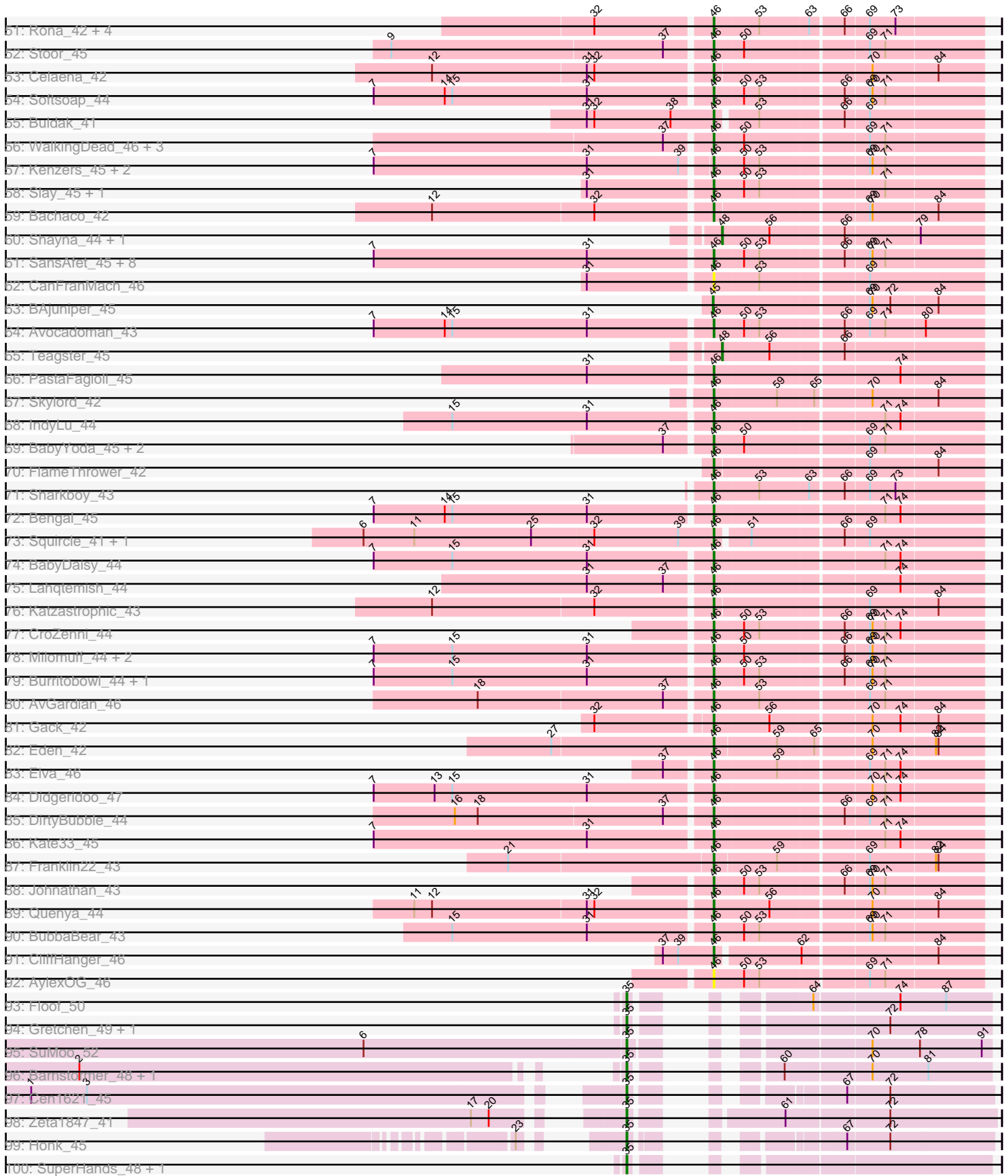


Pham 311239



Pham 311239





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 311239 Report

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

Pham number 311239 has 205 members, 30 are drafts.

Phages represented in each track:

- Track 1 : ThursdayNight\_46
- Track 2 : Michkear\_43
- Track 3 : AEgle\_40, Amploria\_42, Adumb2043\_41, Turab\_41
- Track 4 : Sue2\_44
- Track 5 : Tuck\_47, Community\_46, Phives\_46
- Track 6 : Simpson\_46, Kaylissa\_45, Tbone\_43, Warda\_44, Mudpuppy\_40, Joemato\_44
- Track 7 : Powerpuff\_46
- Track 8 : Lizalica\_42
- Track 9 : Tutumahutu\_45
- Track 10 : Amyev\_43, Tian\_42
- Track 11 : Tallboi\_43
- Track 12 : Reedo\_43
- Track 13 : DrSierra\_41
- Track 14 : Skelbel\_42, Asa16\_41, Niobe\_41, Subaru\_42, Jstan\_43, Eraser\_41, London\_41, Elezi\_41
- Track 15 : Schaffner\_44
- Track 16 : Ascela\_43
- Track 17 : Cassia\_43, TforTroy\_45
- Track 18 : Yang\_43
- Track 19 : Crewmate\_49, ObiToo\_49
- Track 20 : AGrandiflora\_45, YesChef\_44
- Track 21 : lter\_43
- Track 22 : Cyan\_44, Lego\_43, JohnDoe\_44, Flutur\_43
- Track 23 : DrManhattan\_43, Adolin\_44
- Track 24 : IttyBittyPiggy\_44, Pumpkins\_43
- Track 25 : Janeemi\_46
- Track 26 : VResidence\_43
- Track 27 : JuneStar\_45
- Track 28 : Nitro\_42
- Track 29 : Berrie\_45
- Track 30 : PandaPo\_44, MissSwiss\_44
- Track 31 : KeAlii\_41
- Track 32 : Wildwest\_42
- Track 33 : Pixelle\_44
- Track 34 : MaGuCo\_41, IUFootball\_44, Liebe\_44, Maureen\_44
- Track 35 : Snek\_41, Tweety19\_42

- Track 36 : JasmineDragon\_47, ShakeltOph\_47, MiniMommy\_48
- Track 37 : JohnThicc\_50, FiveHead\_51
- Track 38 : VroomVroom\_46, AceofSpades\_47
- Track 39 : Origami\_49, LadyAstra\_50
- Track 40 : Emotion\_48
- Track 41 : Sooty\_40, Cappuccino\_40, Kalimba\_40, Sabourin\_40, Gambol\_41, Donkey\_40
- Track 42 : Moss\_40, Halsey\_40, Ashes\_40, Giorgio\_39, RockScotty\_39, SpecialK\_40, Beaupre\_39, Mysterium\_39, Stuu\_40, Gumpizza\_39
- Track 43 : Exile\_38
- Track 44 : Soondubu\_39
- Track 45 : AinMach\_45
- Track 46 : SanaSana\_47
- Track 47 : TukTuk\_45, Phisb\_45, Pecas\_45, QMacho\_47, Finalfrontier\_45, SarBear\_44, Swervy\_45, Lilo27\_45
- Track 48 : CupcakePrincess\_45, Eula\_45, MsUbiquitous\_45, Jovita\_45, Jabb\_45
- Track 49 : Rollins\_42, Vitas\_42, Bernstein\_42, Brahms\_42, Armstrong\_42, Clayda5\_43, Coltrane\_42
- Track 50 : Albedo\_45
- Track 51 : Rona\_42, ChiliPepper\_42, Dismas\_42, Kamdara\_42, Kieran\_42
- Track 52 : Stoor\_45
- Track 53 : Celaena\_42
- Track 54 : Softsoap\_44
- Track 55 : Buldak\_41
- Track 56 : WalkingDead\_46, Loviatar\_45, Akino08\_45, PondAmelia\_55
- Track 57 : Kenzers\_45, Lynlen\_45, SirBeanington\_44
- Track 58 : Slay\_45, Nicky22\_45
- Track 59 : Bachaco\_42
- Track 60 : Shayna\_44, SunnyD\_44
- Track 61 : SansAfet\_45, BelmontSKP\_45, LimaBean\_44, Albright\_42, AnnaLie\_45, Abigail\_44, Arroyo\_45, PhigPhack\_45, Cashington\_42
- Track 62 : CanFranMach\_46
- Track 63 : BAjuniper\_45
- Track 64 : Avocadoman\_43
- Track 65 : Teagster\_45
- Track 66 : PastaFagioli\_45
- Track 67 : Skylord\_42
- Track 68 : IndyLu\_44
- Track 69 : BabyYoda\_45, Stromboli\_45, Icarian\_47
- Track 70 : FlameThrower\_42
- Track 71 : Sharkboy\_43
- Track 72 : Bengal\_45
- Track 73 : Squircle\_41, Olliecat\_41
- Track 74 : BabyDaisy\_44
- Track 75 : Lahqtemish\_44
- Track 76 : Katzastrophic\_43
- Track 77 : CroZenni\_44
- Track 78 : Milomuff\_44, Solea\_45, DickRichards\_43
- Track 79 : Burritobowl\_44, Doobus\_43
- Track 80 : AvGardian\_46
- Track 81 : Gack\_42
- Track 82 : Eden\_42
- Track 83 : Elva\_46

- Track 84 : Didgeridoo\_47
- Track 85 : DirtyBubble\_44
- Track 86 : Kate33\_45
- Track 87 : Franklin22\_43
- Track 88 : Johnathan\_43
- Track 89 : Quenya\_44
- Track 90 : BubbaBear\_43
- Track 91 : CliffHanger\_46
- Track 92 : AylexOG\_46
- Track 93 : Floof\_50
- Track 94 : Gretchen\_49, Forester\_48
- Track 95 : SuMoo\_52
- Track 96 : Barnstormer\_48, UtzChips\_48
- Track 97 : Cen1621\_45
- Track 98 : Zeta1847\_41
- Track 99 : Honk\_45
- Track 100 : SuperHands\_48, Percival\_50
- Track 101 : Caron\_51
- Track 102 : IAmGroot\_49, GardenState\_49
- Track 103 : LisoBros\_43
- Track 104 : GrimEater\_39, Jankie\_40
- Track 105 : Elfy\_44
- Track 106 : CallinAllBarbz\_43
- Track 107 : BaileyBlu\_43
- Track 108 : Samy\_66

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

The start number called the most often in the published annotations is 46, it was called in 77 of the 175 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Abigail\_44, Akino08\_45, Albedo\_45, Albright\_42, AnnaLie\_45, Armstrong\_42, Arroyo\_45, AvGardian\_46, Avocadoman\_43, AylexOG\_46, BabyDaisy\_44, BabyYoda\_45, Bachaco\_42, BelmontSKP\_45, Bengal\_45, Bernstein\_42, Brahms\_42, BubbaBear\_43, Buldak\_41, Burritobowl\_44, CanFranMach\_46, Cashington\_42, Celaena\_42, ChiliPepper\_42, Clayda5\_43, CliffHanger\_46, Coltrane\_42, CroZenni\_44, CupcakePrincess\_45, DickRichards\_43, Didgeridoo\_47, DirtyBubble\_44, Dismas\_42, Doobus\_43, Eden\_42, Elva\_46, Eula\_45, Finalfrontier\_45, FlameThrower\_42, Franklin22\_43, Gack\_42, Icarian\_47, IndyLu\_44, Jabb\_45, Johnathan\_43, Jovita\_45, Kamdara\_42, Kate33\_45, Katzastrophic\_43, Kenzers\_45, Kieran\_42, Lahqtemish\_44, Lilo27\_45, LimaBean\_44, Loviatar\_45, Lynlen\_45, Milomuff\_44, MsUbiquitous\_45, Nicky22\_45, Olliecat\_41, PastaFagioli\_45, Pecas\_45, PhigPhack\_45, Phisb\_45, PondAmelia\_55, QMacho\_47, Quenya\_44, Rollins\_42, Rona\_42, SanaSana\_47, SansAfet\_45, SarBear\_44, Sharkboy\_43, SirBeanington\_44, Skylord\_42, Slay\_45, Softsoap\_44, Solea\_45, Squircle\_41, Stoor\_45, Stromboli\_45, Swervy\_45, TukTuk\_45, Vitas\_42, WalkingDead\_46,

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

- GardenState\_49, IAmGroot\_49,

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

- AEgle\_40, AGrandiflora\_45, AceofSpades\_47, Adolin\_44, Adumb2043\_41, AinMach\_45, Amploria\_42, Amyev\_43, Asa16\_41, Ascela\_43, Ashes\_40, BAjuniper\_45, BaileyBlu\_43, Barnstormer\_48, Beaupre\_39, Berrie\_45, CallinAllBarbz\_43, Cappuccino\_40, Caron\_51, Cassia\_43, Cen1621\_45, Community\_46, Crewmate\_49, Cyan\_44, Donkey\_40, DrManhattan\_43, DrSierra\_41, Elezi\_41, Elfy\_44, Emotion\_48, Eraser\_41, Exile\_38, FiveHead\_51, Floof\_50, Flutur\_43, Forester\_48, Gambol\_41, Giorgio\_39, Gretchen\_49, GrimEater\_39, Gumpizza\_39, Halsey\_40, Honk\_45, IUFootball\_44, Iter\_43, IttyBittyPiggy\_44, Janeemi\_46, Jankie\_40, JasmineDragon\_47, Joemato\_44, JohnDoe\_44, JohnThicc\_50, Jstan\_43, JuneStar\_45, Kalimba\_40, Kaylissa\_45, KeAlii\_41, LadyAstra\_50, Lego\_43, Liebe\_44, LisoBros\_43, Lizalica\_42, London\_41, MaGuCo\_41, Maureen\_44, Michkear\_43, MiniMommy\_48, MissSwiss\_44, Moss\_40, Mudpuppy\_40, Mysterium\_39, Niobe\_41, Nitro\_42, ObiToo\_49, Origami\_49, PandaPo\_44, Percival\_50, Phives\_46, Pixelle\_44, Powerpuff\_46, Pumpkins\_43, Reedo\_43, RockScotty\_39, Sabourin\_40, Samy\_66, Schaffner\_44, ShakeltOph\_47, Shayna\_44, Simpson\_46, Skelbel\_42, Snek\_41, Soondubu\_39, Sooty\_40, SpecialK\_40, Stuu\_40, SuMoo\_52, Subaru\_42, Sue2\_44, SunnyD\_44, SuperHands\_48, Tallboi\_43, Tbone\_43, Teagster\_45, TforTroy\_45, ThursdayNight\_46, Tian\_42, Tuck\_47, Turab\_41, Tutumahutu\_45, Tweety19\_42, UtzChips\_48, VResidence\_43, VroomVroom\_46, Warda\_44, Wildwest\_42, Yang\_43, YesChef\_44, Zeta1847\_41,

### Summary by start number:

Start 35:

- Found in 14 of 205 ( 6.8% ) of genes in pham
- Manual Annotations of this start: 14 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnstormer\_48 (EH), Caron\_51 (EH), Cen1621\_45 (EH), Floof\_50 (EH), Forester\_48 (EH), GardenState\_49 (EH), Gretchen\_49 (EH), Honk\_45 (EH), IAmGroot\_49 (EH), Percival\_50 (EH), SuMoo\_52 (EH), SuperHands\_48 (EH), UtzChips\_48 (EH), Zeta1847\_41 (EH),

Start 38:

- Found in 2 of 205 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 175
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Samy\_66 (singleton),

Start 40:

- Found in 2 of 205 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Snek\_41 (AZ3), Tweety19\_42 (AZ3),

Start 41:

- Found in 2 of 205 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nitro\_42 (AZ1), Wildwest\_42 (AZ1),

Start 42:

- Found in 66 of 205 ( 32.2% ) of genes in pham
- Manual Annotations of this start: 49 of 175
- Called 97.0% of time when present
- Phage (with cluster) where this start called: AEgle\_40 (AZ1), AGrandiflora\_45 (AZ1), Adolin\_44 (AZ1), Adumb2043\_41 (AZ1), AinMach\_45 (AZ7), Amploria\_42 (AZ1), Amyev\_43 (AZ1), Asa16\_41 (AZ1), Ascela\_43 (AZ1), BaileyBlu\_43 (FP), Berrie\_45 (AZ1), CallinAllBarbz\_43 (FP), Cassia\_43 (AZ1), Community\_46 (AZ1), Crewmate\_49 (AZ1), Cyan\_44 (AZ1), DrManhattan\_43 (AZ1), DrSierra\_41 (AZ1), Elezi\_41 (AZ1), Elfy\_44 (FP), Eraser\_41 (AZ1), Exile\_38 (AZ6), Flutur\_43 (AZ), GrimEater\_39 (FP), Iter\_43 (AZ1), IttyBittyPiggy\_44 (AZ1), Janeemi\_46 (AZ1), Jankie\_40 (FP), Joemato\_44 (AZ1), JohnDoe\_44 (AZ1), Jstan\_43 (AZ1), JuneStar\_45 (AZ1), Kaylissa\_45 (AZ1), KeAlii\_41 (AZ1), Lego\_43 (AZ1), LisoBros\_43 (FP), Lizalica\_42 (AZ1), London\_41 (AZ1), Michkear\_43 (AZ), MissSwiss\_44 (AZ1), Mudpuppy\_40 (AZ1), Niobe\_41 (AZ1), ObiToo\_49 (AZ1), PandaPo\_44 (AZ1), Phives\_46 (AZ1), Pixelle\_44 (AZ1), Pumpkins\_43 (AZ1), Reedo\_43 (AZ1), Schaffner\_44 (AZ1), Simpson\_46 (AZ1), Skelbel\_42 (AZ1), Soondubu\_39 (AZ6), Subaru\_42 (AZ1), Sue2\_44 (AZ1), Tallboi\_43 (AZ1), Tbone\_43 (AZ1), TforTroy\_45 (AZ1), Tian\_42 (AZ1), Tuck\_47 (AZ1), Turab\_41 (AZ1), VResidence\_43 (AZ1), Warda\_44 (AZ1), Yang\_43 (AZ1), YesChef\_44 (AZ1),

Start 43:

- Found in 4 of 205 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 2 of 175
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Powerpuff\_46 (AZ1), Tutumahutu\_45 (AZ1),

Start 44:

- Found in 31 of 205 ( 15.1% ) of genes in pham
- Manual Annotations of this start: 24 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AceofSpades\_47 (AZ4), Ashes\_40 (AZ5), Beaupre\_39 (AZ5), Cappuccino\_40 (AZ5), Donkey\_40 (AZ5), Emotion\_48 (AZ4), FiveHead\_51 (AZ4), Gambol\_41 (AZ5), Giorgio\_39 (AZ5), Gumpizza\_39 (AZ5), Halsey\_40 (AZ5), IUFootball\_44 (AZ2), JasmineDragon\_47 (AZ4), JohnThicc\_50 (AZ4), Kalimba\_40 (AZ5), LadyAstra\_50 (AZ4), Liebe\_44 (AZ2), MaGuCo\_41 (AZ2), Maureen\_44 (AZ2), MiniMommy\_48 (AZ4), Moss\_40 (AZ5), Mysterium\_39 (AZ5), Origami\_49 (AZ4), RockScotty\_39 (AZ5), Sabourin\_40 (AZ5), ShakeltOph\_47 (AZ4), Sooty\_40 (AZ5), SpecialK\_40 (AZ5), Stuu\_40 (AZ5), ThursdayNight\_46 (AZ), VroomVroom\_46 (AZ4),

Start 45:

- Found in 1 of 205 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BAjuniper\_45 (EB),

Start 46:

- Found in 87 of 205 ( 42.4% ) of genes in pham
- Manual Annotations of this start: 77 of 175
- Called 97.7% of time when present

- Phage (with cluster) where this start called: Abigail\_44 (EB), Akino08\_45 (EB), Albedo\_45 (EB), Albright\_42 (EB), AnnaLie\_45 (EB), Armstrong\_42 (EB), Arroyo\_45 (EB), AvGardian\_46 (EB), Avocadoman\_43 (EB), AylexOG\_46 (EB), BabyDaisy\_44 (EB), BabyYoda\_45 (EB), Bachaco\_42 (EB), BelmontSKP\_45 (EB), Bengal\_45 (EB), Bernstein\_42 (EB), Brahms\_42 (EB), BubbaBear\_43 (EB), Buldak\_41 (EB), Burritobowl\_44 (EB), CanFranMach\_46 (EB), Cashington\_42 (EB), Celaena\_42 (EB), ChiliPepper\_42 (EB), Clayda5\_43 (EB), CliffHanger\_46 (EB), Coltrane\_42 (EB), CroZenni\_44 (EB), CupcakePrincess\_45 (EB), DickRichards\_43 (EB), Didgeridoo\_47 (EB), DirtyBubble\_44 (EB), Dismas\_42 (EB), Doobus\_43 (EB), Eden\_42 (EB), Elva\_46 (EB), Eula\_45 (EB), Finalfrontier\_45 (EB), FlameThrower\_42 (EB), Franklin22\_43 (EB), Gack\_42 (EB), Icarian\_47 (EB), IndyLu\_44 (EB), Jabb\_45 (EB), Johnathan\_43 (EB), Jovita\_45 (EB), Kamdara\_42 (EB), Kate33\_45 (EB), Katzastrophic\_43 (EB), Kenzers\_45 (EB), Kieran\_42 (EB), Lahqtemish\_44 (EB), Lilo27\_45 (EB), LimaBean\_44 (EB), Loviatar\_45 (EB), Lynlen\_45 (EB), Milomuff\_44 (EB), MsUbiquitous\_45 (EB), Nicky22\_45 (EB), Olliecat\_41 (EB), PastaFagioli\_45 (EB), Pecas\_45 (EB), PhigPhack\_45 (EB), Phisb\_45 (EB), PondAmelia\_55 (EB), QMacho\_47 (EB), Quenya\_44 (EB), Rollins\_42 (EB), Rona\_42 (EB), SanaSana\_47 (EB), SansAfet\_45 (EB), SarBear\_44 (EB), Sharkboy\_43 (EB), SirBeannington\_44 (EB), Skylord\_42 (EB), Slay\_45 (EB), Softsoap\_44 (EB), Solea\_45 (EB), Squircle\_41 (EB), Stoor\_45 (EB), Stromboli\_45 (EB), Swervy\_45 (EB), TukTuk\_45 (EB), Vitas\_42 (EB), WalkingDead\_46 (EB),

Start 48:

- Found in 3 of 205 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 3 of 175
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shayna\_44 (EB), SunnyD\_44 (EB), Teagster\_45 (EB),

### Summary by clusters:

There are 12 clusters represented in this pham: FP, singleton, AZ3, EH, EB, AZ1, AZ2, AZ, AZ4, AZ5, AZ6, AZ7,

Info for manual annotations of cluster AZ1:

- Start number 41 was manually annotated 2 times for cluster AZ1.
- Start number 42 was manually annotated 42 times for cluster AZ1.
- Start number 43 was manually annotated 2 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 44 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 40 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 44 was manually annotated 5 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 44 was manually annotated 16 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 42 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster EB:

- Start number 45 was manually annotated 1 time for cluster EB.
- Start number 46 was manually annotated 77 times for cluster EB.
- Start number 48 was manually annotated 3 times for cluster EB.

Info for manual annotations of cluster EH:

- Start number 35 was manually annotated 14 times for cluster EH.

Info for manual annotations of cluster FP:

- Start number 42 was manually annotated 6 times for cluster FP.

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

Gene: AEgle\_40 Start: 31132, Stop: 31437, Start Num: 42

Candidate Starts for AEgle\_40:

(Start: 42 @31132 has 49 MA's), (58, 31201), (71, 31321), (85, 31384), (90, 31414),

Gene: AGrandiflora\_45 Start: 32415, Stop: 32717, Start Num: 42

Candidate Starts for AGrandiflora\_45:

(Start: 42 @32415 has 49 MA's), (Start: 43 @32418 has 2 MA's), (72, 32607), (90, 32694),

Gene: Abigail\_44 Start: 31356, Stop: 31658, Start Num: 46

Candidate Starts for Abigail\_44:

(7, 30966), (31, 31218), (Start: 46 @31356 has 77 MA's), (50, 31389), (53, 31407), (66, 31500), (69, 31527), (70, 31530), (71, 31545),

Gene: AceofSpades\_47 Start: 32646, Stop: 32975, Start Num: 44

Candidate Starts for AceofSpades\_47:

(Start: 44 @32646 has 24 MA's), (78, 32880), (83, 32901),

Gene: Adolin\_44 Start: 30600, Stop: 30899, Start Num: 42

Candidate Starts for Adolin\_44:

(Start: 42 @30600 has 49 MA's), (71, 30783), (79, 30822), (84, 30843),

Gene: Adumb2043\_41 Start: 31151, Stop: 31456, Start Num: 42

Candidate Starts for Adumb2043\_41:

(Start: 42 @31151 has 49 MA's), (58, 31220), (71, 31340), (85, 31403), (90, 31433),

Gene: AinMach\_45 Start: 32431, Stop: 32742, Start Num: 42

Candidate Starts for AinMach\_45:

(Start: 42 @32431 has 49 MA's), (74, 32638),

Gene: Akino08\_45 Start: 33582, Stop: 33884, Start Num: 46

Candidate Starts for Akino08\_45:

(37, 33534), (Start: 46 @33582 has 77 MA's), (50, 33615), (69, 33753), (71, 33771),

Gene: Albedo\_45 Start: 31959, Stop: 32261, Start Num: 46

Candidate Starts for Albedo\_45:

(7, 31572), (15, 31665), (31, 31824), (39, 31932), (Start: 46 @31959 has 77 MA's), (50, 31992), (53, 32010), (69, 32130), (70, 32133), (71, 32148),

Gene: Albright\_42 Start: 30889, Stop: 31191, Start Num: 46

Candidate Starts for Albright\_42:

(7, 30499), (31, 30751), (Start: 46 @30889 has 77 MA's), (50, 30922), (53, 30940), (66, 31033), (69, 31060), (70, 31063), (71, 31078),

Gene: Amploria\_42 Start: 31334, Stop: 31639, Start Num: 42

Candidate Starts for Amploria\_42:

(Start: 42 @31334 has 49 MA's), (58, 31403), (71, 31523), (85, 31586), (90, 31616),

Gene: Amyev\_43 Start: 32705, Stop: 33010, Start Num: 42

Candidate Starts for Amyev\_43:

(24, 32522), (Start: 42 @32705 has 49 MA's), (77, 32930), (85, 32957), (90, 32987),

Gene: AnnaLie\_45 Start: 31967, Stop: 32269, Start Num: 46

Candidate Starts for AnnaLie\_45:

(7, 31577), (31, 31829), (Start: 46 @31967 has 77 MA's), (50, 32000), (53, 32018), (66, 32111), (69, 32138), (70, 32141), (71, 32156),

Gene: Armstrong\_42 Start: 29501, Stop: 29803, Start Num: 46

Candidate Starts for Armstrong\_42:

(19, 29249), (32, 29372), (37, 29453), (Start: 46 @29501 has 77 MA's), (59, 29573), (65, 29615), (70, 29675), (84, 29750),

Gene: Arroyo\_45 Start: 32075, Stop: 32377, Start Num: 46

Candidate Starts for Arroyo\_45:

(7, 31685), (31, 31937), (Start: 46 @32075 has 77 MA's), (50, 32108), (53, 32126), (66, 32219), (69, 32246), (70, 32249), (71, 32264),

Gene: Asa16\_41 Start: 32515, Stop: 32820, Start Num: 42

Candidate Starts for Asa16\_41:

(24, 32335), (Start: 42 @32515 has 49 MA's), (58, 32584), (70, 32689), (71, 32704), (74, 32722), (90, 32797),

Gene: Ascela\_43 Start: 31669, Stop: 31974, Start Num: 42

Candidate Starts for Ascela\_43:

(6, 31300), (26, 31510), (Start: 42 @31669 has 49 MA's), (77, 31894), (89, 31939),

Gene: Ashes\_40 Start: 30003, Stop: 30311, Start Num: 44

Candidate Starts for Ashes\_40:

(28, 29844), (Start: 44 @30003 has 24 MA's), (74, 30210),

Gene: AvGardian\_46 Start: 31983, Stop: 32285, Start Num: 46

Candidate Starts for AvGardian\_46:

(18, 31719), (37, 31935), (Start: 46 @31983 has 77 MA's), (53, 32034), (69, 32154), (71, 32172),

Gene: Avocadoman\_43 Start: 31096, Stop: 31398, Start Num: 46

Candidate Starts for Avocadoman\_43:

(7, 30706), (14, 30790), (15, 30799), (31, 30958), (Start: 46 @31096 has 77 MA's), (50, 31129), (53, 31147), (66, 31240), (69, 31267), (71, 31285), (80, 31330),

Gene: AylexOG\_46 Start: 32041, Stop: 32343, Start Num: 46  
Candidate Starts for AylexOG\_46:  
(Start: 46 @32041 has 77 MA's), (50, 32074), (53, 32092), (69, 32212), (71, 32230),

Gene: BAjuniper\_45 Start: 32882, Stop: 33187, Start Num: 45  
Candidate Starts for BAjuniper\_45:  
(Start: 45 @32882 has 1 MA's), (69, 33056), (70, 33059), (72, 33080), (84, 33134),

Gene: BabyDaisy\_44 Start: 31930, Stop: 32232, Start Num: 46  
Candidate Starts for BabyDaisy\_44:  
(7, 31540), (15, 31633), (31, 31792), (Start: 46 @31930 has 77 MA's), (71, 32119), (74, 32137),

Gene: BabyYoda\_45 Start: 32699, Stop: 33001, Start Num: 46  
Candidate Starts for BabyYoda\_45:  
(37, 32651), (Start: 46 @32699 has 77 MA's), (50, 32732), (69, 32870), (71, 32888),

Gene: Bachaco\_42 Start: 32661, Stop: 32963, Start Num: 46  
Candidate Starts for Bachaco\_42:  
(12, 32343), (32, 32532), (Start: 46 @32661 has 77 MA's), (69, 32832), (70, 32835), (84, 32910),

Gene: BaileyBlu\_43 Start: 31369, Stop: 31668, Start Num: 42  
Candidate Starts for BaileyBlu\_43:  
(24, 31189), (Start: 42 @31369 has 49 MA's), (74, 31570), (76, 31588),

Gene: Barnstormer\_48 Start: 33039, Stop: 33356, Start Num: 35  
Candidate Starts for Barnstormer\_48:  
(2, 32505), (Start: 35 @33039 has 14 MA's), (60, 33126), (70, 33219), (81, 33282),

Gene: Beaupre\_39 Start: 29813, Stop: 30121, Start Num: 44  
Candidate Starts for Beaupre\_39:  
(28, 29654), (Start: 44 @29813 has 24 MA's), (74, 30020),

Gene: BelmontSKP\_45 Start: 31967, Stop: 32269, Start Num: 46  
Candidate Starts for BelmontSKP\_45:  
(7, 31577), (31, 31829), (Start: 46 @31967 has 77 MA's), (50, 32000), (53, 32018), (66, 32111), (69, 32138), (70, 32141), (71, 32156),

Gene: Bengal\_45 Start: 31620, Stop: 31922, Start Num: 46  
Candidate Starts for Bengal\_45:  
(7, 31230), (14, 31314), (15, 31323), (31, 31482), (Start: 46 @31620 has 77 MA's), (71, 31809), (74, 31827),

Gene: Bernstein\_42 Start: 29583, Stop: 29885, Start Num: 46  
Candidate Starts for Bernstein\_42:  
(19, 29331), (32, 29454), (37, 29535), (Start: 46 @29583 has 77 MA's), (59, 29655), (65, 29697), (70, 29757), (84, 29832),

Gene: Berrie\_45 Start: 32854, Stop: 33162, Start Num: 42  
Candidate Starts for Berrie\_45:  
(24, 32671), (Start: 42 @32854 has 49 MA's),

Gene: Brahms\_42 Start: 29503, Stop: 29805, Start Num: 46  
Candidate Starts for Brahms\_42:

(19, 29251), (32, 29374), (37, 29455), (Start: 46 @29503 has 77 MA's), (59, 29575), (65, 29617), (70, 29677), (84, 29752),

Gene: BubbaBear\_43 Start: 31549, Stop: 31851, Start Num: 46

Candidate Starts for BubbaBear\_43:

(15, 31252), (31, 31411), (Start: 46 @31549 has 77 MA's), (50, 31582), (53, 31600), (69, 31720), (70, 31723), (71, 31738),

Gene: Buldak\_41 Start: 30127, Stop: 30420, Start Num: 46

Candidate Starts for Buldak\_41:

(31, 29980), (32, 29989), (Start: 38 @30079 has 1 MA's), (Start: 46 @30127 has 77 MA's), (53, 30169), (66, 30262), (69, 30289),

Gene: Burritobowl\_44 Start: 31550, Stop: 31852, Start Num: 46

Candidate Starts for Burritobowl\_44:

(7, 31160), (15, 31253), (31, 31412), (Start: 46 @31550 has 77 MA's), (50, 31583), (53, 31601), (66, 31694), (69, 31721), (70, 31724), (71, 31739),

Gene: CallinAllBarbz\_43 Start: 31559, Stop: 31864, Start Num: 42

Candidate Starts for CallinAllBarbz\_43:

(4, 31100), (5, 31109), (Start: 42 @31559 has 49 MA's), (74, 31760), (76, 31778), (82, 31802),

Gene: CanFranMach\_46 Start: 32006, Stop: 32308, Start Num: 46

Candidate Starts for CanFranMach\_46:

(31, 31868), (Start: 46 @32006 has 77 MA's), (53, 32057), (69, 32177),

Gene: Cappuccino\_40 Start: 29871, Stop: 30179, Start Num: 44

Candidate Starts for Cappuccino\_40:

(28, 29712), (Start: 44 @29871 has 24 MA's),

Gene: Caron\_51 Start: 34033, Stop: 34350, Start Num: 35

Candidate Starts for Caron\_51:

(6, 33835), (Start: 35 @34033 has 14 MA's), (60, 34120), (81, 34276),

Gene: Cashington\_42 Start: 30929, Stop: 31231, Start Num: 46

Candidate Starts for Cashington\_42:

(7, 30539), (31, 30791), (Start: 46 @30929 has 77 MA's), (50, 30962), (53, 30980), (66, 31073), (69, 31100), (70, 31103), (71, 31118),

Gene: Cassia\_43 Start: 31681, Stop: 31986, Start Num: 42

Candidate Starts for Cassia\_43:

(Start: 42 @31681 has 49 MA's), (74, 31888), (79, 31909),

Gene: Celaena\_42 Start: 32403, Stop: 32705, Start Num: 46

Candidate Starts for Celaena\_42:

(12, 32085), (31, 32265), (32, 32274), (Start: 46 @32403 has 77 MA's), (70, 32577), (84, 32652),

Gene: Cen1621\_45 Start: 31636, Stop: 31953, Start Num: 35

Candidate Starts for Cen1621\_45:

(1, 30994), (3, 31060), (Start: 35 @31636 has 14 MA's), (67, 31786), (72, 31834),

Gene: ChiliPepper\_42 Start: 32033, Stop: 32335, Start Num: 46

Candidate Starts for ChiliPepper\_42:

(32, 31904), (Start: 46 @32033 has 77 MA's), (53, 32084), (63, 32141), (66, 32177), (69, 32204), (73, 32234),

Gene: Clayda5\_43 Start: 29490, Stop: 29792, Start Num: 46

Candidate Starts for Clayda5\_43:

(19, 29238), (32, 29361), (37, 29442), (Start: 46 @29490 has 77 MA's), (59, 29562), (65, 29604), (70, 29664), (84, 29739),

Gene: CliffHanger\_46 Start: 30824, Stop: 31117, Start Num: 46

Candidate Starts for CliffHanger\_46:

(37, 30767), (39, 30785), (Start: 46 @30824 has 77 MA's), (62, 30914), (84, 31064),

Gene: Coltrane\_42 Start: 29503, Stop: 29805, Start Num: 46

Candidate Starts for Coltrane\_42:

(19, 29251), (32, 29374), (37, 29455), (Start: 46 @29503 has 77 MA's), (59, 29575), (65, 29617), (70, 29677), (84, 29752),

Gene: Community\_46 Start: 33667, Stop: 33975, Start Num: 42

Candidate Starts for Community\_46:

(Start: 42 @33667 has 49 MA's), (90, 33949),

Gene: Crewmate\_49 Start: 32358, Stop: 32663, Start Num: 42

Candidate Starts for Crewmate\_49:

(Start: 42 @32358 has 49 MA's), (74, 32565), (77, 32583), (85, 32610), (90, 32640),

Gene: CroZenni\_44 Start: 31470, Stop: 31772, Start Num: 46

Candidate Starts for CroZenni\_44:

(Start: 46 @31470 has 77 MA's), (50, 31503), (53, 31521), (66, 31614), (69, 31641), (70, 31644), (71, 31659), (74, 31677),

Gene: CupcakePrincess\_45 Start: 31656, Stop: 31958, Start Num: 46

Candidate Starts for CupcakePrincess\_45:

(7, 31266), (10, 31299), (31, 31518), (Start: 46 @31656 has 77 MA's), (50, 31689), (53, 31707), (69, 31827), (71, 31845),

Gene: Cyan\_44 Start: 32023, Stop: 32322, Start Num: 42

Candidate Starts for Cyan\_44:

(Start: 42 @32023 has 49 MA's), (71, 32206), (72, 32212), (90, 32299),

Gene: DickRichards\_43 Start: 31909, Stop: 32211, Start Num: 46

Candidate Starts for DickRichards\_43:

(7, 31519), (15, 31612), (31, 31771), (Start: 46 @31909 has 77 MA's), (50, 31942), (66, 32053), (69, 32080), (70, 32083), (71, 32098),

Gene: Didgeridoo\_47 Start: 32276, Stop: 32578, Start Num: 46

Candidate Starts for Didgeridoo\_47:

(7, 31886), (13, 31958), (15, 31979), (31, 32138), (Start: 46 @32276 has 77 MA's), (70, 32450), (71, 32465), (74, 32483),

Gene: DirtyBubble\_44 Start: 32367, Stop: 32669, Start Num: 46

Candidate Starts for DirtyBubble\_44:

(16, 32076), (18, 32103), (37, 32319), (Start: 46 @32367 has 77 MA's), (66, 32511), (69, 32538), (71, 32556),

Gene: Dismas\_42 Start: 31986, Stop: 32288, Start Num: 46

Candidate Starts for Dismas\_42:

(32, 31857), (Start: 46 @31986 has 77 MA's), (53, 32037), (63, 32094), (66, 32130), (69, 32157), (73, 32187),

Gene: Donkey\_40 Start: 29861, Stop: 30169, Start Num: 44

Candidate Starts for Donkey\_40:

(28, 29702), (Start: 44 @29861 has 24 MA's),

Gene: Doobus\_43 Start: 31293, Stop: 31595, Start Num: 46

Candidate Starts for Doobus\_43:

(7, 30903), (15, 30996), (31, 31155), (Start: 46 @31293 has 77 MA's), (50, 31326), (53, 31344), (66, 31437), (69, 31464), (70, 31467), (71, 31482),

Gene: DrManhattan\_43 Start: 30166, Stop: 30465, Start Num: 42

Candidate Starts for DrManhattan\_43:

(Start: 42 @30166 has 49 MA's), (71, 30349), (79, 30388), (84, 30409),

Gene: DrSierra\_41 Start: 29959, Stop: 30258, Start Num: 42

Candidate Starts for DrSierra\_41:

(Start: 42 @29959 has 49 MA's), (71, 30142),

Gene: Eden\_42 Start: 30233, Stop: 30532, Start Num: 46

Candidate Starts for Eden\_42:

(27, 30044), (Start: 46 @30233 has 77 MA's), (59, 30302), (65, 30344), (70, 30404), (82, 30476), (84, 30479),

Gene: Elezi\_41 Start: 32512, Stop: 32817, Start Num: 42

Candidate Starts for Elezi\_41:

(24, 32332), (Start: 42 @32512 has 49 MA's), (58, 32581), (70, 32686), (71, 32701), (74, 32719), (90, 32794),

Gene: Elfy\_44 Start: 31206, Stop: 31523, Start Num: 42

Candidate Starts for Elfy\_44:

(Start: 42 @31206 has 49 MA's), (70, 31383), (74, 31416), (81, 31446), (90, 31491),

Gene: Elva\_46 Start: 32598, Stop: 32900, Start Num: 46

Candidate Starts for Elva\_46:

(37, 32550), (Start: 46 @32598 has 77 MA's), (59, 32670), (69, 32769), (71, 32787), (74, 32805),

Gene: Emotion\_48 Start: 33410, Stop: 33724, Start Num: 44

Candidate Starts for Emotion\_48:

(8, 33041), (30, 33260), (37, 33359), (Start: 44 @33410 has 24 MA's), (85, 33665),

Gene: Eraser\_41 Start: 32522, Stop: 32827, Start Num: 42

Candidate Starts for Eraser\_41:

(24, 32342), (Start: 42 @32522 has 49 MA's), (58, 32591), (70, 32696), (71, 32711), (74, 32729), (90, 32804),

Gene: Eula\_45 Start: 31642, Stop: 31944, Start Num: 46

Candidate Starts for Eula\_45:

(7, 31252), (10, 31285), (31, 31504), (Start: 46 @31642 has 77 MA's), (50, 31675), (53, 31693), (69, 31813), (71, 31831),

Gene: Exile\_38 Start: 33014, Stop: 33325, Start Num: 42

Candidate Starts for Exile\_38:

(Start: 42 @33014 has 49 MA's), (74, 33224),

Gene: Finalfrontier\_45 Start: 32501, Stop: 32803, Start Num: 46

Candidate Starts for Finalfrontier\_45:

(31, 32363), (Start: 46 @32501 has 77 MA's), (50, 32534), (53, 32552), (69, 32672), (71, 32690),

Gene: FiveHead\_51 Start: 32621, Stop: 32938, Start Num: 44

Candidate Starts for FiveHead\_51:

(30, 32522), (Start: 44 @32621 has 24 MA's), (83, 32876),

Gene: FlameThrower\_42 Start: 31852, Stop: 32154, Start Num: 46

Candidate Starts for FlameThrower\_42:

(Start: 46 @31852 has 77 MA's), (69, 32023), (84, 32101),

Gene: Floof\_50 Start: 33911, Stop: 34228, Start Num: 35

Candidate Starts for Floof\_50:

(Start: 35 @33911 has 14 MA's), (64, 34028), (74, 34124), (87, 34175),

Gene: Flutur\_43 Start: 32280, Stop: 32579, Start Num: 42

Candidate Starts for Flutur\_43:

(Start: 42 @32280 has 49 MA's), (71, 32463), (72, 32469), (90, 32556),

Gene: Forester\_48 Start: 34846, Stop: 35163, Start Num: 35

Candidate Starts for Forester\_48:

(Start: 35 @34846 has 14 MA's), (72, 35047),

Gene: Franklin22\_43 Start: 30108, Stop: 30407, Start Num: 46

Candidate Starts for Franklin22\_43:

(21, 29871), (Start: 46 @30108 has 77 MA's), (59, 30177), (69, 30276), (82, 30351), (84, 30354),

Gene: Gack\_42 Start: 30149, Stop: 30451, Start Num: 46

Candidate Starts for Gack\_42:

(32, 30020), (Start: 46 @30149 has 77 MA's), (56, 30212), (70, 30323), (74, 30356), (84, 30398),

Gene: Gambol\_41 Start: 29880, Stop: 30188, Start Num: 44

Candidate Starts for Gambol\_41:

(28, 29721), (Start: 44 @29880 has 24 MA's),

Gene: GardenState\_49 Start: 33316, Stop: 33633, Start Num: 35

Candidate Starts for GardenState\_49:

(Start: 35 @33316 has 14 MA's), (Start: 46 @33352 has 77 MA's), (50, 33364),

Gene: Giorgio\_39 Start: 29796, Stop: 30104, Start Num: 44

Candidate Starts for Giorgio\_39:

(28, 29637), (Start: 44 @29796 has 24 MA's), (74, 30003),

Gene: Gretchen\_49 Start: 34530, Stop: 34847, Start Num: 35

Candidate Starts for Gretchen\_49:

(Start: 35 @34530 has 14 MA's), (72, 34731),

Gene: GrimEater\_39 Start: 30063, Stop: 30365, Start Num: 42

Candidate Starts for GrimEater\_39:

(Start: 42 @30063 has 49 MA's), (49, 30090), (68, 30222), (74, 30267), (90, 30342),

Gene: Gumpizza\_39 Start: 29752, Stop: 30060, Start Num: 44

Candidate Starts for Gumpizza\_39:

(28, 29593), (Start: 44 @29752 has 24 MA's), (74, 29959),

Gene: Halsey\_40 Start: 30007, Stop: 30315, Start Num: 44

Candidate Starts for Halsey\_40:

(28, 29848), (Start: 44 @30007 has 24 MA's), (74, 30214),

Gene: Honk\_45 Start: 30126, Stop: 30440, Start Num: 35

Candidate Starts for Honk\_45:

(23, 30066), (Start: 35 @30126 has 14 MA's), (67, 30273), (72, 30321),

Gene: IAmGroot\_49 Start: 33783, Stop: 34100, Start Num: 35

Candidate Starts for IAmGroot\_49:

(Start: 35 @33783 has 14 MA's), (Start: 46 @33819 has 77 MA's), (50, 33831),

Gene: IUFootball\_44 Start: 33414, Stop: 33731, Start Num: 44

Candidate Starts for IUFootball\_44:

(Start: 44 @33414 has 24 MA's), (47, 33420), (53, 33462), (80, 33645),

Gene: Icarian\_47 Start: 33008, Stop: 33310, Start Num: 46

Candidate Starts for Icarian\_47:

(37, 32960), (Start: 46 @33008 has 77 MA's), (50, 33041), (69, 33179), (71, 33197),

Gene: IndyLu\_44 Start: 31876, Stop: 32178, Start Num: 46

Candidate Starts for IndyLu\_44:

(15, 31579), (31, 31738), (Start: 46 @31876 has 77 MA's), (71, 32065), (74, 32083),

Gene: Iter\_43 Start: 31665, Stop: 31970, Start Num: 42

Candidate Starts for Iter\_43:

(26, 31506), (Start: 42 @31665 has 49 MA's), (77, 31890), (89, 31935),

Gene: IttyBittyPiggy\_44 Start: 31474, Stop: 31779, Start Num: 42

Candidate Starts for IttyBittyPiggy\_44:

(Start: 42 @31474 has 49 MA's), (79, 31702),

Gene: Jabb\_45 Start: 31656, Stop: 31958, Start Num: 46

Candidate Starts for Jabb\_45:

(7, 31266), (10, 31299), (31, 31518), (Start: 46 @31656 has 77 MA's), (50, 31689), (53, 31707), (69, 31827), (71, 31845),

Gene: Janeemi\_46 Start: 33665, Stop: 33973, Start Num: 42

Candidate Starts for Janeemi\_46:

(Start: 42 @33665 has 49 MA's), (71, 33854), (90, 33947),

Gene: Jankie\_40 Start: 30240, Stop: 30542, Start Num: 42

Candidate Starts for Jankie\_40:

(Start: 42 @30240 has 49 MA's), (49, 30267), (68, 30399), (74, 30444), (90, 30519),

Gene: JasmineDragon\_47 Start: 32601, Stop: 32918, Start Num: 44

Candidate Starts for JasmineDragon\_47:

(30, 32499), (Start: 44 @32601 has 24 MA's), (72, 32802), (83, 32856),

Gene: Joemato\_44 Start: 32050, Stop: 32349, Start Num: 42

Candidate Starts for Joemato\_44:

(Start: 42 @32050 has 49 MA's), (72, 32239),

Gene: JohnDoe\_44 Start: 32046, Stop: 32345, Start Num: 42

Candidate Starts for JohnDoe\_44:

(Start: 42 @32046 has 49 MA's), (71, 32229), (72, 32235), (90, 32322),

Gene: JohnThicc\_50 Start: 32621, Stop: 32938, Start Num: 44

Candidate Starts for JohnThicc\_50:

(30, 32522), (Start: 44 @32621 has 24 MA's), (83, 32876),

Gene: Johnathan\_43 Start: 30932, Stop: 31234, Start Num: 46

Candidate Starts for Johnathan\_43:

(Start: 46 @30932 has 77 MA's), (50, 30965), (53, 30983), (66, 31076), (69, 31103), (70, 31106), (71, 31121),

Gene: Jovita\_45 Start: 31671, Stop: 31973, Start Num: 46

Candidate Starts for Jovita\_45:

(7, 31281), (10, 31314), (31, 31533), (Start: 46 @31671 has 77 MA's), (50, 31704), (53, 31722), (69, 31842), (71, 31860),

Gene: Jstan\_43 Start: 32516, Stop: 32821, Start Num: 42

Candidate Starts for Jstan\_43:

(24, 32336), (Start: 42 @32516 has 49 MA's), (58, 32585), (70, 32690), (71, 32705), (74, 32723), (90, 32798),

Gene: JuneStar\_45 Start: 33586, Stop: 33891, Start Num: 42

Candidate Starts for JuneStar\_45:

(Start: 42 @33586 has 49 MA's), (74, 33793), (79, 33814),

Gene: Kalimba\_40 Start: 29858, Stop: 30166, Start Num: 44

Candidate Starts for Kalimba\_40:

(28, 29699), (Start: 44 @29858 has 24 MA's),

Gene: Kamdara\_42 Start: 31991, Stop: 32293, Start Num: 46

Candidate Starts for Kamdara\_42:

(32, 31862), (Start: 46 @31991 has 77 MA's), (53, 32042), (63, 32099), (66, 32135), (69, 32162), (73, 32192),

Gene: Kate33\_45 Start: 31621, Stop: 31923, Start Num: 46

Candidate Starts for Kate33\_45:

(7, 31231), (31, 31483), (Start: 46 @31621 has 77 MA's), (71, 31810), (74, 31828),

Gene: Katzastrophic\_43 Start: 31982, Stop: 32284, Start Num: 46

Candidate Starts for Katzastrophic\_43:

(12, 31664), (32, 31853), (Start: 46 @31982 has 77 MA's), (69, 32153), (84, 32231),

Gene: Kaylissa\_45 Start: 32436, Stop: 32735, Start Num: 42

Candidate Starts for Kaylissa\_45:

(Start: 42 @32436 has 49 MA's), (72, 32625),

Gene: KeAlii\_41 Start: 31618, Stop: 31923, Start Num: 42

Candidate Starts for KeAlii\_41:

(Start: 42 @31618 has 49 MA's), (71, 31807), (75, 31828),

Gene: Kenzers\_45 Start: 31712, Stop: 32014, Start Num: 46

Candidate Starts for Kenzers\_45:

(7, 31325), (31, 31577), (39, 31685), (Start: 46 @31712 has 77 MA's), (50, 31745), (53, 31763), (69, 31883), (70, 31886), (71, 31901),

Gene: Kieran\_42 Start: 31994, Stop: 32296, Start Num: 46

Candidate Starts for Kieran\_42:

(32, 31865), (Start: 46 @31994 has 77 MA's), (53, 32045), (63, 32102), (66, 32138), (69, 32165), (73, 32195),

Gene: LadyAstra\_50 Start: 32721, Stop: 33038, Start Num: 44

Candidate Starts for LadyAstra\_50:

(6, 32370), (30, 32622), (Start: 44 @32721 has 24 MA's), (83, 32976),

Gene: Lahqtemish\_44 Start: 31902, Stop: 32204, Start Num: 46

Candidate Starts for Lahqtemish\_44:

(31, 31764), (37, 31854), (Start: 46 @31902 has 77 MA's), (74, 32109),

Gene: Lego\_43 Start: 31753, Stop: 32052, Start Num: 42

Candidate Starts for Lego\_43:

(Start: 42 @31753 has 49 MA's), (71, 31936), (72, 31942), (90, 32029),

Gene: Liebe\_44 Start: 33414, Stop: 33731, Start Num: 44

Candidate Starts for Liebe\_44:

(Start: 44 @33414 has 24 MA's), (47, 33420), (53, 33462), (80, 33645),

Gene: Lilo27\_45 Start: 31550, Stop: 31852, Start Num: 46

Candidate Starts for Lilo27\_45:

(31, 31412), (Start: 46 @31550 has 77 MA's), (50, 31583), (53, 31601), (69, 31721), (71, 31739),

Gene: LimaBean\_44 Start: 31234, Stop: 31536, Start Num: 46

Candidate Starts for LimaBean\_44:

(7, 30844), (31, 31096), (Start: 46 @31234 has 77 MA's), (50, 31267), (53, 31285), (66, 31378), (69, 31405), (70, 31408), (71, 31423),

Gene: LisoBros\_43 Start: 34559, Stop: 34864, Start Num: 42

Candidate Starts for LisoBros\_43:

(Start: 42 @34559 has 49 MA's), (76, 34778), (86, 34811), (88, 34823),

Gene: Lizalica\_42 Start: 31130, Stop: 31429, Start Num: 42

Candidate Starts for Lizalica\_42:

(Start: 42 @31130 has 49 MA's), (72, 31319), (90, 31406),

Gene: London\_41 Start: 32512, Stop: 32817, Start Num: 42

Candidate Starts for London\_41:

(24, 32332), (Start: 42 @32512 has 49 MA's), (58, 32581), (70, 32686), (71, 32701), (74, 32719), (90, 32794),

Gene: Loviatar\_45 Start: 33597, Stop: 33899, Start Num: 46

Candidate Starts for Loviatar\_45:

(37, 33549), (Start: 46 @33597 has 77 MA's), (50, 33630), (69, 33768), (71, 33786),

Gene: Lynlen\_45 Start: 31712, Stop: 32014, Start Num: 46

Candidate Starts for Lynlen\_45:

(7, 31325), (31, 31577), (39, 31685), (Start: 46 @31712 has 77 MA's), (50, 31745), (53, 31763), (69, 31883), (70, 31886), (71, 31901),

Gene: MaGuCo\_41 Start: 31898, Stop: 32215, Start Num: 44

Candidate Starts for MaGuCo\_41:

(Start: 44 @31898 has 24 MA's), (47, 31904), (53, 31946), (80, 32129),

Gene: Maureen\_44 Start: 33414, Stop: 33731, Start Num: 44

Candidate Starts for Maureen\_44:

(Start: 44 @33414 has 24 MA's), (47, 33420), (53, 33462), (80, 33645),

Gene: Michkear\_43 Start: 32693, Stop: 33013, Start Num: 42

Candidate Starts for Michkear\_43:

(22, 32504), (33, 32615), (Start: 42 @32693 has 49 MA's), (53, 32750), (56, 32762),

Gene: Milomuff\_44 Start: 31458, Stop: 31760, Start Num: 46

Candidate Starts for Milomuff\_44:

(7, 31068), (15, 31161), (31, 31320), (Start: 46 @31458 has 77 MA's), (50, 31491), (66, 31602), (69, 31629), (70, 31632), (71, 31647),

Gene: MiniMommy\_48 Start: 32602, Stop: 32919, Start Num: 44

Candidate Starts for MiniMommy\_48:

(30, 32500), (Start: 44 @32602 has 24 MA's), (72, 32803), (83, 32857),

Gene: MissSwiss\_44 Start: 30667, Stop: 30978, Start Num: 42

Candidate Starts for MissSwiss\_44:

(Start: 42 @30667 has 49 MA's), (71, 30862), (74, 30880), (79, 30901), (84, 30922),

Gene: Moss\_40 Start: 29948, Stop: 30256, Start Num: 44

Candidate Starts for Moss\_40:

(28, 29789), (Start: 44 @29948 has 24 MA's), (74, 30155),

Gene: MsUbiquitous\_45 Start: 31656, Stop: 31958, Start Num: 46

Candidate Starts for MsUbiquitous\_45:

(7, 31266), (10, 31299), (31, 31518), (Start: 46 @31656 has 77 MA's), (50, 31689), (53, 31707), (69, 31827), (71, 31845),

Gene: Mudpuppy\_40 Start: 31619, Stop: 31918, Start Num: 42

Candidate Starts for Mudpuppy\_40:

(Start: 42 @31619 has 49 MA's), (72, 31808),

Gene: Mysterium\_39 Start: 29778, Stop: 30086, Start Num: 44

Candidate Starts for Mysterium\_39:

(28, 29619), (Start: 44 @29778 has 24 MA's), (74, 29985),

Gene: Nicky22\_45 Start: 32104, Stop: 32406, Start Num: 46

Candidate Starts for Nicky22\_45:

(31, 31966), (Start: 46 @32104 has 77 MA's), (50, 32137), (53, 32155), (71, 32293),

Gene: Niobe\_41 Start: 32516, Stop: 32821, Start Num: 42

Candidate Starts for Niobe\_41:

(24, 32336), (Start: 42 @32516 has 49 MA's), (58, 32585), (70, 32690), (71, 32705), (74, 32723), (90, 32798),

Gene: Nitro\_42 Start: 32274, Stop: 32591, Start Num: 41

Candidate Starts for Nitro\_42:

(6, 31905), (26, 32112), (30, 32154), (Start: 41 @32274 has 2 MA's), (51, 32328), (71, 32475), (74, 32493), (89, 32556),

Gene: ObiToo\_49 Start: 32801, Stop: 33106, Start Num: 42

Candidate Starts for ObiToo\_49:

(Start: 42 @32801 has 49 MA's), (74, 33008), (77, 33026), (85, 33053), (90, 33083),

Gene: Olliecat\_41 Start: 30192, Stop: 30485, Start Num: 46

Candidate Starts for Olliecat\_41:

(6, 29784), (11, 29844), (25, 29982), (32, 30054), (39, 30153), (Start: 46 @30192 has 77 MA's), (51, 30225), (66, 30327), (69, 30354),

Gene: Origami\_49 Start: 32513, Stop: 32830, Start Num: 44

Candidate Starts for Origami\_49:

(6, 32162), (30, 32414), (Start: 44 @32513 has 24 MA's), (83, 32768),

Gene: PandaPo\_44 Start: 30673, Stop: 30984, Start Num: 42

Candidate Starts for PandaPo\_44:

(Start: 42 @30673 has 49 MA's), (71, 30868), (74, 30886), (79, 30907), (84, 30928),

Gene: PastaFagioli\_45 Start: 32296, Stop: 32598, Start Num: 46

Candidate Starts for PastaFagioli\_45:

(31, 32158), (Start: 46 @32296 has 77 MA's), (74, 32503),

Gene: Pecas\_45 Start: 31856, Stop: 32158, Start Num: 46

Candidate Starts for Pecas\_45:

(31, 31718), (Start: 46 @31856 has 77 MA's), (50, 31889), (53, 31907), (69, 32027), (71, 32045),

Gene: Percival\_50 Start: 34365, Stop: 34682, Start Num: 35

Candidate Starts for Percival\_50:

(Start: 35 @34365 has 14 MA's),

Gene: PhigPhack\_45 Start: 31476, Stop: 31778, Start Num: 46

Candidate Starts for PhigPhack\_45:

(7, 31086), (31, 31338), (Start: 46 @31476 has 77 MA's), (50, 31509), (53, 31527), (66, 31620), (69, 31647), (70, 31650), (71, 31665),

Gene: Phisb\_45 Start: 31701, Stop: 32003, Start Num: 46

Candidate Starts for Phisb\_45:

(31, 31563), (Start: 46 @31701 has 77 MA's), (50, 31734), (53, 31752), (69, 31872), (71, 31890),

Gene: Phives\_46 Start: 33495, Stop: 33803, Start Num: 42

Candidate Starts for Phives\_46:

(Start: 42 @33495 has 49 MA's), (90, 33777),

Gene: Pixelle\_44 Start: 32731, Stop: 33036, Start Num: 42

Candidate Starts for Pixelle\_44:

(Start: 42 @32731 has 49 MA's), (77, 32956), (85, 32983), (90, 33013),

Gene: PondAmelia\_55 Start: 32518, Stop: 32820, Start Num: 46

Candidate Starts for PondAmelia\_55:

(37, 32470), (Start: 46 @32518 has 77 MA's), (50, 32551), (69, 32689), (71, 32707),

Gene: Powerpuff\_46 Start: 33141, Stop: 33440, Start Num: 43

Candidate Starts for Powerpuff\_46:

(Start: 42 @33138 has 49 MA's), (Start: 43 @33141 has 2 MA's), (72, 33330), (90, 33417),

Gene: Pumpkins\_43 Start: 32145, Stop: 32450, Start Num: 42

Candidate Starts for Pumpkins\_43:

(Start: 42 @32145 has 49 MA's), (79, 32373),

Gene: QMacho\_47 Start: 32339, Stop: 32641, Start Num: 46

Candidate Starts for QMacho\_47:

(31, 32201), (Start: 46 @32339 has 77 MA's), (50, 32372), (53, 32390), (69, 32510), (71, 32528),

Gene: Quenya\_44 Start: 32171, Stop: 32476, Start Num: 46

Candidate Starts for Quenya\_44:

(11, 31832), (12, 31853), (31, 32033), (32, 32042), (Start: 46 @32171 has 77 MA's), (56, 32237), (70, 32348), (84, 32423),

Gene: Reedo\_43 Start: 30266, Stop: 30568, Start Num: 42

Candidate Starts for Reedo\_43:

(Start: 42 @30266 has 49 MA's), (55, 30323), (58, 30332), (71, 30452),

Gene: RockScotty\_39 Start: 29776, Stop: 30084, Start Num: 44

Candidate Starts for RockScotty\_39:

(28, 29617), (Start: 44 @29776 has 24 MA's), (74, 29983),

Gene: Rollins\_42 Start: 29583, Stop: 29885, Start Num: 46

Candidate Starts for Rollins\_42:

(19, 29331), (32, 29454), (37, 29535), (Start: 46 @29583 has 77 MA's), (59, 29655), (65, 29697), (70, 29757), (84, 29832),

Gene: Rona\_42 Start: 31977, Stop: 32279, Start Num: 46

Candidate Starts for Rona\_42:

(32, 31848), (Start: 46 @31977 has 77 MA's), (53, 32028), (63, 32085), (66, 32121), (69, 32148), (73, 32178),

Gene: Sabourin\_40 Start: 29858, Stop: 30166, Start Num: 44

Candidate Starts for Sabourin\_40:

(28, 29699), (Start: 44 @29858 has 24 MA's),

Gene: Samy\_66 Start: 44114, Stop: 44473, Start Num: 38

Candidate Starts for Samy\_66:

(34, 44051), (36, 44075), (Start: 38 @44114 has 1 MA's), (39, 44123), (52, 44195), (57, 44216), (76, 44378), (87, 44414),

Gene: SanaSana\_47 Start: 33206, Stop: 33508, Start Num: 46

Candidate Starts for SanaSana\_47:

(14, 32903), (37, 33158), (Start: 46 @33206 has 77 MA's), (50, 33239), (69, 33377), (71, 33395),

Gene: SansAfet\_45 Start: 31563, Stop: 31865, Start Num: 46

Candidate Starts for SansAfet\_45:

(7, 31173), (31, 31425), (Start: 46 @31563 has 77 MA's), (50, 31596), (53, 31614), (66, 31707), (69, 31734), (70, 31737), (71, 31752),

Gene: SarBear\_44 Start: 31349, Stop: 31651, Start Num: 46

Candidate Starts for SarBear\_44:

(31, 31211), (Start: 46 @31349 has 77 MA's), (50, 31382), (53, 31400), (69, 31520), (71, 31538),

Gene: Schaffner\_44 Start: 32201, Stop: 32506, Start Num: 42

Candidate Starts for Schaffner\_44:

(Start: 42 @32201 has 49 MA's), (74, 32408), (79, 32429),

Gene: ShakeltOph\_47 Start: 32601, Stop: 32918, Start Num: 44

Candidate Starts for ShakeltOph\_47:

(30, 32499), (Start: 44 @32601 has 24 MA's), (72, 32802), (83, 32856),

Gene: Sharkboy\_43 Start: 32076, Stop: 32378, Start Num: 46

Candidate Starts for Sharkboy\_43:

(Start: 46 @32076 has 77 MA's), (53, 32127), (63, 32184), (66, 32220), (69, 32247), (73, 32277),

Gene: Shayna\_44 Start: 30922, Stop: 31215, Start Num: 48

Candidate Starts for Shayna\_44:

(Start: 48 @30922 has 3 MA's), (56, 30976), (66, 31057), (79, 31141),

Gene: Simpson\_46 Start: 32054, Stop: 32353, Start Num: 42

Candidate Starts for Simpson\_46:

(Start: 42 @32054 has 49 MA's), (72, 32243),

Gene: SirBeanington\_44 Start: 31860, Stop: 32162, Start Num: 46

Candidate Starts for SirBeanington\_44:

(7, 31473), (31, 31725), (39, 31833), (Start: 46 @31860 has 77 MA's), (50, 31893), (53, 31911), (69, 32031), (70, 32034), (71, 32049),

Gene: Skelbel\_42 Start: 32516, Stop: 32821, Start Num: 42

Candidate Starts for Skelbel\_42:

(24, 32336), (Start: 42 @32516 has 49 MA's), (58, 32585), (70, 32690), (71, 32705), (74, 32723), (90, 32798),

Gene: Skylord\_42 Start: 29514, Stop: 29816, Start Num: 46

Candidate Starts for Skylord\_42:

(Start: 46 @29514 has 77 MA's), (59, 29586), (65, 29628), (70, 29688), (84, 29763),

Gene: Slay\_45 Start: 32077, Stop: 32379, Start Num: 46

Candidate Starts for Slay\_45:

(31, 31939), (Start: 46 @32077 has 77 MA's), (50, 32110), (53, 32128), (71, 32266),

Gene: Snek\_41 Start: 30099, Stop: 30401, Start Num: 40

Candidate Starts for Snek\_41:

(Start: 40 @30099 has 2 MA's), (71, 30285), (84, 30345), (89, 30366),

Gene: Softsoap\_44 Start: 31474, Stop: 31776, Start Num: 46

Candidate Starts for Softsoap\_44:

(7, 31084), (14, 31168), (15, 31177), (31, 31336), (Start: 46 @31474 has 77 MA's), (50, 31507), (53, 31525), (66, 31618), (69, 31645), (70, 31648), (71, 31663),

Gene: Solea\_45 Start: 31458, Stop: 31760, Start Num: 46

Candidate Starts for Solea\_45:

(7, 31068), (15, 31161), (31, 31320), (Start: 46 @31458 has 77 MA's), (50, 31491), (66, 31602), (69, 31629), (70, 31632), (71, 31647),

Gene: Soondubu\_39 Start: 33016, Stop: 33327, Start Num: 42

Candidate Starts for Soondubu\_39:

(Start: 42 @33016 has 49 MA's), (74, 33226), (81, 33256),

Gene: Sooty\_40 Start: 29873, Stop: 30181, Start Num: 44

Candidate Starts for Sooty\_40:

(28, 29714), (Start: 44 @29873 has 24 MA's),

Gene: SpecialK\_40 Start: 29856, Stop: 30164, Start Num: 44

Candidate Starts for SpecialK\_40:

(28, 29697), (Start: 44 @29856 has 24 MA's), (74, 30063),

Gene: Squiracle\_41 Start: 30191, Stop: 30484, Start Num: 46

Candidate Starts for Squiracle\_41:

(6, 29783), (11, 29843), (25, 29981), (32, 30053), (39, 30152), (Start: 46 @30191 has 77 MA's), (51, 30224), (66, 30326), (69, 30353),

Gene: Stoor\_45 Start: 32875, Stop: 33177, Start Num: 46

Candidate Starts for Stoor\_45:

(9, 32509), (37, 32827), (Start: 46 @32875 has 77 MA's), (50, 32908), (69, 33046), (71, 33064),

Gene: Stromboli\_45 Start: 32737, Stop: 33039, Start Num: 46

Candidate Starts for Stromboli\_45:

(37, 32689), (Start: 46 @32737 has 77 MA's), (50, 32770), (69, 32908), (71, 32926),

Gene: Stuu\_40 Start: 29968, Stop: 30276, Start Num: 44

Candidate Starts for Stuu\_40:

(28, 29809), (Start: 44 @29968 has 24 MA's), (74, 30175),

Gene: SuMoo\_52 Start: 34116, Stop: 34439, Start Num: 35

Candidate Starts for SuMoo\_52:

(6, 33810), (Start: 35 @34116 has 14 MA's), (70, 34302), (78, 34356), (91, 34428),

Gene: Subaru\_42 Start: 32512, Stop: 32817, Start Num: 42

Candidate Starts for Subaru\_42:

(24, 32332), (Start: 42 @32512 has 49 MA's), (58, 32581), (70, 32686), (71, 32701), (74, 32719), (90, 32794),

Gene: Sue2\_44 Start: 32428, Stop: 32745, Start Num: 42  
Candidate Starts for Sue2\_44:  
(24, 32248), (Start: 42 @32428 has 49 MA's), (71, 32617), (79, 32656),

Gene: SunnyD\_44 Start: 30927, Stop: 31220, Start Num: 48  
Candidate Starts for SunnyD\_44:  
(Start: 48 @30927 has 3 MA's), (56, 30981), (66, 31062), (79, 31146),

Gene: SuperHands\_48 Start: 34851, Stop: 35168, Start Num: 35  
Candidate Starts for SuperHands\_48:  
(Start: 35 @34851 has 14 MA's),

Gene: Swervy\_45 Start: 31621, Stop: 31923, Start Num: 46  
Candidate Starts for Swervy\_45:  
(31, 31483), (Start: 46 @31621 has 77 MA's), (50, 31654), (53, 31672), (69, 31792), (71, 31810),

Gene: Tallboi\_43 Start: 32884, Stop: 33189, Start Num: 42  
Candidate Starts for Tallboi\_43:  
(Start: 42 @32884 has 49 MA's), (71, 33073), (85, 33136), (90, 33166),

Gene: Tbone\_43 Start: 31848, Stop: 32147, Start Num: 42  
Candidate Starts for Tbone\_43:  
(Start: 42 @31848 has 49 MA's), (72, 32037),

Gene: Teagster\_45 Start: 31820, Stop: 32113, Start Num: 48  
Candidate Starts for Teagster\_45:  
(Start: 48 @31820 has 3 MA's), (56, 31874), (66, 31955),

Gene: TforTroy\_45 Start: 32007, Stop: 32312, Start Num: 42  
Candidate Starts for TforTroy\_45:  
(Start: 42 @32007 has 49 MA's), (74, 32214), (79, 32235),

Gene: ThursdayNight\_46 Start: 32508, Stop: 32822, Start Num: 44  
Candidate Starts for ThursdayNight\_46:  
(Start: 44 @32508 has 24 MA's),

Gene: Tian\_42 Start: 32705, Stop: 33010, Start Num: 42  
Candidate Starts for Tian\_42:  
(24, 32522), (Start: 42 @32705 has 49 MA's), (77, 32930), (85, 32957), (90, 32987),

Gene: Tuck\_47 Start: 34047, Stop: 34355, Start Num: 42  
Candidate Starts for Tuck\_47:  
(Start: 42 @34047 has 49 MA's), (90, 34329),

Gene: TukTuk\_45 Start: 31629, Stop: 31931, Start Num: 46  
Candidate Starts for TukTuk\_45:  
(31, 31491), (Start: 46 @31629 has 77 MA's), (50, 31662), (53, 31680), (69, 31800), (71, 31818),

Gene: Turab\_41 Start: 31151, Stop: 31456, Start Num: 42  
Candidate Starts for Turab\_41:  
(Start: 42 @31151 has 49 MA's), (58, 31220), (71, 31340), (85, 31403), (90, 31433),

Gene: Tutumahutu\_45 Start: 32024, Stop: 32323, Start Num: 43  
Candidate Starts for Tutumahutu\_45:  
(Start: 42 @32021 has 49 MA's), (Start: 43 @32024 has 2 MA's), (71, 32207), (72, 32213), (90, 32300),

Gene: Tweety19\_42 Start: 30099, Stop: 30401, Start Num: 40  
Candidate Starts for Tweety19\_42:  
(Start: 40 @30099 has 2 MA's), (71, 30285), (84, 30345), (89, 30366),

Gene: UtzChips\_48 Start: 33025, Stop: 33342, Start Num: 35  
Candidate Starts for UtzChips\_48:  
(2, 32491), (Start: 35 @33025 has 14 MA's), (60, 33112), (70, 33205), (81, 33268),

Gene: VResidence\_43 Start: 31198, Stop: 31497, Start Num: 42  
Candidate Starts for VResidence\_43:  
(29, 31081), (Start: 42 @31198 has 49 MA's), (54, 31246), (71, 31381), (74, 31399), (75, 31402), (79, 31420),

Gene: Vitas\_42 Start: 29496, Stop: 29798, Start Num: 46  
Candidate Starts for Vitas\_42:  
(19, 29244), (32, 29367), (37, 29448), (Start: 46 @29496 has 77 MA's), (59, 29568), (65, 29610), (70, 29670), (84, 29745),

Gene: VroomVroom\_46 Start: 32510, Stop: 32839, Start Num: 44  
Candidate Starts for VroomVroom\_46:  
(Start: 44 @32510 has 24 MA's), (78, 32744), (83, 32765),

Gene: WalkingDead\_46 Start: 33486, Stop: 33788, Start Num: 46  
Candidate Starts for WalkingDead\_46:  
(37, 33438), (Start: 46 @33486 has 77 MA's), (50, 33519), (69, 33657), (71, 33675),

Gene: Warda\_44 Start: 32024, Stop: 32323, Start Num: 42  
Candidate Starts for Warda\_44:  
(Start: 42 @32024 has 49 MA's), (72, 32213),

Gene: Wildwest\_42 Start: 31279, Stop: 31584, Start Num: 41  
Candidate Starts for Wildwest\_42:  
(Start: 41 @31279 has 2 MA's), (71, 31468),

Gene: Yang\_43 Start: 31319, Stop: 31624, Start Num: 42  
Candidate Starts for Yang\_43:  
(Start: 42 @31319 has 49 MA's), (74, 31526), (79, 31547),

Gene: YesChef\_44 Start: 31997, Stop: 32299, Start Num: 42  
Candidate Starts for YesChef\_44:  
(Start: 42 @31997 has 49 MA's), (Start: 43 @32000 has 2 MA's), (72, 32189), (90, 32276),

Gene: Zeta1847\_41 Start: 31062, Stop: 31412, Start Num: 35  
Candidate Starts for Zeta1847\_41:  
(17, 30942), (20, 30963), (Start: 35 @31062 has 14 MA's), (61, 31176), (72, 31290),