125, 39137), (133, 39215), (134, 39218), (144, 39269), (180, 39494),

Gene: Swervy\_60 Start: 37644, Stop: 38555, Start Num: 63

Candidate Starts for Swervy\_60:

(Start: 63 @37644 has 22 MA's), (79, 37773), (82, 37797), (84, 37809), (89, 37827), (90, 37833), (94, 37884), (116, 38067), (123, 38130), (125, 38148), (126, 38151), (133, 38226), (134, 38229), (136, 38238), (139, 38265), (151, 38334), (162, 38400), (166, 38424),

Gene: TMaxx\_72 Start: 40011, Stop: 40820, Start Num: 60

Candidate Starts for TMaxx\_72:

(Start: 60 @40011 has 3 MA's), (78, 40143), (81, 40158), (90, 40209), (112, 40356), (113, 40359), (119, 40401), (121, 40419), (123, 40434), (126, 40455), (132, 40509), (133, 40530), (136, 40542), (138, 40557), (154, 40644), (155, 40659), (160, 40677), (168, 40713), (176, 40761),

Gene: Teagster\_69 Start: 39117, Stop: 39992, Start Num: 64

Candidate Starts for Teagster\_69:

(Start: 64 @39117 has 29 MA's), (82, 39270), (84, 39282), (89, 39300), (90, 39306), (94, 39357), (123, 39564), (125, 39582), (133, 39660), (134, 39663), (180, 39939),

Gene: Towmatter\_3 Start: 851, Stop: 1669, Start Num: 60

Candidate Starts for Towmatter\_3:

(18, 596), (42, 785), (43, 800), (Start: 60 @851 has 3 MA's), (115, 1229), (119, 1265), (123, 1298), (127, 1322), (135, 1391), (136, 1397), (143, 1436), (174, 1589), (182, 1643), (184, 1658),

Gene: Tribby\_88 Start: 51102, Stop: 51908, Start Num: 59

Candidate Starts for Tribby\_88:

(Start: 59 @51102 has 21 MA's), (66, 51132), (67, 51135), (68, 51138), (70, 51147), (90, 51297), (96, 51381), (97, 51390), (122, 51525), (123, 51534), (124, 51540), (133, 51621), (135, 51627), (139, 51660), (163, 51780), (180, 51858), (184, 51897),

Gene: TripleC\_64 Start: 40196, Stop: 41005, Start Num: 60

Candidate Starts for TripleC\_64:

(46, 40130), (48, 40136), (Start: 60 @40196 has 3 MA's), (78, 40328), (90, 40394), (113, 40544), (119, 40586), (121, 40604), (123, 40619), (132, 40694), (133, 40715), (136, 40727), (138, 40742), (155, 40844), (160, 40862), (168, 40898), (176, 40946), (183, 40982),

Gene: Triscuit\_67 Start: 42329, Stop: 43126, Start Num: 63

Candidate Starts for Triscuit\_67:

(31, 42182), (Start: 58 @42320 has 5 MA's), (Start: 63 @42329 has 22 MA's), (72, 42380), (81, 42467), (112, 42677), (123, 42755), (133, 42842), (142, 42890), (143, 42893), (169, 43022), (181, 43079), (184, 43115),

Gene: TukTuk\_61 Start: 38089, Stop: 39000, Start Num: 64

Candidate Starts for TukTuk\_61:

(Start: 64 @38089 has 29 MA's), (79, 38218), (82, 38242), (84, 38254), (89, 38272), (90, 38278), (94, 38329), (116, 38512), (123, 38575), (125, 38593), (126, 38596), (133, 38671), (134, 38674), (139, 38710), (162, 38845), (166, 38869),

Gene: Vitas\_59 Start: 36198, Stop: 37112, Start Num: 53

Candidate Starts for Vitas\_59:

(29, 36066), (40, 36126), (Start: 53 @36198 has 9 MA's), (84, 36381), (89, 36399), (90, 36405), (94, 36456), (100, 36543), (106, 36573), (120, 36672), (123, 36690), (125, 36708), (126, 36711), (133, 36786), (134, 36789), (136, 36798), (151, 36891), (166, 36981),

Gene: WalkingDead\_61 Start: 39268, Stop: 40203, Start Num: 54

Candidate Starts for WalkingDead\_61:

(Start: 54 @39268 has 7 MA's), (69, 39319), (79, 39418), (82, 39442), (84, 39454), (89, 39472), (90, 39478), (94, 39529), (105, 39649), (114, 39703), (118, 39739), (123, 39775), (125, 39793), (126, 39796), (133, 39871), (134, 39874), (136, 39883), (139, 39910), (144, 39925), (149, 39967), (166, 40072),

Gene: Xenomorph\_81 Start: 50629, Stop: 51435, Start Num: 59

Candidate Starts for Xenomorph\_81:

(Start: 59 @50629 has 21 MA's), (66, 50659), (67, 50662), (68, 50665), (70, 50674), (90, 50824), (97, 50917), (120, 51043), (122, 51052), (123, 51061), (124, 51067), (133, 51148), (135, 51154), (139, 51187), (163, 51307), (180, 51385), (184, 51424),

Gene: YoshiYama\_87 Start: 51381, Stop: 52187, Start Num: 59

Candidate Starts for YoshiYama\_87:

(Start: 59 @51381 has 21 MA's), (66, 51411), (68, 51417), (70, 51426), (82, 51540), (85, 51555), (90, 51576), (97, 51669), (120, 51795), (122, 51804), (123, 51813), (124, 51819), (132, 51879), (133, 51900), (135, 51906), (139, 51939), (163, 52059), (180, 52137), (184, 52176),