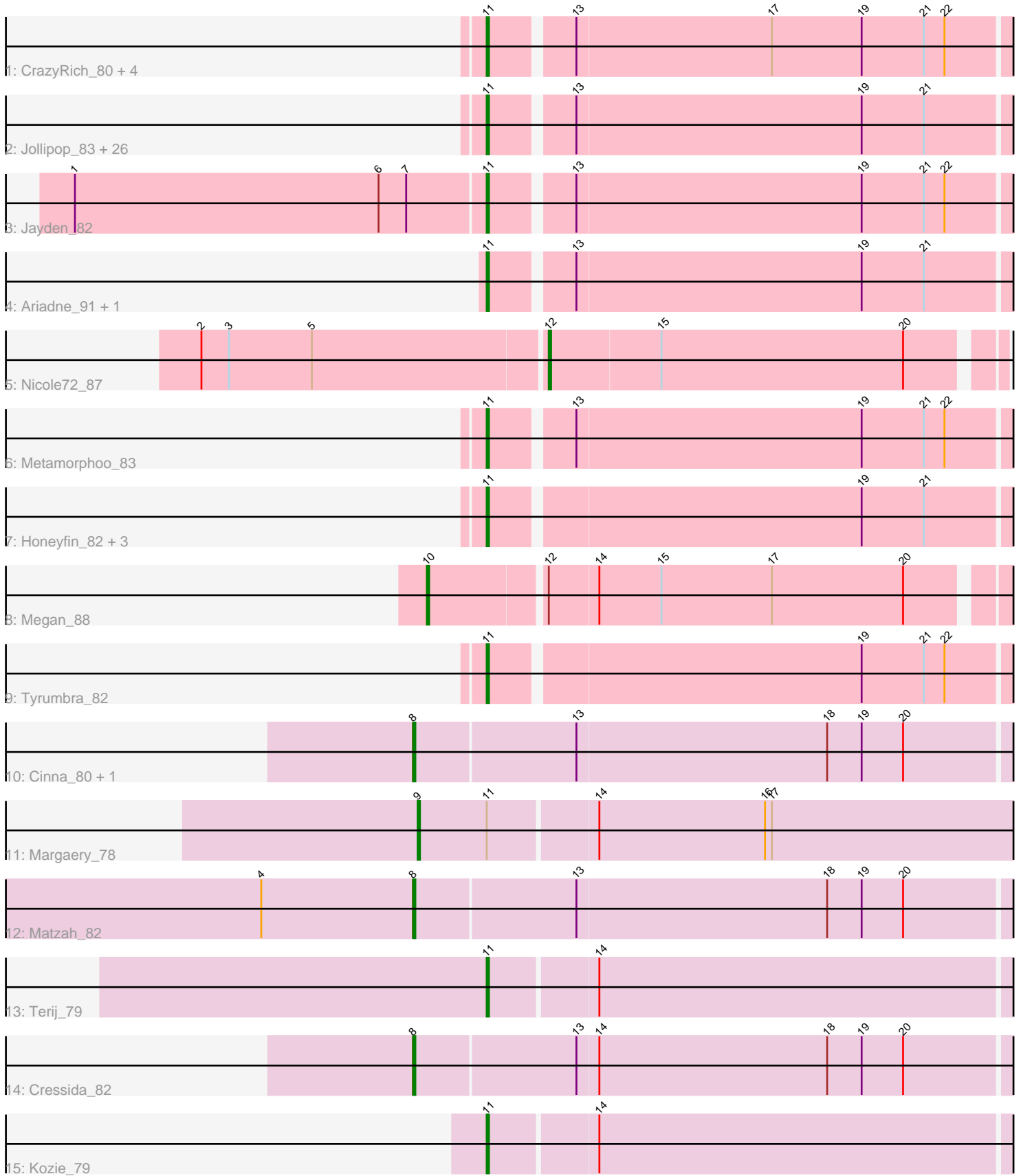


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 168304 Report

This analysis was run 07/09/24 on database version 566.

Pham number 168304 has 50 members, 2 are drafts.

Phages represented in each track:

- Track 1 : CrazyRich\_80, LittleFortune\_83, NoodlelyBoi\_82, ClearAsMud\_85, PiperSansNom\_83
- Track 2 : Jollipop\_83, Fireman\_86, Piperis\_83, BrazzalePHS\_81, PierreOrion\_81, Phrancesco\_82, Gina\_87, KaiHaiDragon\_83, Ganandorf\_80, Pulchra\_84, Paschalis\_82, Yeti\_81, Busephilis\_81, Teamocil\_87, EarickHC\_83, Savannah\_81, Jefe\_82, Crisis\_83, Cranjis\_83, Phorgeous\_82, Kowalski\_81, Selwyn23\_83, Scumberland\_84, Ramiel05\_81, RobsFeet\_89, Onika\_81, Antares\_82
- Track 3 : Jayden\_82
- Track 4 : Ariadne\_91, Smarties\_91
- Track 5 : Nicole72\_87
- Track 6 : Metamorphoo\_83
- Track 7 : Honeyfin\_82, Hermeonysus\_82, Quhwah\_86, Shotgun\_81
- Track 8 : Megan\_88
- Track 9 : Tyumbra\_82
- Track 10 : Cinna\_80, MementoMori\_81
- Track 11 : Margaery\_78
- Track 12 : Matzah\_82
- Track 13 : Terij\_79
- Track 14 : Cressida\_82
- Track 15 : Kozie\_79

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

The start number called the most often in the published annotations is 11, it was called in 41 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antares\_82, Ariadne\_91, BrazzalePHS\_81, Busephilis\_81, ClearAsMud\_85, Cranjis\_83, CrazyRich\_80, Crisis\_83, EarickHC\_83, Fireman\_86, Ganandorf\_80, Gina\_87, Hermeonysus\_82, Honeyfin\_82, Jayden\_82, Jefe\_82, Jollipop\_83, KaiHaiDragon\_83, Kowalski\_81, Kozie\_79, LittleFortune\_83, Metamorphoo\_83, NoodlelyBoi\_82, Onika\_81, Paschalis\_82, Phorgeous\_82, Phrancesco\_82, PierreOrion\_81, PiperSansNom\_83, Piperis\_83, Pulchra\_84, Quhwah\_86, Ramiel05\_81, RobsFeet\_89, Savannah\_81, Scumberland\_84, Selwyn23\_83,

Shotgun\_81, Smarties\_91, Teamocil\_87, Terij\_79, Tyrumbra\_82, Yeti\_81,

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

- Margaery\_78,

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

- Cinna\_80, Cressida\_82, Matzah\_82, Megan\_88, MementoMori\_81, Nicole72\_87,

### Summary by start number:

Start 8:

- Found in 4 of 50 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 4 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cinna\_80 (EI), Cressida\_82 (EI), Matzah\_82 (EI), MementoMori\_81 (EI),

Start 9:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Margaery\_78 (EI),

Start 10:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megan\_88 (EC),

Start 11:

- Found in 44 of 50 ( 88.0% ) of genes in pham
- Manual Annotations of this start: 41 of 48
- Called 97.7% of time when present
- Phage (with cluster) where this start called: Antares\_82 (EC), Ariadne\_91 (EC), BrazzalePHS\_81 (EC), Busephilis\_81 (EC), ClearAsMud\_85 (EC), Cranjjs\_83 (EC), CrazyRich\_80 (EC), Crisis\_83 (EC), EarickHC\_83 (EC), Fireman\_86 (EC), Ganandorf\_80 (EC), Gina\_87 (EC), Hermeonysus\_82 (EC), Honeyfin\_82 (EC), Jayden\_82 (EC), Jefe\_82 (EC), Jollipop\_83 (EC), KaiHaiDragon\_83 (EC), Kowalski\_81 (EC), Kozi\_79 (EI), LittleFortune\_83 (EC), Metamorphoo\_83 (EC), NoodlelyBoi\_82 (EC), Onika\_81 (EC), Paschalis\_82 (EC), Phorgeous\_82 (EC), Phrancesco\_82 (EC), PierreOrion\_81 (EC), PiperSansNom\_83 (EC), Piperis\_83 (EC), Pulchra\_84 (EC), Quhwah\_86 (EC), Ramiel05\_81 (EC), RobsFeet\_89 (EC), Savannah\_81 (EC), Scumberland\_84 (EC), Selwyn23\_83 (EC), Shotgun\_81 (EC), Smarties\_91 (EC), Teamocil\_87 (EC), Terij\_79 (EI), Tyrumbra\_82 (EC), Yeti\_81 (EC),

Start 12:

- Found in 2 of 50 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Nicole72\_87 (EC),

### Summary by clusters:

There are 2 clusters represented in this pham: EI, EC,

Info for manual annotations of cluster EC:

- Start number 10 was manually annotated 1 time for cluster EC.
- Start number 11 was manually annotated 39 times for cluster EC.
- Start number 12 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EI:

- Start number 8 was manually annotated 4 times for cluster EI.
- Start number 9 was manually annotated 1 time for cluster EI.
- Start number 11 was manually annotated 2 times for cluster EI.

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

Gene: Antares\_82 Start: 48883, Stop: 49116, Start Num: 11

Candidate Starts for Antares\_82:

(Start: 11 @48883 has 41 MA's), (13, 48916), (19, 49039), (21, 49066),

Gene: Ariadne\_91 Start: 49718, Stop: 49951, Start Num: 11

Candidate Starts for Ariadne\_91:

(Start: 11 @49718 has 41 MA's), (13, 49751), (19, 49874), (21, 49901),

Gene: BrazzalePHS\_81 Start: 48683, Stop: 48916, Start Num: 11

Candidate Starts for BrazzalePHS\_81:

(Start: 11 @48683 has 41 MA's), (13, 48716), (19, 48839), (21, 48866),

Gene: Busephilis\_81 Start: 48590, Stop: 48823, Start Num: 11

Candidate Starts for Busephilis\_81:

(Start: 11 @48590 has 41 MA's), (13, 48623), (19, 48746), (21, 48773),

Gene: Cinna\_80 Start: 49555, Stop: 49815, Start Num: 8

Candidate Starts for Cinna\_80:

(Start: 8 @49555 has 4 MA's), (13, 49624), (18, 49732), (19, 49747), (20, 49765),

Gene: ClearAsMud\_85 Start: 48908, Stop: 49135, Start Num: 11

Candidate Starts for ClearAsMud\_85:

(Start: 11 @48908 has 41 MA's), (13, 48941), (17, 49025), (19, 49064), (21, 49091), (22, 49100),

Gene: Cranjis\_83 Start: 48870, Stop: 49103, Start Num: 11

Candidate Starts for Cranjis\_83:

(Start: 11 @48870 has 41 MA's), (13, 48903), (19, 49026), (21, 49053),

Gene: CrazyRich\_80 Start: 48380, Stop: 48607, Start Num: 11

Candidate Starts for CrazyRich\_80:

(Start: 11 @48380 has 41 MA's), (13, 48413), (17, 48497), (19, 48536), (21, 48563), (22, 48572),

Gene: Cressida\_82 Start: 49856, Stop: 50116, Start Num: 8

Candidate Starts for Cressida\_82:

(Start: 8 @49856 has 4 MA's), (13, 49925), (14, 49934), (18, 50033), (19, 50048), (20, 50066),

Gene: Crisis\_83 Start: 48826, Stop: 49059, Start Num: 11  
Candidate Starts for Crisis\_83:  
(Start: 11 @48826 has 41 MA's), (13, 48859), (19, 48982), (21, 49009),

Gene: EarickHC\_83 Start: 48748, Stop: 48981, Start Num: 11  
Candidate Starts for EarickHC\_83:  
(Start: 11 @48748 has 41 MA's), (13, 48781), (19, 48904), (21, 48931),

Gene: Fireman\_86 Start: 50140, Stop: 50367, Start Num: 11  
Candidate Starts for Fireman\_86:  
(Start: 11 @50140 has 41 MA's), (13, 50173), (19, 50296), (21, 50323),

Gene: Ganandorf\_80 Start: 48234, Stop: 48467, Start Num: 11  
Candidate Starts for Ganandorf\_80:  
(Start: 11 @48234 has 41 MA's), (13, 48267), (19, 48390), (21, 48417),

Gene: Gina\_87 Start: 48746, Stop: 48973, Start Num: 11  
Candidate Starts for Gina\_87:  
(Start: 11 @48746 has 41 MA's), (13, 48779), (19, 48902), (21, 48929),

Gene: Hermeonysus\_82 Start: 48591, Stop: 48824, Start Num: 11  
Candidate Starts for Hermeonysus\_82:  
(Start: 11 @48591 has 41 MA's), (19, 48747), (21, 48774),

Gene: Honeyfin\_82 Start: 48424, Stop: 48657, Start Num: 11  
Candidate Starts for Honeyfin\_82:  
(Start: 11 @48424 has 41 MA's), (19, 48580), (21, 48607),

Gene: Jayden\_82 Start: 48351, Stop: 48578, Start Num: 11  
Candidate Starts for Jayden\_82:  
(1, 48174), (6, 48306), (7, 48318), (Start: 11 @48351 has 41 MA's), (13, 48384), (19, 48507), (21, 48534), (22, 48543),

Gene: Jefe\_82 Start: 48646, Stop: 48879, Start Num: 11  
Candidate Starts for Jefe\_82:  
(Start: 11 @48646 has 41 MA's), (13, 48679), (19, 48802), (21, 48829),

Gene: Jollipop\_83 Start: 49011, Stop: 49244, Start Num: 11  
Candidate Starts for Jollipop\_83:  
(Start: 11 @49011 has 41 MA's), (13, 49044), (19, 49167), (21, 49194),

Gene: KaiHaiDragon\_83 Start: 48748, Stop: 48981, Start Num: 11  
Candidate Starts for KaiHaiDragon\_83:  
(Start: 11 @48748 has 41 MA's), (13, 48781), (19, 48904), (21, 48931),

Gene: Kowalski\_81 Start: 48678, Stop: 48911, Start Num: 11  
Candidate Starts for Kowalski\_81:  
(Start: 11 @48678 has 41 MA's), (13, 48711), (19, 48834), (21, 48861),

Gene: Kozie\_79 Start: 49382, Stop: 49612, Start Num: 11  
Candidate Starts for Kozie\_79:  
(Start: 11 @49382 has 41 MA's), (14, 49427),

Gene: LittleFortune\_83 Start: 48667, Stop: 48894, Start Num: 11  
Candidate Starts for LittleFortune\_83:  
(Start: 11 @48667 has 41 MA's), (13, 48700), (17, 48784), (19, 48823), (21, 48850), (22, 48859),

Gene: Margaery\_78 Start: 49302, Stop: 49565, Start Num: 9  
Candidate Starts for Margaery\_78:  
(Start: 9 @49302 has 1 MA's), (Start: 11 @49332 has 41 MA's), (14, 49377), (16, 49449), (17, 49452),

Gene: Matzah\_82 Start: 49610, Stop: 49870, Start Num: 8  
Candidate Starts for Matzah\_82:  
(4, 49544), (Start: 8 @49610 has 4 MA's), (13, 49679), (18, 49787), (19, 49802), (20, 49820),

Gene: Megan\_88 Start: 54259, Stop: 54507, Start Num: 10  
Candidate Starts for Megan\_88:  
(Start: 10 @54259 has 1 MA's), (Start: 12 @54307 has 1 MA's), (14, 54328), (15, 54355), (17, 54403),  
(20, 54460),

Gene: MementoMori\_81 Start: 49295, Stop: 49555, Start Num: 8  
Candidate Starts for MementoMori\_81:  
(Start: 8 @49295 has 4 MA's), (13, 49364), (18, 49472), (19, 49487), (20, 49505),

Gene: Metamorphoo\_83 Start: 49433, Stop: 49660, Start Num: 11  
Candidate Starts for Metamorphoo\_83:  
(Start: 11 @49433 has 41 MA's), (13, 49466), (19, 49589), (21, 49616), (22, 49625),

Gene: Nicole72\_87 Start: 54338, Stop: 54535, Start Num: 12  
Candidate Starts for Nicole72\_87:  
(2, 54191), (3, 54203), (5, 54239), (Start: 12 @54338 has 1 MA's), (15, 54386), (20, 54491),

Gene: NoodlelyBoi\_82 Start: 49013, Stop: 49240, Start Num: 11  
Candidate Starts for NoodlelyBoi\_82:  
(Start: 11 @49013 has 41 MA's), (13, 49046), (17, 49130), (19, 49169), (21, 49196), (22, 49205),

Gene: Onika\_81 Start: 48649, Stop: 48882, Start Num: 11  
Candidate Starts for Onika\_81:  
(Start: 11 @48649 has 41 MA's), (13, 48682), (19, 48805), (21, 48832),

Gene: Paschalis\_82 Start: 48676, Stop: 48909, Start Num: 11  
Candidate Starts for Paschalis\_82:  
(Start: 11 @48676 has 41 MA's), (13, 48709), (19, 48832), (21, 48859),

Gene: Phorgeous\_82 Start: 48465, Stop: 48698, Start Num: 11  
Candidate Starts for Phorgeous\_82:  
(Start: 11 @48465 has 41 MA's), (13, 48498), (19, 48621), (21, 48648),

Gene: Phrancesco\_82 Start: 48776, Stop: 49009, Start Num: 11  
Candidate Starts for Phrancesco\_82:  
(Start: 11 @48776 has 41 MA's), (13, 48809), (19, 48932), (21, 48959),

Gene: PierreOrion\_81 Start: 48485, Stop: 48718, Start Num: 11  
Candidate Starts for PierreOrion\_81:  
(Start: 11 @48485 has 41 MA's), (13, 48518), (19, 48641), (21, 48668),

Gene: PiperSansNom\_83 Start: 48985, Stop: 49212, Start Num: 11  
Candidate Starts for PiperSansNom\_83:  
(Start: 11 @48985 has 41 MA's), (13, 49018), (17, 49102), (19, 49141), (21, 49168), (22, 49177),

Gene: Piperis\_83 Start: 48584, Stop: 48817, Start Num: 11  
Candidate Starts for Piperis\_83:  
(Start: 11 @48584 has 41 MA's), (13, 48617), (19, 48740), (21, 48767),

Gene: Pulchra\_84 Start: 49151, Stop: 49384, Start Num: 11  
Candidate Starts for Pulchra\_84:  
(Start: 11 @49151 has 41 MA's), (13, 49184), (19, 49307), (21, 49334),

Gene: Quhwah\_86 Start: 49305, Stop: 49538, Start Num: 11  
Candidate Starts for Quhwah\_86:  
(Start: 11 @49305 has 41 MA's), (19, 49461), (21, 49488),

Gene: Ramiel05\_81 Start: 48678, Stop: 48911, Start Num: 11  
Candidate Starts for Ramiel05\_81:  
(Start: 11 @48678 has 41 MA's), (13, 48711), (19, 48834), (21, 48861),

Gene: RobsFeet\_89 Start: 49750, Stop: 49977, Start Num: 11  
Candidate Starts for RobsFeet\_89:  
(Start: 11 @49750 has 41 MA's), (13, 49783), (19, 49906), (21, 49933),

Gene: Savannah\_81 Start: 48870, Stop: 49103, Start Num: 11  
Candidate Starts for Savannah\_81:  
(Start: 11 @48870 has 41 MA's), (13, 48903), (19, 49026), (21, 49053),

Gene: Scumberland\_84 Start: 48924, Stop: 49157, Start Num: 11  
Candidate Starts for Scumberland\_84:  
(Start: 11 @48924 has 41 MA's), (13, 48957), (19, 49080), (21, 49107),

Gene: Selwyn23\_83 Start: 48809, Stop: 49042, Start Num: 11  
Candidate Starts for Selwyn23\_83:  
(Start: 11 @48809 has 41 MA's), (13, 48842), (19, 48965), (21, 48992),

Gene: Shotgun\_81 Start: 48180, Stop: 48413, Start Num: 11  
Candidate Starts for Shotgun\_81:  
(Start: 11 @48180 has 41 MA's), (19, 48336), (21, 48363),

Gene: Smarties\_91 Start: 49715, Stop: 49948, Start Num: 11  
Candidate Starts for Smarties\_91:  
(Start: 11 @49715 has 41 MA's), (13, 49748), (19, 49871), (21, 49898),

Gene: Teamocil\_87 Start: 48839, Stop: 49066, Start Num: 11  
Candidate Starts for Teamocil\_87:  
(Start: 11 @48839 has 41 MA's), (13, 48872), (19, 48995), (21, 49022),

Gene: Terij\_79 Start: 48974, Stop: 49204, Start Num: 11  
Candidate Starts for Terij\_79:  
(Start: 11 @48974 has 41 MA's), (14, 49019),

Gene: Tyrumbra\_82 Start: 49354, Stop: 49581, Start Num: 11

Candidate Starts for Tyrumbra\_82:

(Start: 11 @49354 has 41 MA's), (19, 49510), (21, 49537), (22, 49546),

Gene: Yeti\_81 Start: 48206, Stop: 48439, Start Num: 11

Candidate Starts for Yeti\_81:

(Start: 11 @48206 has 41 MA's), (13, 48239), (19, 48362), (21, 48389),