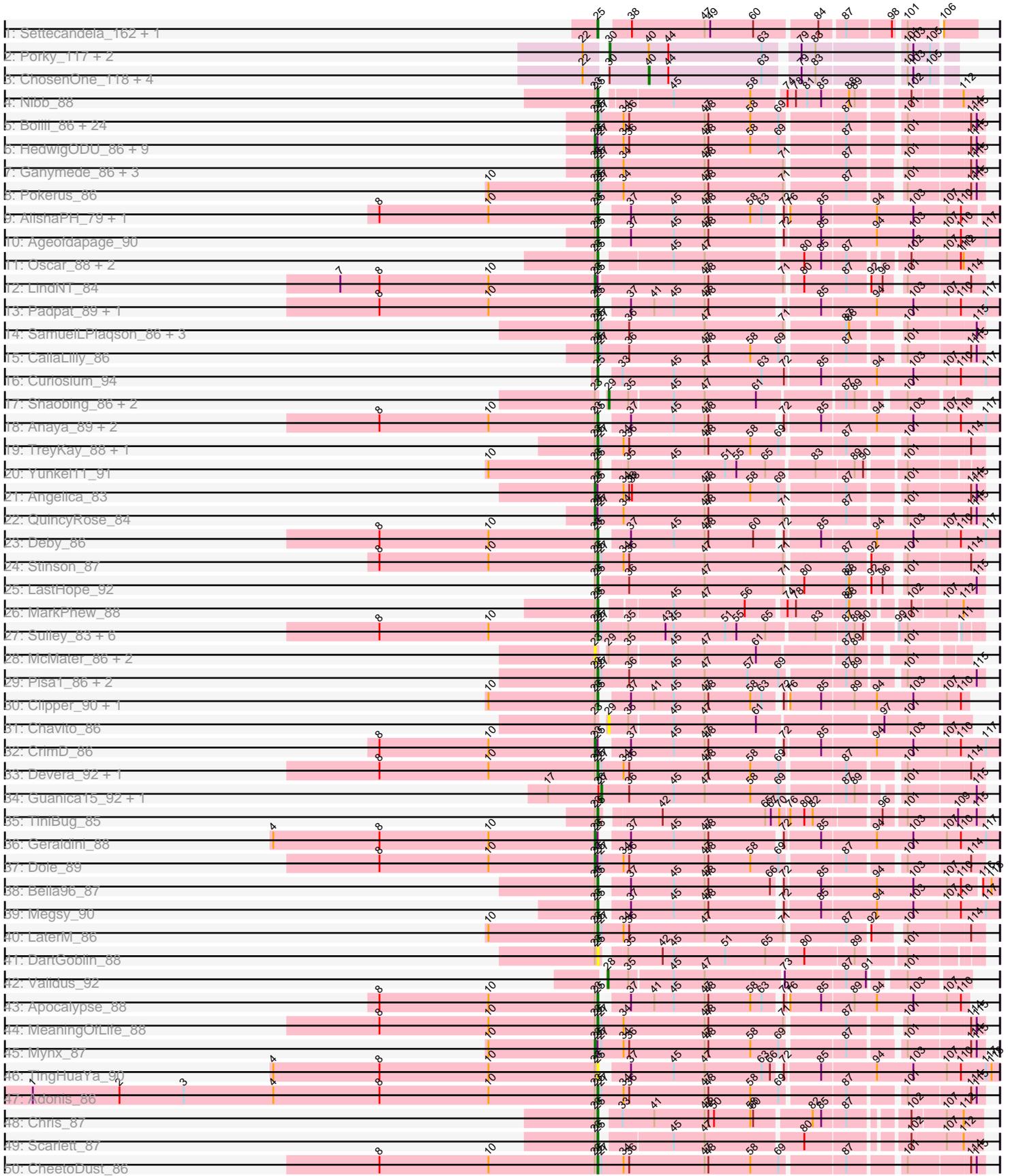
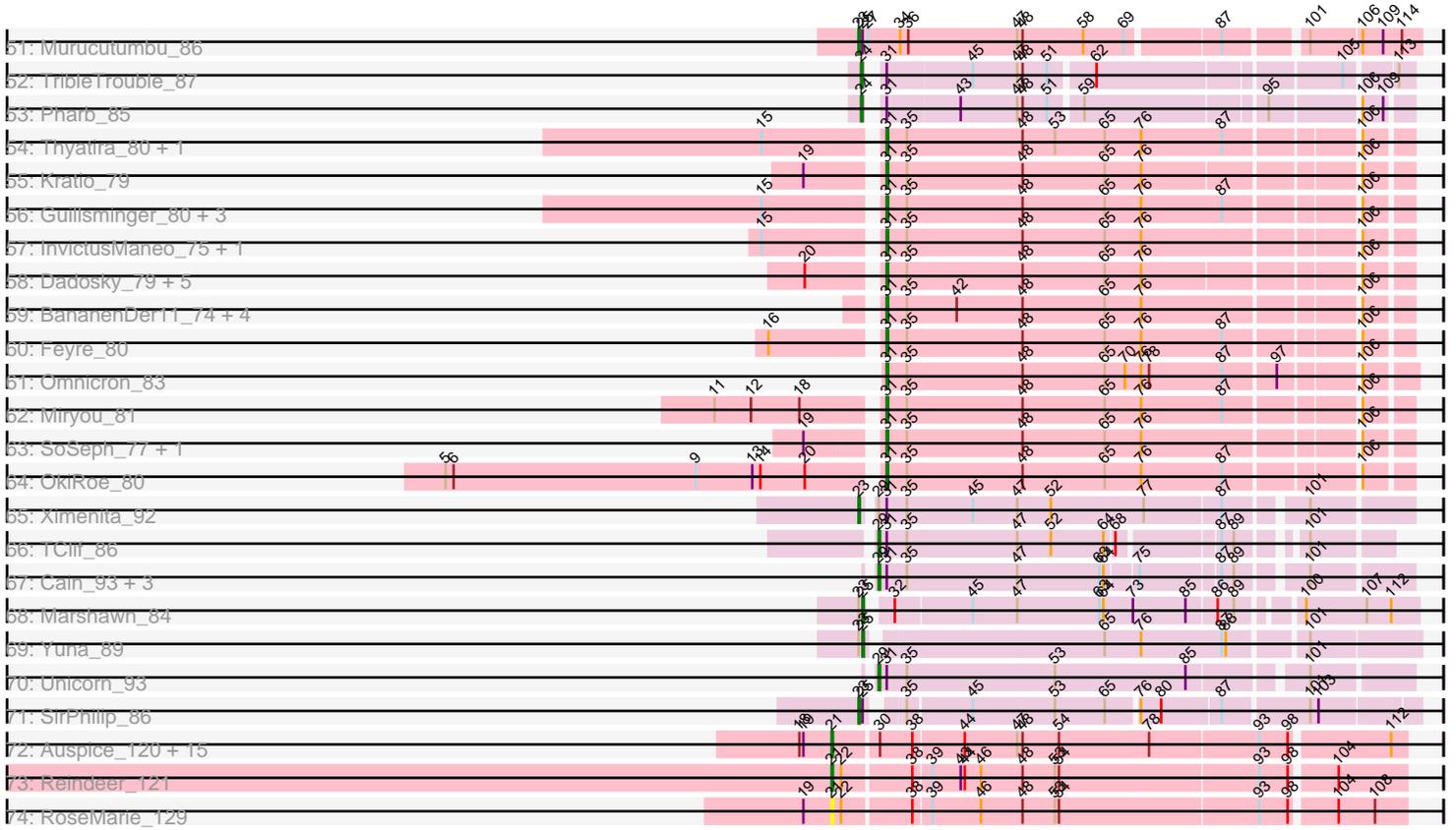


Pham 290882



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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 290882 Report

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

Pham number 290882 has 175 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Settecandela\_162, Phrappuccino\_162
- Track 2 : Porky\_117, MadamMonkfish\_117, Dumbo\_118
- Track 3 : ChosenOne\_118, Lilpickle\_117, Elite2014\_117, Becksu\_116, FoghornLeghorn\_115
- Track 4 : Nibb\_88
- Track 5 : Boiii\_86, ShiaSurprise\_87, BEEST\_86, Lunahalos\_86, Capricorn\_86, Twitch\_86, Belladonna\_86, Durfee\_86, Homura\_85, Peel\_86, Topper\_86, Rosmarinus\_86, ActinUp\_87, Blizzard\_86, Hyperbowlee\_85, CaseJules\_88, Jarvi\_86, Jeckyll\_86, Piatt\_85, Padfoot\_86, Llorens\_86, Asayake\_86, Zabiza\_82, Atiba\_87, Veliki\_87
- Track 6 : HedwigODU\_86, Dalmuri\_86, Adephagia\_85, Spock\_86, JAWS\_85, Tachez\_86, CREW\_85, BaghaKamala\_85, Joy99\_87, Inky\_86
- Track 7 : Ganymede\_86, Beezoo\_89, YoureAdopted\_85, Zavala\_88
- Track 8 : Pokerus\_86
- Track 9 : AlishaPH\_79, BGIlluviae\_85
- Track 10 : Ageofdapage\_90
- Track 11 : Oscar\_88, KiSi\_88, LeMond\_87
- Track 12 : LindNT\_84
- Track 13 : Padpat\_89, Emerson\_88
- Track 14 : SamuelLPlaqson\_86, DrHayes\_86, Urkel\_86, Anma\_86
- Track 15 : CallaLilly\_86
- Track 16 : Curiosium\_94
- Track 17 : Shaobing\_86, Niklas\_87, Peanam\_87
- Track 18 : Anaya\_89, Tiri\_86, TaiwanKao\_87
- Track 19 : TreyKay\_88, Prithvi\_88
- Track 20 : Yunkel11\_91
- Track 21 : Angelica\_83
- Track 22 : QuincyRose\_84
- Track 23 : Deby\_86
- Track 24 : Stinson\_87
- Track 25 : LastHope\_92
- Track 26 : MarkPhew\_88
- Track 27 : Sulley\_83, Ramen\_87, Jayhawk\_88, Rapunzel97\_88, BarrelRoll\_86, TruffulaTree\_88, Slimphazie\_88
- Track 28 : McMater\_86, Richo\_86, Dartin\_86
- Track 29 : Pisa1\_86, Pisa4\_80, Bern\_87
- Track 30 : Clipper\_90, MacKat\_82

- Track 31 : Chavito\_86
- Track 32 : CrimD\_86
- Track 33 : Devera\_92, Illumine\_90
- Track 34 : Guanica15\_92, Efra2\_93
- Track 35 : TiniBug\_85
- Track 36 : Geraldini\_88
- Track 37 : Dole\_89
- Track 38 : Bella96\_87
- Track 39 : Megsy\_90
- Track 40 : LaterM\_86
- Track 41 : DartGoblin\_88
- Track 42 : Validus\_92
- Track 43 : Apocalypse\_88
- Track 44 : MeaningOfLife\_88
- Track 45 : Mynx\_87
- Track 46 : TingHuaYa\_90
- Track 47 : Adonis\_86
- Track 48 : Chris\_87
- Track 49 : Scarlett\_87
- Track 50 : CheetoDust\_86
- Track 51 : Murucutumbu\_86
- Track 52 : TribbleTrouble\_87
- Track 53 : Pharb\_85
- Track 54 : Thyatira\_80, Waterfoul\_79
- Track 55 : Kratio\_79
- Track 56 : Guillsminger\_80, Leston\_79, Gengar\_79, Paola\_79
- Track 57 : InvictusManeo\_75, Agent47\_77
- Track 58 : Dadosky\_79, Psycho\_77, AlleyCat\_79, Edugator\_75, Larva\_78, Neighly\_79
- Track 59 : BananenDer11\_74, ViviJ\_83, DoubleChamp\_74, LilDirt\_74, Collard\_75
- Track 60 : Feyre\_80
- Track 61 : Omnicron\_83
- Track 62 : Miryou\_81
- Track 63 : SoSeph\_77, Heftyboy\_77
- Track 64 : OkiRoe\_80
- Track 65 : Ximenita\_92
- Track 66 : TClif\_86
- Track 67 : Cain\_93, Bryler\_85, Phrank\_93, Tierra\_93
- Track 68 : Marshawn\_84
- Track 69 : Yuna\_89
- Track 70 : Unicorn\_93
- Track 71 : SirPhilip\_86
- Track 72 : Auspice\_120, Dulcita\_121, Skinny\_126, IPhane7\_118, FreakyGoo\_121, PegLeg\_124, Bricole\_122, Diminimus\_121, Glaske16\_123, TyDawg\_115, KleverKIS\_123, Izel\_121, LilhomieP\_120, Bongo\_120, TpudiCK\_122, SlimJimmy\_120
- Track 73 : Reindeer\_121
- Track 74 : RoseMarie\_129

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

The start number called the most often in the published annotations is 25, it was called in 79 of the 156 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_87, Adonis\_86, Ageofdapage\_90, AlishaPH\_79, Anaya\_89, Anma\_86, Apocalypse\_88, Asayake\_86, Atiba\_87, BEEST\_86, BGlluviae\_85, BarrelRoll\_86, Beezoo\_89, Bella96\_87, Belladonna\_86, Bern\_87, Blizzard\_86, Boiiii\_86, CallaLilly\_86, Capricorn\_86, CaseJules\_88, CheetoDust\_86, Chris\_87, Clipper\_90, Curiosium\_94, DartGoblin\_88, Deby\_86, Devera\_92, DrHayes\_86, Durfee\_86, Emerson\_88, Ganymede\_86, Homura\_85, Hyperbowlee\_85, Illumine\_90, Jarvi\_86, Jayhawk\_88, Jeckyll\_86, KiSi\_88, LastHope\_92, LaterM\_86, LeMond\_87, Llorens\_86, Lunahalos\_86, MacKat\_82, MarkPhew\_88, Marshawn\_84, MeaningOfLife\_88, Megsy\_90, Nibb\_88, Oscar\_88, Padfoot\_86, Padpat\_89, Peel\_86, Phrappuccino\_162, Piatt\_85, Pisa1\_86, Pisa4\_80, Pokerus\_86, Prithvi\_88, Ramen\_87, Rapunzel97\_88, Rosmarinus\_86, SamuelLPlaqson\_86, Scarlett\_87, Settecandela\_162, ShiaSurprise\_87, Slimphazie\_88, Stinson\_87, Sulley\_83, TaiwanKao\_87, TingHuaYa\_90, TiniBug\_85, Tiri\_86, Topper\_86, TreyKay\_88, TruffulaTree\_88, Twitch\_86, Urkel\_86, Veliki\_87, YoureAdopted\_85, Yuna\_89, Yunkel11\_91, Zabiza\_82, Zavala\_88,

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

- Adephagia\_85, Angelica\_83, BaghaKamala\_85, CREW\_85, CrimD\_86, Dalmuri\_86, Dole\_89, Geraldini\_88, HedwigODU\_86, Inky\_86, JAWS\_85, Joy99\_87, LindNT\_84, Murucutumbu\_86, Mynx\_87, QuincyRose\_84, SirPhilip\_86, Spock\_86, Tachez\_86,

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

- Agent47\_77, AlleyCat\_79, Auspice\_120, BananenDer11\_74, Becksu\_116, Bongo\_120, Bricole\_122, Bryler\_85, Cain\_93, Chavito\_86, ChosenOne\_118, Collard\_75, Dadosky\_79, Dartin\_86, Diminimus\_121, DoubleChamp\_74, Dulcita\_121, Dumbo\_118, Edugator\_75, Efra2\_93, Elite2014\_117, Feyre\_80, FoghornLeghorn\_115, FreakyGoo\_121, Gengar\_79, Glaske16\_123, Guanica15\_92, Guillsminger\_80, Heftyboy\_77, IPhane7\_118, InvictusManeo\_75, Izel\_121, KleverKiS\_123, Kratio\_79, Larva\_78, Leston\_79, LilDirt\_74, LilhomieP\_120, Lilpickle\_117, MadamMonkfish\_117, McMater\_86, Miryou\_81, Neighly\_79, Niklas\_87, OkiRoe\_80, Omnicron\_83, Paola\_79, Peanam\_87, PegLeg\_124, Pharb\_85, Phrank\_93, Porky\_117, Psycho\_77, Reindeer\_121, Richo\_86, RoseMarie\_129, Shaobing\_86, Skinny\_126, SlimJimmy\_120, SoSeph\_77, TClif\_86, Thyatira\_80, Tierra\_93, TpudiCK\_122, TribleTrouble\_87, TyDawg\_115, Unicorn\_93, Validus\_92, ViviJ\_83, Waterfoul\_79, Ximenita\_92,

### Summary by start number:

Start 21:

- Found in 18 of 175 ( 10.3% ) of genes in pham
- Manual Annotations of this start: 15 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Auspice\_120 (M1), Bongo\_120 (M1), Bricole\_122 (M1), Diminimus\_121 (M1), Dulcita\_121 (M1), FreakyGoo\_121 (M1), Glaske16\_123 (M1), IPhane7\_118 (M1), Izel\_121 (M1), KleverKiS\_123 (M1), LilhomieP\_120 (M1), PegLeg\_124 (M1), Reindeer\_121 (M1), RoseMarie\_129 (M1), Skinny\_126 (M1), SlimJimmy\_120 (M1), TpudiCK\_122 (M1), TyDawg\_115 (M1),

#### Start 23:

- Found in 109 of 175 ( 62.3% ) of genes in pham
- Manual Annotations of this start: 20 of 156
- Called 21.1% of time when present
- Phage (with cluster) where this start called: Adephagia\_85 (K1), Angelica\_83 (K1), BaghaKamala\_85 (K1), CREW\_85 (K1), CrimD\_86 (K1), Dalmuri\_86 (K1), Dartin\_86 (K1), Dole\_89 (K1), Geraldini\_88 (K1), HedwigODU\_86 (K1), Inky\_86 (K1), JAWS\_85 (K1), Joy99\_87 (K1), LindNT\_84 (K1), McMater\_86 (K1), Murucutumbu\_86 (K1), Mynx\_87 (K1), QuincyRose\_84 (K1), Richo\_86 (K1), SirPhilip\_86 (K6), Spock\_86 (K1), Tachez\_86 (K1), Ximenita\_92 (K6),

#### Start 24:

- Found in 2 of 175 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 2 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pharb\_85 (K3), TripleTrouble\_87 (K3),

#### Start 25:

- Found in 104 of 175 ( 59.4% ) of genes in pham
- Manual Annotations of this start: 79 of 156
- Called 81.7% of time when present
- Phage (with cluster) where this start called: ActinUp\_87 (K1), Adonis\_86 (K1), Ageofdapage\_90 (K1), AlishaPH\_79 (K1), Anaya\_89 (K1), Anma\_86 (K1), Apocalypse\_88 (K1), Asayake\_86 (K1), Atiba\_87 (K1), BEEST\_86 (K1), BGIlluviae\_85 (K1), BarrelRoll\_86 (K1), Beezoo\_89 (K1), Bella96\_87 (K1), Belladonna\_86 (K1), Bern\_87 (K1), Blizzard\_86 (K1), Boiiii\_86 (K1), CallaLilly\_86 (K1), Capricorn\_86 (K1), CaseJules\_88 (K1), CheetoDust\_86 (K1), Chris\_87 (K1), Clipper\_90 (K1), Curiosium\_94 (K1), DartGoblin\_88 (K1), Deby\_86 (K1), Devera\_92 (K1), DrHayes\_86 (K1), Durfee\_86 (K1), Emerson\_88 (K1), Ganymede\_86 (K1), Homura\_85 (K1), Hyperbowlee\_85 (K1), Illumine\_90 (K1), Jarvi\_86 (K1), Jayhawk\_88 (K1), Jeckyll\_86 (K1), KiSi\_88 (K1), LastHope\_92 (K1), LaterM\_86 (K1), LeMond\_87 (K1), Llorens\_86 (K1), Lunahalos\_86 (K1), MacKat\_82 (K1), MarkPhew\_88 (K1), Marshawn\_84 (K6), MeaningOfLife\_88 (K1), Megsy\_90 (K1), Nibb\_88 (K1), Oscar\_88 (K1), Padfoot\_86 (K1), Padpat\_89 (K1), Peel\_86 (K1), Phrappuccino\_162 (AA), Piatt\_85 (K1), Pisa1\_86 (K1), Pisa4\_80 (K1), Pokerus\_86 (K1), Prithvi\_88 (K1), Ramen\_87 (K1), Rapunzel97\_88 (K1), Rosmarinus\_86 (K1), SamuelLPlaqson\_86 (K1), Scarlett\_87 (K1), Settecandela\_162 (AA), ShiaSurprise\_87 (K1), Slimphazie\_88 (K1), Stinson\_87 (K1), Sulley\_83 (K1), TaiwanKao\_87 (K1), TingHuaYa\_90 (K1), TiniBug\_85 (K1), Tiri\_86 (K1), Topper\_86 (K1), TreyKay\_88 (K1), TruffulaTree\_88 (K1), Twitch\_86 (K1), Urkel\_86 (K1), Veliki\_87 (K1), YoureAdopted\_85 (K1), Yuna\_89 (K6), Yunkel11\_91 (K1), Zabiza\_82 (K1), Zavala\_88 (K1),

#### Start 27:

- Found in 70 of 175 ( 40.0% ) of genes in pham
- Manual Annotations of this start: 2 of 156
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Efra2\_93 (K1), Guanica15\_92 (K1),

#### Start 28:

- Found in 1 of 175 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 156
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Validus\_92 (K1),

Start 29:

- Found in 14 of 175 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 9 of 156
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Bryler\_85 (K6), Cain\_93 (K6), Chavito\_86 (K1), Niklas\_87 (K1), Peanam\_87 (K1), Phrank\_93 (K6), Shaobing\_86 (K1), TClif\_86 (K6), Tierra\_93 (K6), Unicorn\_93 (K6),

Start 30:

- Found in 24 of 175 ( 13.7% ) of genes in pham
- Manual Annotations of this start: 3 of 156
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Dumbo\_118 (E), MadamMonkfish\_117 (E), Porky\_117 (E),

Start 31:

- Found in 35 of 175 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 22 of 156
- Called 74.3% of time when present
- Phage (with cluster) where this start called: Agent47\_77 (K5), AlleyCat\_79 (K5), BananenDer11\_74 (K5), Collard\_75 (K5), Dadosky\_79 (K5), DoubleChamp\_74 (K5), Edugator\_75 (K5), Feyre\_80 (K5), Gengar\_79 (K5), Guillsminger\_80 (K5), Heftyboy\_77 (K5), InvictusManeo\_75 (K5), Kratio\_79 (K5), Larva\_78 (K5), Leston\_79 (K5), LilDirt\_74 (K5), Miryou\_81 (K5), Neighly\_79 (K3), OkiRoe\_80 (K5), Omnicron\_83 (K5), Paola\_79 (K5), Psycho\_77 (K5), SoSeph\_77 (K5), Thyatira\_80 (K5), ViviJ\_83 (K5), Waterfoul\_79 (K5),

Start 40:

- Found in 8 of 175 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 3 of 156
- Called 62.5% of time when present
- Phage (with cluster) where this start called: Becksu\_116 (E), ChosenOne\_118 (E), Elite2014\_117 (E), FoghornLeghorn\_115 (E), Lilpickle\_117 (E),

**Summary by clusters:**

There are 7 clusters represented in this pham: AA, E, K3, K1, M1, K6, K5,

Info for manual annotations of cluster AA:

- Start number 25 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster E:

- Start number 30 was manually annotated 3 times for cluster E.
- Start number 40 was manually annotated 3 times for cluster E.

Info for manual annotations of cluster K1:

- Start number 23 was manually annotated 18 times for cluster K1.
- Start number 25 was manually annotated 75 times for cluster K1.
- Start number 27 was manually annotated 2 times for cluster K1.
- Start number 28 was manually annotated 1 time for cluster K1.
- Start number 29 was manually annotated 3 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 24 was manually annotated 2 times for cluster K3.

Info for manual annotations of cluster K5:

- Start number 31 was manually annotated 22 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 23 was manually annotated 2 times for cluster K6.
- Start number 25 was manually annotated 2 times for cluster K6.
- Start number 29 was manually annotated 6 times for cluster K6.

Info for manual annotations of cluster M1:

- Start number 21 was manually annotated 15 times for cluster M1.

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

Gene: ActinUp\_87 Start: 55176, Stop: 55559, Start Num: 25

Candidate Starts for ActinUp\_87:

(Start: 23 @55173 has 20 MA's), (Start: 25 @55176 has 79 MA's), (Start: 27 @55179 has 2 MA's), (34, 55203), (36, 55209), (47, 55290), (48, 55293), (58, 55338), (69, 55368), (87, 55431), (101, 55482), (114, 55545), (115, 55551),

Gene: Adephagia\_85 Start: 55016, Stop: 55402, Start Num: 23

Candidate Starts for Adephagia\_85:

(Start: 23 @55016 has 20 MA's), (Start: 25 @55019 has 79 MA's), (Start: 27 @55022 has 2 MA's), (34, 55046), (36, 55052), (47, 55133), (48, 55136), (58, 55181), (69, 55211), (87, 55274), (101, 55325), (114, 55388), (115, 55394),

Gene: Adonis\_86 Start: 55208, Stop: 55591, Start Num: 25

Candidate Starts for Adonis\_86:

(1, 54602), (2, 54695), (3, 54764), (4, 54860), (8, 54974), (10, 55091), (Start: 23 @55205 has 20 MA's), (Start: 25 @55208 has 79 MA's), (Start: 27 @55211 has 2 MA's), (34, 55235), (36, 55241), (47, 55322), (48, 55325), (58, 55370), (69, 55400), (87, 55463), (101, 55514), (114, 55577), (115, 55583),

Gene: Agent47\_77 Start: 51159, Stop: 51524, Start Num: 31

Candidate Starts for Agent47\_77:

(15, 51084), (Start: 31 @51159 has 22 MA's), (35, 51174), (48, 51258), (65, 51318), (76, 51345), (106, 51492),

Gene: Ageofdapage\_90 Start: 55958, Stop: 56356, Start Num: 25

Candidate Starts for Ageofdapage\_90:

(Start: 23 @55955 has 20 MA's), (Start: 25 @55958 has 79 MA's), (37, 55979), (45, 56024), (47, 56057), (48, 56060), (72, 56132), (85, 56168), (94, 56225), (103, 56264), (107, 56300), (110, 56315), (117, 56342),

Gene: AlishaPH\_79 Start: 52396, Stop: 52788, Start Num: 25

Candidate Starts for AlishaPH\_79:

(8, 52162), (10, 52279), (Start: 23 @52393 has 20 MA's), (Start: 25 @52396 has 79 MA's), (37, 52417), (45, 52462), (47, 52495), (48, 52498), (58, 52543), (63, 52555), (72, 52570), (76, 52573), (85, 52606), (94, 52663), (103, 52702), (107, 52738), (110, 52753),

Gene: AlleyCat\_79 Start: 52246, Stop: 52608, Start Num: 31

Candidate Starts for AlleyCat\_79:

(20, 52198), (Start: 31 @52246 has 22 MA's), (35, 52261), (48, 52345), (65, 52405), (76, 52432), (106, 52576),

Gene: Anaya\_89 Start: 56222, Stop: 56620, Start Num: 25

Candidate Starts for Anaya\_89:

(8, 55988), (10, 56105), (Start: 23 @56219 has 20 MA's), (Start: 25 @56222 has 79 MA's), (37, 56243), (45, 56288), (47, 56321), (48, 56324), (72, 56396), (85, 56432), (94, 56489), (103, 56528), (107, 56564), (110, 56579), (117, 56606),

Gene: Angelica\_83 Start: 54442, Stop: 54828, Start Num: 23

Candidate Starts for Angelica\_83:

(Start: 23 @54442 has 20 MA's), (Start: 25 @54445 has 79 MA's), (34, 54472), (36, 54478), (38, 54481), (47, 54559), (48, 54562), (58, 54607), (69, 54637), (87, 54700), (101, 54751), (114, 54814), (115, 54820),

Gene: Anma\_86 Start: 55402, Stop: 55782, Start Num: 25

Candidate Starts for Anma\_86:

(Start: 23 @55399 has 20 MA's), (Start: 25 @55402 has 79 MA's), (Start: 27 @55405 has 2 MA's), (36, 55435), (47, 55516), (71, 55597), (87, 55657), (88, 55660), (101, 55705), (115, 55774),

Gene: Apocalypse\_88 Start: 55385, Stop: 55750, Start Num: 25

Candidate Starts for Apocalypse\_88:

(8, 55151), (10, 55268), (Start: 23 @55382 has 20 MA's), (Start: 25 @55385 has 79 MA's), (37, 55406), (41, 55430), (45, 55451), (47, 55484), (48, 55487), (58, 55532), (63, 55544), (72, 55559), (76, 55562), (85, 55595), (89, 55628), (94, 55652), (103, 55691), (107, 55727), (110, 55742),

Gene: Asayake\_86 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for Asayake\_86:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640), (114, 55703), (115, 55709),

Gene: Atiba\_87 Start: 54982, Stop: 55365, Start Num: 25

Candidate Starts for Atiba\_87:

(Start: 23 @54979 has 20 MA's), (Start: 25 @54982 has 79 MA's), (Start: 27 @54985 has 2 MA's), (34, 55009), (36, 55015), (47, 55096), (48, 55099), (58, 55144), (69, 55174), (87, 55237), (101, 55288), (114, 55351), (115, 55357),

Gene: Auspice\_120 Start: 63814, Stop: 64218, Start Num: 21

Candidate Starts for Auspice\_120:

(18, 63790), (19, 63793), (Start: 21 @63814 has 15 MA's), (Start: 30 @63844 has 3 MA's), (38, 63868), (44, 63904), (47, 63943), (48, 63946), (54, 63973), (78, 64039), (93, 64117), (98, 64138), (112, 64207),

Gene: BEEST\_86 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for BEEST\_86:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640), (114, 55703), (115, 55709),

Gene: BGlluviae\_85 Start: 54705, Stop: 55097, Start Num: 25

Candidate Starts for BGlluviae\_85:

(8, 54471), (10, 54588), (Start: 23 @54702 has 20 MA's), (Start: 25 @54705 has 79 MA's), (37, 54726), (45, 54771), (47, 54804), (48, 54807), (58, 54852), (63, 54864), (72, 54879), (76, 54882), (85, 54915), (94, 54972), (103, 55011), (107, 55047), (110, 55062),

Gene: BaghaKamala\_85 Start: 54559, Stop: 54945, Start Num: 23

Candidate Starts for BaghaKamala\_85:

(Start: 23 @54559 has 20 MA's), (Start: 25 @54562 has 79 MA's), (Start: 27 @54565 has 2 MA's), (34, 54589), (36, 54595), (47, 54676), (48, 54679), (58, 54724), (69, 54754), (87, 54817), (101, 54868), (114, 54931), (115, 54937),

Gene: BananenDer11\_74 Start: 51123, Stop: 51488, Start Num: 31

Candidate Starts for BananenDer11\_74:

(Start: 31 @51123 has 22 MA's), (35, 51138), (42, 51174), (48, 51222), (65, 51282), (76, 51309), (106, 51456),

Gene: BarrelRoll\_86 Start: 55102, Stop: 55476, Start Num: 25

Candidate Starts for BarrelRoll\_86:

(8, 54868), (10, 54985), (Start: 23 @55099 has 20 MA's), (Start: 25 @55102 has 79 MA's), (Start: 27 @55105 has 2 MA's), (35, 55132), (43, 55171), (45, 55180), (51, 55234), (55, 55246), (65, 55276), (83, 55324), (87, 55354), (89, 55363), (90, 55372), (99, 55399), (101, 55408), (111, 55459),

Gene: Becksu\_116 Start: 66823, Stop: 67122, Start Num: 40

Candidate Starts for Becksu\_116:

(22, 66763), (Start: 30 @66781 has 3 MA's), (Start: 40 @66823 has 3 MA's), (44, 66844), (63, 66943), (79, 66973), (83, 66988), (101, 67075), (103, 67081), (105, 67099),

Gene: Beezoo\_89 Start: 55917, Stop: 56297, Start Num: 25

Candidate Starts for Beezoo\_89:

(Start: 23 @55914 has 20 MA's), (Start: 25 @55917 has 79 MA's), (Start: 27 @55920 has 2 MA's), (34, 55944), (47, 56031), (48, 56034), (71, 56112), (87, 56172), (101, 56220), (114, 56283), (115, 56289),

Gene: Bella96\_87 Start: 55512, Stop: 55904, Start Num: 25

Candidate Starts for Bella96\_87:

(Start: 23 @55509 has 20 MA's), (Start: 25 @55512 has 79 MA's), (37, 55533), (45, 55578), (47, 55611), (48, 55614), (66, 55680), (72, 55686), (85, 55722), (94, 55779), (103, 55818), (107, 55854), (110, 55869), (116, 55887), (118, 55896),

Gene: Belladonna\_86 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Belladonna\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: Bern\_87 Start: 53628, Stop: 54011, Start Num: 25

Candidate Starts for Bern\_87:

(Start: 23 @53625 has 20 MA's), (Start: 25 @53628 has 79 MA's), (Start: 27 @53631 has 2 MA's), (36, 53661), (45, 53709), (47, 53742), (57, 53787), (69, 53820), (87, 53883), (89, 53892), (101, 53934), (115, 54003),

Gene: Blizzard\_86 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for Blizzard\_86:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640),

(114, 55703), (115, 55709),

Gene: Boiiii\_86 Start: 55336, Stop: 55719, Start Num: 25

Candidate Starts for Boiiii\_86:

(Start: 23 @55333 has 20 MA's), (Start: 25 @55336 has 79 MA's), (Start: 27 @55339 has 2 MA's), (34, 55363), (36, 55369), (47, 55450), (48, 55453), (58, 55498), (69, 55528), (87, 55591), (101, 55642), (114, 55705), (115, 55711),

Gene: Bongo\_120 Start: 63430, Stop: 63834, Start Num: 21

Candidate Starts for Bongo\_120:

(18, 63406), (19, 63409), (Start: 21 @63430 has 15 MA's), (Start: 30 @63460 has 3 MA's), (38, 63484), (44, 63520), (47, 63559), (48, 63562), (54, 63589), (78, 63655), (93, 63733), (98, 63754), (112, 63823),

Gene: Bricole\_122 Start: 63578, Stop: 63982, Start Num: 21

Candidate Starts for Bricole\_122:

(18, 63554), (19, 63557), (Start: 21 @63578 has 15 MA's), (Start: 30 @63608 has 3 MA's), (38, 63632), (44, 63668), (47, 63707), (48, 63710), (54, 63737), (78, 63803), (93, 63881), (98, 63902), (112, 63971),

Gene: Bryler\_85 Start: 53090, Stop: 53452, Start Num: 29

Candidate Starts for Bryler\_85:

(Start: 29 @53090 has 9 MA's), (Start: 31 @53096 has 22 MA's), (35, 53111), (47, 53192), (63, 53252), (64, 53255), (75, 53276), (87, 53330), (89, 53339), (101, 53381),

Gene: CREW\_85 Start: 55134, Stop: 55520, Start Num: 23

Candidate Starts for CREW\_85:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: Cain\_93 Start: 56237, Stop: 56599, Start Num: 29

Candidate Starts for Cain\_93:

(Start: 29 @56237 has 9 MA's), (Start: 31 @56243 has 22 MA's), (35, 56258), (47, 56339), (63, 56399), (64, 56402), (75, 56423), (87, 56477), (89, 56486), (101, 56528),

Gene: CallaLilly\_86 Start: 55060, Stop: 55443, Start Num: 25

Candidate Starts for CallaLilly\_86:

(Start: 23 @55057 has 20 MA's), (Start: 25 @55060 has 79 MA's), (Start: 27 @55063 has 2 MA's), (36, 55093), (47, 55174), (48, 55177), (58, 55222), (69, 55252), (87, 55315), (101, 55366), (114, 55429), (115, 55435),

Gene: Capricorn\_86 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Capricorn\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: CaseJules\_88 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for CaseJules\_88:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640), (114, 55703), (115, 55709),

Gene: Chavito\_86 Start: 56405, Stop: 56767, Start Num: 29

Candidate Starts for Chavito\_86:

(Start: 23 @56399 has 20 MA's), (Start: 29 @56405 has 9 MA's), (35, 56426), (45, 56471), (47, 56504), (61, 56558), (97, 56681), (101, 56705),

Gene: CheetoDust\_86 Start: 54523, Stop: 54906, Start Num: 25

Candidate Starts for CheetoDust\_86:

(8, 54289), (10, 54406), (Start: 23 @54520 has 20 MA's), (Start: 25 @54523 has 79 MA's), (Start: 27 @54526 has 2 MA's), (34, 54550), (36, 54556), (47, 54637), (48, 54640), (58, 54685), (69, 54715), (87, 54778), (101, 54829), (114, 54892), (115, 54898),

Gene: ChosenOne\_118 Start: 66075, Stop: 66374, Start Num: 40

Candidate Starts for ChosenOne\_118:

(22, 66015), (Start: 30 @66033 has 3 MA's), (Start: 40 @66075 has 3 MA's), (44, 66096), (63, 66195), (79, 66225), (83, 66240), (101, 66327), (103, 66333), (105, 66351),

Gene: Chris\_87 Start: 55450, Stop: 55815, Start Num: 25

Candidate Starts for Chris\_87:

(Start: 23 @55447 has 20 MA's), (Start: 25 @55450 has 79 MA's), (33, 55465), (41, 55498), (47, 55552), (48, 55555), (50, 55561), (58, 55600), (60, 55603), (82, 55660), (85, 55669), (87, 55693), (102, 55744), (107, 55777), (112, 55795),

Gene: Clipper\_90 Start: 55898, Stop: 56263, Start Num: 25

Candidate Starts for Clipper\_90:

(10, 55781), (Start: 23 @55895 has 20 MA's), (Start: 25 @55898 has 79 MA's), (37, 55919), (41, 55943), (45, 55964), (47, 55997), (48, 56000), (58, 56045), (63, 56057), (72, 56072), (76, 56075), (85, 56108), (89, 56141), (94, 56165), (103, 56204), (107, 56240), (110, 56255),

Gene: Collard\_75 Start: 51123, Stop: 51488, Start Num: 31

Candidate Starts for Collard\_75:

(Start: 31 @51123 has 22 MA's), (35, 51138), (42, 51174), (48, 51222), (65, 51282), (76, 51309), (106, 51456),

Gene: CrimD\_86 Start: 55155, Stop: 55556, Start Num: 23

Candidate Starts for CrimD\_86:

(8, 54924), (10, 55041), (Start: 23 @55155 has 20 MA's), (Start: 25 @55158 has 79 MA's), (37, 55179), (45, 55224), (47, 55257), (48, 55260), (72, 55332), (85, 55368), (94, 55425), (103, 55464), (107, 55500), (110, 55515), (117, 55542),

Gene: Curiosium\_94 Start: 56508, Stop: 56915, Start Num: 25

Candidate Starts for Curiosium\_94:

(Start: 25 @56508 has 79 MA's), (33, 56520), (45, 56574), (47, 56607), (63, 56667), (72, 56691), (85, 56727), (94, 56784), (103, 56823), (107, 56859), (110, 56874), (117, 56901),

Gene: Dadosky\_79 Start: 52247, Stop: 52609, Start Num: 31

Candidate Starts for Dadosky\_79:

(20, 52199), (Start: 31 @52247 has 22 MA's), (35, 52262), (48, 52346), (65, 52406), (76, 52433), (106, 52577),

Gene: Dalmuri\_86 Start: 55134, Stop: 55520, Start Num: 23

Candidate Starts for Dalmuri\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: DartGoblin\_88 Start: 55268, Stop: 55630, Start Num: 25

Candidate Starts for DartGoblin\_88:

(Start: 23 @55265 has 20 MA's), (Start: 25 @55268 has 79 MA's), (35, 55286), (42, 55322), (45, 55334), (51, 55388), (65, 55430), (80, 55466), (89, 55517), (101, 55562),

Gene: Dartin\_86 Start: 56056, Stop: 56409, Start Num: 23

Candidate Starts for Dartin\_86:

(Start: 23 @56056 has 20 MA's), (Start: 29 @56062 has 9 MA's), (35, 56083), (45, 56128), (47, 56161), (61, 56215), (87, 56299), (89, 56308), (101, 56350),

Gene: Deby\_86 Start: 55645, Stop: 56043, Start Num: 25

Candidate Starts for Deby\_86:

(8, 55411), (10, 55528), (Start: 23 @55642 has 20 MA's), (Start: 25 @55645 has 79 MA's), (37, 55666), (45, 55711), (47, 55744), (48, 55747), (60, 55795), (72, 55819), (85, 55855), (94, 55912), (103, 55951), (107, 55987), (110, 56002), (117, 56029),

Gene: Devera\_92 Start: 56005, Stop: 56388, Start Num: 25

Candidate Starts for Devera\_92:

(8, 55771), (10, 55888), (Start: 23 @56002 has 20 MA's), (Start: 25 @56005 has 79 MA's), (Start: 27 @56008 has 2 MA's), (34, 56032), (36, 56038), (47, 56119), (48, 56122), (58, 56167), (69, 56197), (87, 56260), (101, 56311), (114, 56374),

Gene: Diminimus\_121 Start: 63425, Stop: 63829, Start Num: 21

Candidate Starts for Diminimus\_121:

(18, 63401), (19, 63404), (Start: 21 @63425 has 15 MA's), (Start: 30 @63455 has 3 MA's), (38, 63479), (44, 63515), (47, 63554), (48, 63557), (54, 63584), (78, 63650), (93, 63728), (98, 63749), (112, 63818),

Gene: Dole\_89 Start: 56005, Stop: 56391, Start Num: 23

Candidate Starts for Dole\_89:

(8, 55774), (10, 55891), (Start: 23 @56005 has 20 MA's), (Start: 25 @56008 has 79 MA's), (Start: 27 @56011 has 2 MA's), (34, 56035), (36, 56041), (47, 56122), (48, 56125), (58, 56170), (69, 56200), (87, 56263), (101, 56314), (114, 56377),

Gene: DoubleChamp\_74 Start: 51123, Stop: 51488, Start Num: 31

Candidate Starts for DoubleChamp\_74:

(Start: 31 @51123 has 22 MA's), (35, 51138), (42, 51174), (48, 51222), (65, 51282), (76, 51309), (106, 51456),

Gene: DrHayes\_86 Start: 55402, Stop: 55782, Start Num: 25

Candidate Starts for DrHayes\_86:

(Start: 23 @55399 has 20 MA's), (Start: 25 @55402 has 79 MA's), (Start: 27 @55405 has 2 MA's), (36, 55435), (47, 55516), (71, 55597), (87, 55657), (88, 55660), (101, 55705), (115, 55774),

Gene: Dulcita\_121 Start: 63426, Stop: 63830, Start Num: 21

Candidate Starts for Dulcita\_121:

(18, 63402), (19, 63405), (Start: 21 @63426 has 15 MA's), (Start: 30 @63456 has 3 MA's), (38, 63480), (44, 63516), (47, 63555), (48, 63558), (54, 63585), (78, 63651), (93, 63729), (98, 63750), (112, 63819),

Gene: Dumbo\_118 Start: 66225, Stop: 66566, Start Num: 30

Candidate Starts for Dumbo\_118:

(22, 66207), (Start: 30 @66225 has 3 MA's), (Start: 40 @66267 has 3 MA's), (44, 66288), (63, 66387), (79, 66417), (83, 66432), (101, 66519), (103, 66525), (105, 66543),

Gene: Durfee\_86 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for Durfee\_86:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640), (114, 55703), (115, 55709),

Gene: Edugator\_75 Start: 53418, Stop: 53780, Start Num: 31

Candidate Starts for Edugator\_75:

(20, 53370), (Start: 31 @53418 has 22 MA's), (35, 53433), (48, 53517), (65, 53577), (76, 53604), (106, 53748),

Gene: Efra2\_93 Start: 56492, Stop: 56866, Start Num: 27

Candidate Starts for Efra2\_93:

(17, 56435), (26, 56489), (Start: 27 @56492 has 2 MA's), (36, 56522), (45, 56570), (47, 56603), (58, 56651), (69, 56681), (87, 56744), (89, 56753), (101, 56789), (115, 56858),

Gene: Elite2014\_117 Start: 66074, Stop: 66373, Start Num: 40

Candidate Starts for Elite2014\_117:

(22, 66014), (Start: 30 @66032 has 3 MA's), (Start: 40 @66074 has 3 MA's), (44, 66095), (63, 66194), (79, 66224), (83, 66239), (101, 66326), (103, 66332), (105, 66350),

Gene: Emerson\_88 Start: 55322, Stop: 55720, Start Num: 25

Candidate Starts for Emerson\_88:

(8, 55088), (10, 55205), (Start: 23 @55319 has 20 MA's), (Start: 25 @55322 has 79 MA's), (37, 55343), (41, 55367), (45, 55388), (47, 55421), (48, 55424), (85, 55532), (94, 55589), (103, 55628), (107, 55664), (110, 55679), (117, 55706),

Gene: Feyre\_80 Start: 54820, Stop: 55185, Start Num: 31

Candidate Starts for Feyre\_80:

(16, 54748), (Start: 31 @54820 has 22 MA's), (35, 54835), (48, 54919), (65, 54979), (76, 55006), (87, 55066), (106, 55153),

Gene: FoghornLeghorn\_115 Start: 65163, Stop: 65462, Start Num: 40

Candidate Starts for FoghornLeghorn\_115:

(22, 65103), (Start: 30 @65121 has 3 MA's), (Start: 40 @65163 has 3 MA's), (44, 65184), (63, 65283), (79, 65313), (83, 65328), (101, 65415), (103, 65421), (105, 65439),

Gene: FreakyGoo\_121 Start: 63910, Stop: 64314, Start Num: 21

Candidate Starts for FreakyGoo\_121:

(18, 63886), (19, 63889), (Start: 21 @63910 has 15 MA's), (Start: 30 @63940 has 3 MA's), (38, 63964), (44, 64000), (47, 64039), (48, 64042), (54, 64069), (78, 64135), (93, 64213), (98, 64234), (112, 64303),

Gene: Ganymede\_86 Start: 55143, Stop: 55523, Start Num: 25

Candidate Starts for Ganymede\_86:

(Start: 23 @55140 has 20 MA's), (Start: 25 @55143 has 79 MA's), (Start: 27 @55146 has 2 MA's), (34, 55170), (47, 55257), (48, 55260), (71, 55338), (87, 55398), (101, 55446), (114, 55509), (115, 55515),

Gene: Gengar\_79 Start: 53635, Stop: 54000, Start Num: 31

Candidate Starts for Gengar\_79:

(15, 53560), (Start: 31 @53635 has 22 MA's), (35, 53650), (48, 53734), (65, 53794), (76, 53821), (87, 53881), (106, 53968),

Gene: Geraldini\_88 Start: 55160, Stop: 55561, Start Num: 23

Candidate Starts for Geraldini\_88:

(4, 54815), (8, 54929), (10, 55046), (Start: 23 @55160 has 20 MA's), (Start: 25 @55163 has 79 MA's), (37, 55184), (45, 55229), (47, 55262), (48, 55265), (72, 55337), (85, 55373), (94, 55430), (103, 55469), (107, 55505), (110, 55520), (117, 55547),

Gene: Glaske16\_123 Start: 64543, Stop: 64947, Start Num: 21

Candidate Starts for Glaske16\_123:

(18, 64519), (19, 64522), (Start: 21 @64543 has 15 MA's), (Start: 30 @64573 has 3 MA's), (38, 64597), (44, 64633), (47, 64672), (48, 64675), (54, 64702), (78, 64768), (93, 64846), (98, 64867), (112, 64936),

Gene: Guanica15\_92 Start: 56184, Stop: 56558, Start Num: 27

Candidate Starts for Guanica15\_92:

(17, 56127), (26, 56181), (Start: 27 @56184 has 2 MA's), (36, 56214), (45, 56262), (47, 56295), (58, 56343), (69, 56373), (87, 56436), (89, 56445), (101, 56481), (115, 56550),

Gene: Guillsminger\_80 Start: 53483, Stop: 53848, Start Num: 31

Candidate Starts for Guillsminger\_80:

(15, 53408), (Start: 31 @53483 has 22 MA's), (35, 53498), (48, 53582), (65, 53642), (76, 53669), (87, 53729), (106, 53816),

Gene: HedwigODU\_86 Start: 55173, Stop: 55559, Start Num: 23

Candidate Starts for HedwigODU\_86:

(Start: 23 @55173 has 20 MA's), (Start: 25 @55176 has 79 MA's), (Start: 27 @55179 has 2 MA's), (34, 55203), (36, 55209), (47, 55290), (48, 55293), (58, 55338), (69, 55368), (87, 55431), (101, 55482), (114, 55545), (115, 55551),

Gene: Heftyboy\_77 Start: 52850, Stop: 53215, Start Num: 31

Candidate Starts for Heftyboy\_77:

(19, 52805), (Start: 31 @52850 has 22 MA's), (35, 52865), (48, 52949), (65, 53009), (76, 53036), (106, 53183),

Gene: Homura\_85 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Homura\_85:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: Hyperbowlee\_85 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for Hyperbowlee\_85:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640), (114, 55703), (115, 55709),

Gene: IPHane7\_118 Start: 63430, Stop: 63834, Start Num: 21

Candidate Starts for IPHane7\_118:

(18, 63406), (19, 63409), (Start: 21 @63430 has 15 MA's), (Start: 30 @63460 has 3 MA's), (38, 63484), (44, 63520), (47, 63559), (48, 63562), (54, 63589), (78, 63655), (93, 63733), (98, 63754), (112, 63823),

Gene: Illumine\_90 Start: 56007, Stop: 56390, Start Num: 25

Candidate Starts for Illumine\_90:

(8, 55773), (10, 55890), (Start: 23 @56004 has 20 MA's), (Start: 25 @56007 has 79 MA's), (Start: 27 @56010 has 2 MA's), (34, 56034), (36, 56040), (47, 56121), (48, 56124), (58, 56169), (69, 56199), (87,

56262), (101, 56313), (114, 56376),

Gene: Inky\_86 Start: 55134, Stop: 55520, Start Num: 23

Candidate Starts for Inky\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: InvictusManeo\_75 Start: 51163, Stop: 51528, Start Num: 31

Candidate Starts for InvictusManeo\_75:

(15, 51088), (Start: 31 @51163 has 22 MA's), (35, 51178), (48, 51262), (65, 51322), (76, 51349), (106, 51496),

Gene: Izel\_121 Start: 63425, Stop: 63829, Start Num: 21

Candidate Starts for Izel\_121:

(18, 63401), (19, 63404), (Start: 21 @63425 has 15 MA's), (Start: 30 @63455 has 3 MA's), (38, 63479), (44, 63515), (47, 63554), (48, 63557), (54, 63584), (78, 63650), (93, 63728), (98, 63749), (112, 63818),

Gene: JAWS\_85 Start: 55120, Stop: 55506, Start Num: 23

Candidate Starts for JAWS\_85:

(Start: 23 @55120 has 20 MA's), (Start: 25 @55123 has 79 MA's), (Start: 27 @55126 has 2 MA's), (34, 55150), (36, 55156), (47, 55237), (48, 55240), (58, 55285), (69, 55315), (87, 55378), (101, 55429), (114, 55492), (115, 55498),

Gene: Jarvi\_86 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Jarvi\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: Jayhawk\_88 Start: 55162, Stop: 55536, Start Num: 25

Candidate Starts for Jayhawk\_88:

(8, 54928), (10, 55045), (Start: 23 @55159 has 20 MA's), (Start: 25 @55162 has 79 MA's), (Start: 27 @55165 has 2 MA's), (35, 55192), (43, 55231), (45, 55240), (51, 55294), (55, 55306), (65, 55336), (83, 55384), (87, 55414), (89, 55423), (90, 55432), (99, 55459), (101, 55468), (111, 55519),

Gene: Jeckyll\_86 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Jeckyll\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: Joy99\_87 Start: 55263, Stop: 55649, Start Num: 23

Candidate Starts for Joy99\_87:

(Start: 23 @55263 has 20 MA's), (Start: 25 @55266 has 79 MA's), (Start: 27 @55269 has 2 MA's), (34, 55293), (36, 55299), (47, 55380), (48, 55383), (58, 55428), (69, 55458), (87, 55521), (101, 55572), (114, 55635), (115, 55641),

Gene: KiSi\_88 Start: 55400, Stop: 55765, Start Num: 25

Candidate Starts for KiSi\_88:

(Start: 23 @55397 has 20 MA's), (Start: 25 @55400 has 79 MA's), (45, 55466), (47, 55499), (80, 55598), (85, 55616), (87, 55640), (102, 55691), (107, 55727), (110, 55742), (112, 55745),

Gene: KleverKiS\_123 Start: 64915, Stop: 65319, Start Num: 21

Candidate Starts for KleverKiS\_123:

(18, 64891), (19, 64894), (Start: 21 @64915 has 15 MA's), (Start: 30 @64945 has 3 MA's), (38, 64969), (44, 65005), (47, 65044), (48, 65047), (54, 65074), (78, 65140), (93, 65218), (98, 65239), (112, 65308),

Gene: Kratio\_79 Start: 52141, Stop: 52503, Start Num: 31

Candidate Starts for Kratio\_79:

(19, 52093), (Start: 31 @52141 has 22 MA's), (35, 52156), (48, 52240), (65, 52300), (76, 52327), (106, 52471),

Gene: Larva\_78 Start: 53119, Stop: 53481, Start Num: 31

Candidate Starts for Larva\_78:

(20, 53071), (Start: 31 @53119 has 22 MA's), (35, 53134), (48, 53218), (65, 53278), (76, 53305), (106, 53449),

Gene: LastHope\_92 Start: 55896, Stop: 56273, Start Num: 25

Candidate Starts for LastHope\_92:

(Start: 23 @55893 has 20 MA's), (Start: 25 @55896 has 79 MA's), (36, 55926), (47, 56007), (71, 56088), (80, 56103), (87, 56148), (88, 56151), (92, 56169), (96, 56181), (101, 56196), (115, 56265),

Gene: LaterM\_86 Start: 55505, Stop: 55885, Start Num: 25

Candidate Starts for LaterM\_86:

(10, 55388), (Start: 23 @55502 has 20 MA's), (Start: 25 @55505 has 79 MA's), (Start: 27 @55508 has 2 MA's), (34, 55532), (36, 55538), (47, 55619), (71, 55700), (87, 55760), (92, 55781), (101, 55808), (114, 55871),

Gene: LeMond\_87 Start: 55362, Stop: 55727, Start Num: 25

Candidate Starts for LeMond\_87:

(Start: 23 @55359 has 20 MA's), (Start: 25 @55362 has 79 MA's), (45, 55428), (47, 55461), (80, 55560), (85, 55578), (87, 55602), (102, 55653), (107, 55689), (110, 55704), (112, 55707),

Gene: Leston\_79 Start: 53600, Stop: 53965, Start Num: 31

Candidate Starts for Leston\_79:

(15, 53525), (Start: 31 @53600 has 22 MA's), (35, 53615), (48, 53699), (65, 53759), (76, 53786), (87, 53846), (106, 53933),

Gene: LilDirt\_74 Start: 50924, Stop: 51289, Start Num: 31

Candidate Starts for LilDirt\_74:

(Start: 31 @50924 has 22 MA's), (35, 50939), (42, 50975), (48, 51023), (65, 51083), (76, 51110), (106, 51257),

Gene: LilhomieP\_120 Start: 64708, Stop: 65112, Start Num: 21

Candidate Starts for LilhomieP\_120:

(18, 64684), (19, 64687), (Start: 21 @64708 has 15 MA's), (Start: 30 @64738 has 3 MA's), (38, 64762), (44, 64798), (47, 64837), (48, 64840), (54, 64867), (78, 64933), (93, 65011), (98, 65032), (112, 65101),

Gene: Lilpickle\_117 Start: 66074, Stop: 66373, Start Num: 40

Candidate Starts for Lilpickle\_117:

(22, 66014), (Start: 30 @66032 has 3 MA's), (Start: 40 @66074 has 3 MA's), (44, 66095), (63, 66194), (79, 66224), (83, 66239), (101, 66326), (103, 66332), (105, 66350),

Gene: LindNT\_84 Start: 55242, Stop: 55622, Start Num: 23

Candidate Starts for LindNT\_84:

(7, 54969), (8, 55011), (10, 55128), (Start: 23 @55242 has 20 MA's), (Start: 25 @55245 has 79 MA's), (47, 55356), (48, 55359), (71, 55437), (80, 55452), (87, 55497), (92, 55518), (96, 55530), (101, 55545), (114, 55608),

Gene: Llorens\_86 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Llorens\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: Lunahalos\_86 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Lunahalos\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: MacKat\_82 Start: 50782, Stop: 51147, Start Num: 25

Candidate Starts for MacKat\_82:

(10, 50665), (Start: 23 @50779 has 20 MA's), (Start: 25 @50782 has 79 MA's), (37, 50803), (41, 50827), (45, 50848), (47, 50881), (48, 50884), (58, 50929), (63, 50941), (72, 50956), (76, 50959), (85, 50992), (89, 51025), (94, 51049), (103, 51088), (107, 51124), (110, 51139),

Gene: MadamMonkfish\_117 Start: 66042, Stop: 66383, Start Num: 30

Candidate Starts for MadamMonkfish\_117:

(22, 66024), (Start: 30 @66042 has 3 MA's), (Start: 40 @66084 has 3 MA's), (44, 66105), (63, 66204), (79, 66234), (83, 66249), (101, 66336), (103, 66342), (105, 66360),

Gene: MarkPhew\_88 Start: 55429, Stop: 55788, Start Num: 25

Candidate Starts for MarkPhew\_88:

(Start: 23 @55426 has 20 MA's), (Start: 25 @55429 has 79 MA's), (45, 55492), (47, 55525), (56, 55567), (74, 55606), (78, 55615), (87, 55666), (88, 55669), (102, 55717), (107, 55750), (112, 55768),

Gene: Marshawn\_84 Start: 55567, Stop: 55941, Start Num: 25

Candidate Starts for Marshawn\_84:

(Start: 23 @55564 has 20 MA's), (Start: 25 @55567 has 79 MA's), (32, 55579), (45, 55633), (47, 55666), (63, 55726), (64, 55729), (73, 55750), (85, 55789), (86, 55810), (89, 55822), (100, 55858), (107, 55903), (112, 55921),

Gene: McMater\_86 Start: 56056, Stop: 56409, Start Num: 23

Candidate Starts for McMater\_86:

(Start: 23 @56056 has 20 MA's), (Start: 29 @56062 has 9 MA's), (35, 56083), (45, 56128), (47, 56161), (61, 56215), (87, 56299), (89, 56308), (101, 56350),

Gene: MeaningOfLife\_88 Start: 55825, Stop: 56205, Start Num: 25

Candidate Starts for MeaningOfLife\_88:

(8, 55591), (10, 55708), (Start: 23 @55822 has 20 MA's), (Start: 25 @55825 has 79 MA's), (Start: 27 @55828 has 2 MA's), (34, 55852), (47, 55939), (48, 55942), (71, 56020), (87, 56080), (101, 56128), (114, 56191), (115, 56197),

Gene: Megsy\_90 Start: 55453, Stop: 55851, Start Num: 25

Candidate Starts for Megsy\_90:

(Start: 23 @55450 has 20 MA's), (Start: 25 @55453 has 79 MA's), (37, 55474), (45, 55519), (47, 55552), (48, 55555), (72, 55627), (85, 55663), (94, 55720), (103, 55759), (107, 55795), (110, 55810),

(117, 55837),

Gene: Miryou\_81 Start: 55458, Stop: 55823, Start Num: 31

Candidate Starts for Miryou\_81:

(11, 55347), (12, 55374), (18, 55410), (Start: 31 @55458 has 22 MA's), (35, 55473), (48, 55557), (65, 55617), (76, 55644), (87, 55704), (106, 55791),

Gene: Murucutumbu\_86 Start: 56026, Stop: 56412, Start Num: 23

Candidate Starts for Murucutumbu\_86:

(Start: 23 @56026 has 20 MA's), (Start: 25 @56029 has 79 MA's), (Start: 27 @56032 has 2 MA's), (34, 56056), (36, 56062), (47, 56143), (48, 56146), (58, 56191), (69, 56221), (87, 56284), (101, 56335), (106, 56371), (109, 56386), (114, 56398),

Gene: Mynx\_87 Start: 55442, Stop: 55828, Start Num: 23

Candidate Starts for Mynx\_87:

(10, 55328), (Start: 23 @55442 has 20 MA's), (Start: 25 @55445 has 79 MA's), (Start: 27 @55448 has 2 MA's), (34, 55472), (36, 55478), (47, 55559), (48, 55562), (58, 55607), (69, 55637), (87, 55700), (101, 55751), (114, 55814), (115, 55820),

Gene: Neighly\_79 Start: 53118, Stop: 53480, Start Num: 31

Candidate Starts for Neighly\_79:

(20, 53070), (Start: 31 @53118 has 22 MA's), (35, 53133), (48, 53217), (65, 53277), (76, 53304), (106, 53448),

Gene: Nibb\_88 Start: 55087, Stop: 55446, Start Num: 25

Candidate Starts for Nibb\_88:

(Start: 23 @55084 has 20 MA's), (Start: 25 @55087 has 79 MA's), (45, 55150), (58, 55231), (74, 55264), (78, 55273), (81, 55285), (85, 55300), (88, 55327), (89, 55333), (102, 55381), (112, 55426),

Gene: Niklas\_87 Start: 56102, Stop: 56449, Start Num: 29

Candidate Starts for Niklas\_87:

(Start: 23 @56096 has 20 MA's), (Start: 29 @56102 has 9 MA's), (35, 56123), (45, 56168), (47, 56201), (61, 56255), (87, 56339), (89, 56348), (101, 56390),

Gene: OkiRoe\_80 Start: 54598, Stop: 54963, Start Num: 31

Candidate Starts for OkiRoe\_80:

(5, 54283), (6, 54289), (9, 54469), (13, 54511), (14, 54517), (20, 54550), (Start: 31 @54598 has 22 MA's), (35, 54613), (48, 54697), (65, 54757), (76, 54784), (87, 54844), (106, 54931),

Gene: Omnicron\_83 Start: 55712, Stop: 56080, Start Num: 31

Candidate Starts for Omnicron\_83:

(Start: 31 @55712 has 22 MA's), (35, 55727), (48, 55811), (65, 55871), (70, 55886), (76, 55898), (78, 55904), (87, 55958), (97, 55994), (106, 56045),

Gene: Oscar\_88 Start: 55283, Stop: 55648, Start Num: 25

Candidate Starts for Oscar\_88:

(Start: 23 @55280 has 20 MA's), (Start: 25 @55283 has 79 MA's), (45, 55349), (47, 55382), (80, 55481), (85, 55499), (87, 55523), (102, 55574), (107, 55610), (110, 55625), (112, 55628),

Gene: Padfoot\_86 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for Padfoot\_86:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640),

(114, 55703), (115, 55709),

Gene: Padpat\_89 Start: 55322, Stop: 55720, Start Num: 25

Candidate Starts for Padpat\_89:

(8, 55088), (10, 55205), (Start: 23 @55319 has 20 MA's), (Start: 25 @55322 has 79 MA's), (37, 55343), (41, 55367), (45, 55388), (47, 55421), (48, 55424), (85, 55532), (94, 55589), (103, 55628), (107, 55664), (110, 55679), (117, 55706),

Gene: Paola\_79 Start: 53483, Stop: 53848, Start Num: 31

Candidate Starts for Paola\_79:

(15, 53408), (Start: 31 @53483 has 22 MA's), (35, 53498), (48, 53582), (65, 53642), (76, 53669), (87, 53729), (106, 53816),

Gene: Peanam\_87 Start: 56081, Stop: 56428, Start Num: 29

Candidate Starts for Peanam\_87:

(Start: 23 @56075 has 20 MA's), (Start: 29 @56081 has 9 MA's), (35, 56102), (45, 56147), (47, 56180), (61, 56234), (87, 56318), (89, 56327), (101, 56369),

Gene: Peel\_86 Start: 55139, Stop: 55522, Start Num: 25

Candidate Starts for Peel\_86:

(Start: 23 @55136 has 20 MA's), (Start: 25 @55139 has 79 MA's), (Start: 27 @55142 has 2 MA's), (34, 55166), (36, 55172), (47, 55253), (48, 55256), (58, 55301), (69, 55331), (87, 55394), (101, 55445), (114, 55508), (115, 55514),

Gene: PegLeg\_124 Start: 64592, Stop: 64996, Start Num: 21

Candidate Starts for PegLeg\_124:

(18, 64568), (19, 64571), (Start: 21 @64592 has 15 MA's), (Start: 30 @64622 has 3 MA's), (38, 64646), (44, 64682), (47, 64721), (48, 64724), (54, 64751), (78, 64817), (93, 64895), (98, 64916), (112, 64985),

Gene: Pharb\_85 Start: 54296, Stop: 54655, Start Num: 24

Candidate Starts for Pharb\_85:

(Start: 24 @54296 has 2 MA's), (Start: 31 @54302 has 22 MA's), (43, 54353), (47, 54395), (48, 54398), (51, 54416), (59, 54437), (95, 54563), (106, 54623), (109, 54638),

Gene: Phrank\_93 Start: 56224, Stop: 56586, Start Num: 29

Candidate Starts for Phrank\_93:

(Start: 29 @56224 has 9 MA's), (Start: 31 @56230 has 22 MA's), (35, 56245), (47, 56326), (63, 56386), (64, 56389), (75, 56410), (87, 56464), (89, 56473), (101, 56515),

Gene: Phrappuccino\_162 Start: 109339, Stop: 109698, Start Num: 25

Candidate Starts for Phrappuccino\_162:

(Start: 25 @109339 has 79 MA's), (38, 109360), (47, 109438), (49, 109444), (60, 109489), (84, 109552), (87, 109576), (98, 109621), (101, 109630), (106, 109663),

Gene: Piatt\_85 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for Piatt\_85:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640), (114, 55703), (115, 55709),

Gene: Pisa1\_86 Start: 55501, Stop: 55884, Start Num: 25

Candidate Starts for Pisa1\_86:

(Start: 23 @55498 has 20 MA's), (Start: 25 @55501 has 79 MA's), (Start: 27 @55504 has 2 MA's), (36, 55534), (45, 55582), (47, 55615), (57, 55660), (69, 55693), (87, 55756), (89, 55765), (101, 55807), (115, 55876),

Gene: Pisa4\_80 Start: 50870, Stop: 51253, Start Num: 25

Candidate Starts for Pisa4\_80:

(Start: 23 @50867 has 20 MA's), (Start: 25 @50870 has 79 MA's), (Start: 27 @50873 has 2 MA's), (36, 50903), (45, 50951), (47, 50984), (57, 51029), (69, 51062), (87, 51125), (89, 51134), (101, 51176), (115, 51245),

Gene: Pokerus\_86 Start: 55146, Stop: 55526, Start Num: 25

Candidate Starts for Pokerus\_86:

(10, 55029), (Start: 23 @55143 has 20 MA's), (Start: 25 @55146 has 79 MA's), (Start: 27 @55149 has 2 MA's), (34, 55173), (47, 55260), (48, 55263), (71, 55341), (87, 55401), (101, 55449), (114, 55512), (115, 55518),

Gene: Porky\_117 Start: 66236, Stop: 66577, Start Num: 30

Candidate Starts for Porky\_117:

(22, 66218), (Start: 30 @66236 has 3 MA's), (Start: 40 @66278 has 3 MA's), (44, 66299), (63, 66398), (79, 66428), (83, 66443), (101, 66530), (103, 66536), (105, 66554),

Gene: Prithvi\_88 Start: 55537, Stop: 55920, Start Num: 25

Candidate Starts for Prithvi\_88:

(Start: 23 @55534 has 20 MA's), (Start: 25 @55537 has 79 MA's), (Start: 27 @55540 has 2 MA's), (34, 55564), (36, 55570), (47, 55651), (48, 55654), (58, 55699), (69, 55729), (87, 55792), (101, 55843), (114, 55906),

Gene: Psycho\_77 Start: 52244, Stop: 52606, Start Num: 31

Candidate Starts for Psycho\_77:

(20, 52196), (Start: 31 @52244 has 22 MA's), (35, 52259), (48, 52343), (65, 52403), (76, 52430), (106, 52574),

Gene: QuincyRose\_84 Start: 55140, Stop: 55523, Start Num: 23

Candidate Starts for QuincyRose\_84:

(Start: 23 @55140 has 20 MA's), (Start: 25 @55143 has 79 MA's), (Start: 27 @55146 has 2 MA's), (34, 55170), (47, 55257), (48, 55260), (71, 55338), (87, 55398), (101, 55446), (114, 55509), (115, 55515),

Gene: Ramen\_87 Start: 54901, Stop: 55275, Start Num: 25

Candidate Starts for Ramen\_87:

(8, 54667), (10, 54784), (Start: 23 @54898 has 20 MA's), (Start: 25 @54901 has 79 MA's), (Start: 27 @54904 has 2 MA's), (35, 54931), (43, 54970), (45, 54979), (51, 55033), (55, 55045), (65, 55075), (83, 55123), (87, 55153), (89, 55162), (90, 55171), (99, 55198), (101, 55207), (111, 55258),

Gene: Rapunzel97\_88 Start: 55117, Stop: 55491, Start Num: 25

Candidate Starts for Rapunzel97\_88:

(8, 54883), (10, 55000), (Start: 23 @55114 has 20 MA's), (Start: 25 @55117 has 79 MA's), (Start: 27 @55120 has 2 MA's), (35, 55147), (43, 55186), (45, 55195), (51, 55249), (55, 55261), (65, 55291), (83, 55339), (87, 55369), (89, 55378), (90, 55387), (99, 55414), (101, 55423), (111, 55474),

Gene: Reindeer\_121 Start: 64799, Stop: 65203, Start Num: 21

Candidate Starts for Reindeer\_121:

(Start: 21 @64799 has 15 MA's), (22, 64805), (38, 64853), (39, 64865), (43, 64886), (44, 64889), (46, 64901), (48, 64931), (53, 64955), (54, 64958), (93, 65102), (98, 65123), (104, 65153),

Gene: Richo\_86 Start: 56056, Stop: 56409, Start Num: 23

Candidate Starts for Richo\_86:

(Start: 23 @56056 has 20 MA's), (Start: 29 @56062 has 9 MA's), (35, 56083), (45, 56128), (47, 56161), (61, 56215), (87, 56299), (89, 56308), (101, 56350),

Gene: RoseMarie\_129 Start: 67303, Stop: 67707, Start Num: 21

Candidate Starts for RoseMarie\_129:

(19, 67282), (Start: 21 @67303 has 15 MA's), (22, 67309), (38, 67357), (39, 67369), (46, 67405), (48, 67435), (53, 67459), (54, 67462), (93, 67606), (98, 67627), (104, 67657), (108, 67684),

Gene: Rosmarinus\_86 Start: 55125, Stop: 55508, Start Num: 25

Candidate Starts for Rosmarinus\_86:

(Start: 23 @55122 has 20 MA's), (Start: 25 @55125 has 79 MA's), (Start: 27 @55128 has 2 MA's), (34, 55152), (36, 55158), (47, 55239), (48, 55242), (58, 55287), (69, 55317), (87, 55380), (101, 55431), (114, 55494), (115, 55500),

Gene: SamuelLPlaqson\_86 Start: 55402, Stop: 55782, Start Num: 25

Candidate Starts for SamuelLPlaqson\_86:

(Start: 23 @55399 has 20 MA's), (Start: 25 @55402 has 79 MA's), (Start: 27 @55405 has 2 MA's), (36, 55435), (47, 55516), (71, 55597), (87, 55657), (88, 55660), (101, 55705), (115, 55774),

Gene: Scarlett\_87 Start: 55157, Stop: 55522, Start Num: 25

Candidate Starts for Scarlett\_87:

(Start: 23 @55154 has 20 MA's), (Start: 25 @55157 has 79 MA's), (45, 55223), (47, 55256), (80, 55355), (102, 55448), (107, 55484), (112, 55502),

Gene: Settecandela\_162 Start: 109339, Stop: 109698, Start Num: 25

Candidate Starts for Settecandela\_162:

(Start: 25 @109339 has 79 MA's), (38, 109360), (47, 109438), (49, 109444), (60, 109489), (84, 109552), (87, 109576), (98, 109621), (101, 109630), (106, 109663),

Gene: Shaobing\_86 Start: 56149, Stop: 56496, Start Num: 29

Candidate Starts for Shaobing\_86:

(Start: 23 @56143 has 20 MA's), (Start: 29 @56149 has 9 MA's), (35, 56170), (45, 56215), (47, 56248), (61, 56302), (87, 56386), (89, 56395), (101, 56437),

Gene: ShiaSurprise\_87 Start: 55334, Stop: 55717, Start Num: 25

Candidate Starts for ShiaSurprise\_87:

(Start: 23 @55331 has 20 MA's), (Start: 25 @55334 has 79 MA's), (Start: 27 @55337 has 2 MA's), (34, 55361), (36, 55367), (47, 55448), (48, 55451), (58, 55496), (69, 55526), (87, 55589), (101, 55640), (114, 55703), (115, 55709),

Gene: SirPhilip\_86 Start: 55346, Stop: 55717, Start Num: 23

Candidate Starts for SirPhilip\_86:

(Start: 23 @55346 has 20 MA's), (Start: 25 @55349 has 79 MA's), (35, 55364), (45, 55409), (53, 55469), (65, 55505), (76, 55526), (80, 55541), (87, 55583), (101, 55643), (103, 55649),

Gene: Skinny\_126 Start: 65708, Stop: 66112, Start Num: 21

Candidate Starts for Skinny\_126:

(18, 65684), (19, 65687), (Start: 21 @65708 has 15 MA's), (Start: 30 @65738 has 3 MA's), (38, 65762), (44, 65798), (47, 65837), (48, 65840), (54, 65867), (78, 65933), (93, 66011), (98, 66032), (112, 66101),

Gene: SlimJimmy\_120 Start: 64417, Stop: 64821, Start Num: 21

Candidate Starts for SlimJimmy\_120:

(18, 64393), (19, 64396), (Start: 21 @64417 has 15 MA's), (Start: 30 @64447 has 3 MA's), (38, 64471), (44, 64507), (47, 64546), (48, 64549), (54, 64576), (78, 64642), (93, 64720), (98, 64741), (112, 64810),

Gene: Slimphazie\_88 Start: 55573, Stop: 55947, Start Num: 25

Candidate Starts for Slimphazie\_88:

(8, 55339), (10, 55456), (Start: 23 @55570 has 20 MA's), (Start: 25 @55573 has 79 MA's), (Start: 27 @55576 has 2 MA's), (35, 55603), (43, 55642), (45, 55651), (51, 55705), (55, 55717), (65, 55747), (83, 55795), (87, 55825), (89, 55834), (90, 55843), (99, 55870), (101, 55879), (111, 55930),

Gene: SoSeph\_77 Start: 52850, Stop: 53215, Start Num: 31

Candidate Starts for SoSeph\_77:

(19, 52805), (Start: 31 @52850 has 22 MA's), (35, 52865), (48, 52949), (65, 53009), (76, 53036), (106, 53183),

Gene: Spock\_86 Start: 55135, Stop: 55521, Start Num: 23

Candidate Starts for Spock\_86:

(Start: 23 @55135 has 20 MA's), (Start: 25 @55138 has 79 MA's), (Start: 27 @55141 has 2 MA's), (34, 55165), (36, 55171), (47, 55252), (48, 55255), (58, 55300), (69, 55330), (87, 55393), (101, 55444), (114, 55507), (115, 55513),

Gene: Stinson\_87 Start: 55311, Stop: 55691, Start Num: 25

Candidate Starts for Stinson\_87:

(8, 55077), (10, 55194), (Start: 23 @55308 has 20 MA's), (Start: 25 @55311 has 79 MA's), (Start: 27 @55314 has 2 MA's), (34, 55338), (36, 55344), (47, 55425), (71, 55506), (87, 55566), (92, 55587), (101, 55614), (114, 55677),

Gene: Sulley\_83 Start: 54742, Stop: 55116, Start Num: 25

Candidate Starts for Sulley\_83:

(8, 54508), (10, 54625), (Start: 23 @54739 has 20 MA's), (Start: 25 @54742 has 79 MA's), (Start: 27 @54745 has 2 MA's), (35, 54772), (43, 54811), (45, 54820), (51, 54874), (55, 54886), (65, 54916), (83, 54964), (87, 54994), (89, 55003), (90, 55012), (99, 55039), (101, 55048), (111, 55099),

Gene: TClif\_86 Start: 54693, Stop: 55031, Start Num: 29

Candidate Starts for TClif\_86:

(Start: 29 @54693 has 9 MA's), (Start: 31 @54699 has 22 MA's), (35, 54714), (47, 54795), (52, 54819), (64, 54858), (68, 54864), (87, 54930), (89, 54939), (101, 54975),

Gene: Tachez\_86 Start: 54979, Stop: 55365, Start Num: 23

Candidate Starts for Tachez\_86:

(Start: 23 @54979 has 20 MA's), (Start: 25 @54982 has 79 MA's), (Start: 27 @54985 has 2 MA's), (34, 55009), (36, 55015), (47, 55096), (48, 55099), (58, 55144), (69, 55174), (87, 55237), (101, 55288), (114, 55351), (115, 55357),

Gene: TaiwanKao\_87 Start: 55165, Stop: 55563, Start Num: 25

Candidate Starts for TaiwanKao\_87:

(8, 54931), (10, 55048), (Start: 23 @55162 has 20 MA's), (Start: 25 @55165 has 79 MA's), (37, 55186), (45, 55231), (47, 55264), (48, 55267), (72, 55339), (85, 55375), (94, 55432), (103, 55471), (107, 55507), (110, 55522), (117, 55549),

Gene: Thyatira\_80 Start: 55195, Stop: 55560, Start Num: 31

Candidate Starts for Thyatira\_80:

(15, 55120), (Start: 31 @55195 has 22 MA's), (35, 55210), (48, 55294), (53, 55318), (65, 55354), (76, 55381), (87, 55441), (106, 55528),

Gene: Tierra\_93 Start: 56850, Stop: 57212, Start Num: 29

Candidate Starts for Tierra\_93:

(Start: 29 @56850 has 9 MA's), (Start: 31 @56856 has 22 MA's), (35, 56871), (47, 56952), (63, 57012), (64, 57015), (75, 57036), (87, 57090), (89, 57099), (101, 57141),

Gene: TingHuaYa\_90 Start: 56200, Stop: 56598, Start Num: 25

Candidate Starts for TingHuaYa\_90:

(4, 55852), (8, 55966), (10, 56083), (Start: 23 @56197 has 20 MA's), (Start: 25 @56200 has 79 MA's), (37, 56221), (45, 56266), (47, 56299), (63, 56359), (66, 56368), (72, 56374), (85, 56410), (94, 56467), (103, 56506), (107, 56542), (110, 56557), (117, 56584), (118, 56590),

Gene: TiniBug\_85 Start: 55521, Stop: 55892, Start Num: 25

Candidate Starts for TiniBug\_85:

(Start: 23 @55518 has 20 MA's), (Start: 25 @55521 has 79 MA's), (42, 55575), (65, 55683), (67, 55689), (70, 55698), (76, 55707), (80, 55722), (82, 55731), (96, 55794), (101, 55815), (109, 55866), (115, 55884),

Gene: Tiri\_86 Start: 54789, Stop: 55187, Start Num: 25

Candidate Starts for Tiri\_86:

(8, 54555), (10, 54672), (Start: 23 @54786 has 20 MA's), (Start: 25 @54789 has 79 MA's), (37, 54810), (45, 54855), (47, 54888), (48, 54891), (72, 54963), (85, 54999), (94, 55056), (103, 55095), (107, 55131), (110, 55146), (117, 55173),

Gene: Topper\_86 Start: 55137, Stop: 55520, Start Num: 25

Candidate Starts for Topper\_86:

(Start: 23 @55134 has 20 MA's), (Start: 25 @55137 has 79 MA's), (Start: 27 @55140 has 2 MA's), (34, 55164), (36, 55170), (47, 55251), (48, 55254), (58, 55299), (69, 55329), (87, 55392), (101, 55443), (114, 55506), (115, 55512),

Gene: TpudiCK\_122 Start: 63430, Stop: 63834, Start Num: 21

Candidate Starts for TpudiCK\_122:

(18, 63406), (19, 63409), (Start: 21 @63430 has 15 MA's), (Start: 30 @63460 has 3 MA's), (38, 63484), (44, 63520), (47, 63559), (48, 63562), (54, 63589), (78, 63655), (93, 63733), (98, 63754), (112, 63823),

Gene: TreyKay\_88 Start: 55537, Stop: 55920, Start Num: 25

Candidate Starts for TreyKay\_88:

(Start: 23 @55534 has 20 MA's), (Start: 25 @55537 has 79 MA's), (Start: 27 @55540 has 2 MA's), (34, 55564), (36, 55570), (47, 55651), (48, 55654), (58, 55699), (69, 55729), (87, 55792), (101, 55843), (114, 55906),

Gene: TribbleTrouble\_87 Start: 56329, Stop: 56691, Start Num: 24

Candidate Starts for TribbleTrouble\_87:

(Start: 24 @56329 has 2 MA's), (Start: 31 @56335 has 22 MA's), (45, 56395), (47, 56428), (48, 56431), (51, 56449), (62, 56479), (105, 56647), (113, 56680),

Gene: TruffulaTree\_88 Start: 55539, Stop: 55913, Start Num: 25

Candidate Starts for TruffulaTree\_88:

(8, 55305), (10, 55422), (Start: 23 @55536 has 20 MA's), (Start: 25 @55539 has 79 MA's), (Start: 27 @55542 has 2 MA's), (35, 55569), (43, 55608), (45, 55617), (51, 55671), (55, 55683), (65, 55713), (83, 55761), (87, 55791), (89, 55800), (90, 55809), (99, 55836), (101, 55845), (111, 55896),

Gene: Twitch\_86 Start: 55139, Stop: 55522, Start Num: 25

Candidate Starts for Twitch\_86:

(Start: 23 @55136 has 20 MA's), (Start: 25 @55139 has 79 MA's), (Start: 27 @55142 has 2 MA's), (34, 55166), (36, 55172), (47, 55253), (48, 55256), (58, 55301), (69, 55331), (87, 55394), (101, 55445), (114, 55508), (115, 55514),

Gene: TyDawg\_115 Start: 63433, Stop: 63837, Start Num: 21

Candidate Starts for TyDawg\_115:

(18, 63409), (19, 63412), (Start: 21 @63433 has 15 MA's), (Start: 30 @63463 has 3 MA's), (38, 63487), (44, 63523), (47, 63562), (48, 63565), (54, 63592), (78, 63658), (93, 63736), (98, 63757), (112, 63826),

Gene: Unicorn\_93 Start: 56561, Stop: 56932, Start Num: 29

Candidate Starts for Unicorn\_93:

(Start: 29 @56561 has 9 MA's), (Start: 31 @56567 has 22 MA's), (35, 56582), (53, 56690), (85, 56786), (101, 56861),

Gene: Urkel\_86 Start: 55402, Stop: 55782, Start Num: 25

Candidate Starts for Urkel\_86:

(Start: 23 @55399 has 20 MA's), (Start: 25 @55402 has 79 MA's), (Start: 27 @55405 has 2 MA's), (36, 55435), (47, 55516), (71, 55597), (87, 55657), (88, 55660), (101, 55705), (115, 55774),

Gene: Validus\_92 Start: 56922, Stop: 57275, Start Num: 28

Candidate Starts for Validus\_92:

(Start: 28 @56922 has 1 MA's), (35, 56943), (45, 56988), (47, 57021), (73, 57099), (87, 57162), (91, 57183), (101, 57213),

Gene: Veliki\_87 Start: 55108, Stop: 55491, Start Num: 25

Candidate Starts for Veliki\_87:

(Start: 23 @55105 has 20 MA's), (Start: 25 @55108 has 79 MA's), (Start: 27 @55111 has 2 MA's), (34, 55135), (36, 55141), (47, 55222), (48, 55225), (58, 55270), (69, 55300), (87, 55363), (101, 55414), (114, 55477), (115, 55483),

Gene: ViviJ\_83 Start: 53212, Stop: 53577, Start Num: 31

Candidate Starts for ViviJ\_83:

(Start: 31 @53212 has 22 MA's), (35, 53227), (42, 53263), (48, 53311), (65, 53371), (76, 53398), (106, 53545),

Gene: Waterfoul\_79 Start: 53265, Stop: 53630, Start Num: 31

Candidate Starts for Waterfoul\_79:

(15, 53190), (Start: 31 @53265 has 22 MA's), (35, 53280), (48, 53364), (53, 53388), (65, 53424), (76, 53451), (87, 53511), (106, 53598),

Gene: Ximenita\_92 Start: 56063, Stop: 56440, Start Num: 23

Candidate Starts for Ximenita\_92:

(Start: 23 @56063 has 20 MA's), (Start: 29 @56069 has 9 MA's), (Start: 31 @56075 has 22 MA's), (35, 56090), (45, 56138), (47, 56171), (52, 56195), (77, 56264), (87, 56318), (101, 56369),

Gene: YoureAdopted\_85 Start: 54928, Stop: 55308, Start Num: 25

Candidate Starts for YoureAdopted\_85:

(Start: 23 @54925 has 20 MA's), (Start: 25 @54928 has 79 MA's), (Start: 27 @54931 has 2 MA's), (34, 54955), (47, 55042), (48, 55045), (71, 55123), (87, 55183), (101, 55231), (114, 55294), (115, 55300),

Gene: Yuna\_89 Start: 57082, Stop: 57462, Start Num: 25

Candidate Starts for Yuna\_89:

(Start: 23 @57079 has 20 MA's), (Start: 25 @57082 has 79 MA's), (65, 57244), (76, 57271), (87, 57331), (88, 57334), (101, 57385),

Gene: Yunkel11\_91 Start: 55781, Stop: 56143, Start Num: 25

Candidate Starts for Yunkel11\_91:

(10, 55664), (Start: 23 @55778 has 20 MA's), (Start: 25 @55781 has 79 MA's), (35, 55799), (45, 55847), (51, 55901), (55, 55913), (65, 55943), (83, 55991), (89, 56030), (90, 56039), (101, 56075),

Gene: Zabiza\_82 Start: 51481, Stop: 51864, Start Num: 25

Candidate Starts for Zabiza\_82:

(Start: 23 @51478 has 20 MA's), (Start: 25 @51481 has 79 MA's), (Start: 27 @51484 has 2 MA's), (34, 51508), (36, 51514), (47, 51595), (48, 51598), (58, 51643), (69, 51673), (87, 51736), (101, 51787), (114, 51850), (115, 51856),

Gene: Zavala\_88 Start: 55393, Stop: 55773, Start Num: 25

Candidate Starts for Zavala\_88:

(Start: 23 @55390 has 20 MA's), (Start: 25 @55393 has 79 MA's), (Start: 27 @55396 has 2 MA's), (34, 55420), (47, 55507), (48, 55510), (71, 55588), (87, 55648), (101, 55696), (114, 55759), (115, 55765),