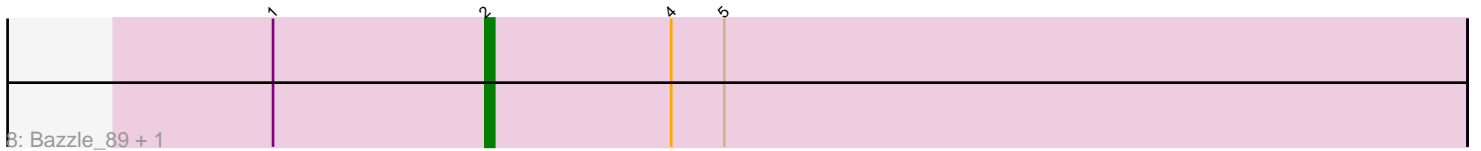
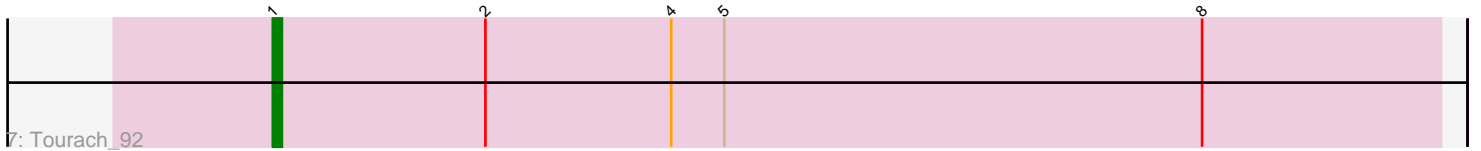
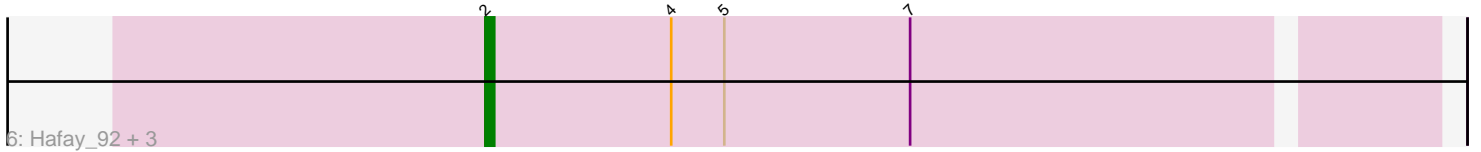
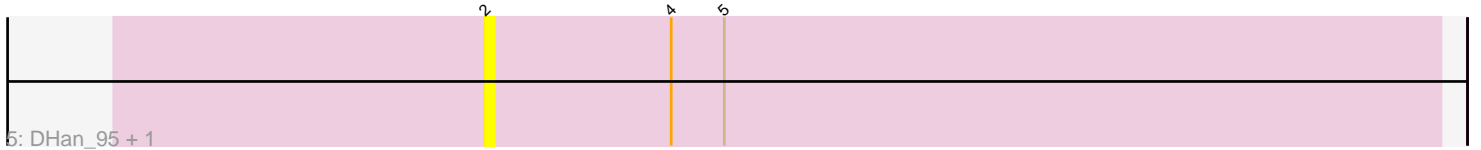
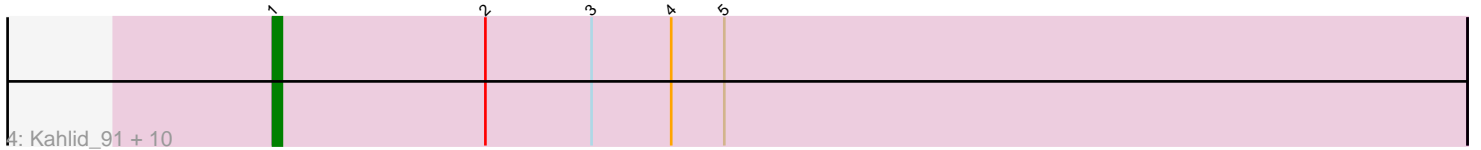
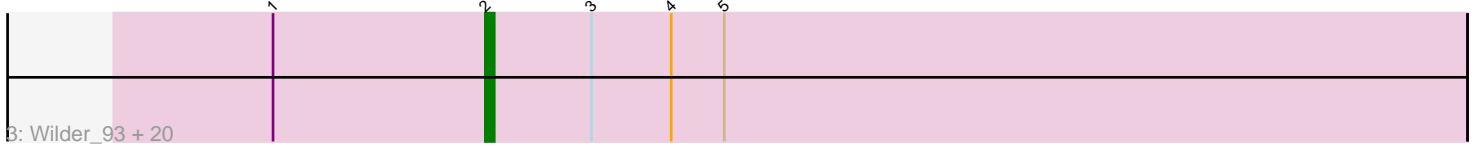
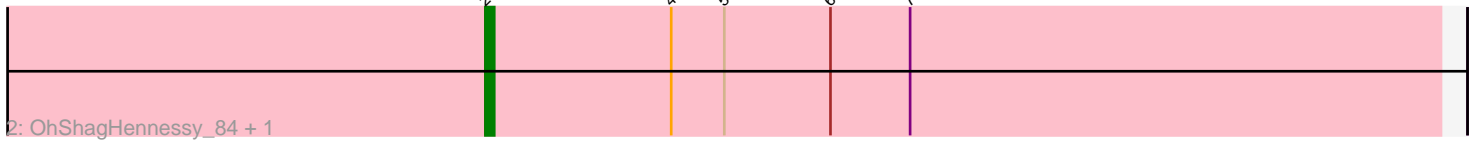
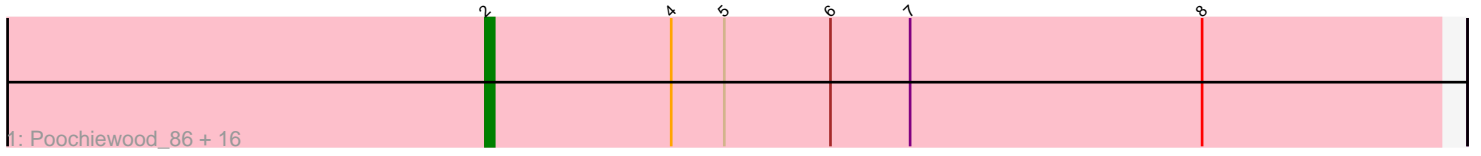


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 301395 Report

This analysis was run 06/08/26 on database version 649.

Pham number 301395 has 62 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Poochiewood\_86, AvadaKedavra\_88, CicholasNage\_85, Acquire49\_88, UPIE\_87, Wamburgxpress\_87, Halena\_85, Wyatt2\_89, MAckerman\_86, DirkDirk\_85, JoeDirt\_89, LeBron\_87, Rose5\_89, Zaria\_88, Enceladus\_85, Tyson\_89, Calm\_89
- Track 2 : OhShagHennessy\_84, Appletree2\_87
- Track 3 : Wilder\_93, Netyap\_91, Rumpelstiltskin\_88, MkaliMitinis3\_94, Gabriela\_92, DrSeegs\_91, Breezona\_92, Lewan\_93, Underpass\_84, Zakai\_93, BigCheese\_92, Loadrie\_91, Nicholasp3\_92, LilDestine\_90, Winky\_92, Gardann\_92, Finemlucis\_93, Crossroads\_92, Vetrix\_90, Faith1\_92, BobsGarage\_91
- Track 4 : Kahlid\_91, Rossetti\_92, GuuelaD\_89, Wigglewiggles\_92, Itos\_92, Lynnae\_93, SoJulia\_94, Miley16\_92, Sarshaun\_93, Soap141\_92, OverPar\_94
- Track 5 : DHan\_95, ZhongYanYuan\_89
- Track 6 : Hafay\_92, Claus\_90, DanBing\_91, Baoshan\_92
- Track 7 : Tourach\_92
- Track 8 : Bazzle\_89, Archie\_89
- Track 9 : Kropertea\_88
- Track 10 : Bromden\_92

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

The start number called the most often in the published annotations is 2, it was called in 45 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49\_88, Appletree2\_87, Archie\_89, AvadaKedavra\_88, Baoshan\_92, Bazzle\_89, BigCheese\_92, BobsGarage\_91, Breezona\_92, Bromden\_92, Calm\_89, CicholasNage\_85, Claus\_90, Crossroads\_92, DHan\_95, DanBing\_91, DirkDirk\_85, DrSeegs\_91, Enceladus\_85, Faith1\_92, Finemlucis\_93, Gabriela\_92, Gardann\_92, Hafay\_92, Halena\_85, JoeDirt\_89, Kropertea\_88, LeBron\_87, Lewan\_93, LilDestine\_90, Loadrie\_91, MAckerman\_86, MkaliMitinis3\_94, Netyap\_91, Nicholasp3\_92, OhShagHennessy\_84, Poochiewood\_86, Rose5\_89, Rumpelstiltskin\_88, Tyson\_89, UPIE\_87, Underpass\_84, Vetrix\_90, Wamburgxpress\_87, Wilder\_93, Winky\_92, Wyatt2\_89, Zakai\_93, Zaria\_88, ZhongYanYuan\_89,

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

- GuuelaD\_89, Itos\_92, Kahlid\_91, Lynnae\_93, Miley16\_92, OverPar\_94, Rossetti\_92, Sarshaun\_93, SoJulia\_94, Soap141\_92, Tourach\_92, Wigglewiggle\_92,

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

- 

### Summary by start number:

Start 1:

- Found in 35 of 62 ( 56.5% ) of genes in pham
- Manual Annotations of this start: 6 of 51
- Called 34.3% of time when present
- Phage (with cluster) where this start called: GuuelaD\_89 (L2), Itos\_92 (L2), Kahlid\_91 (L2), Lynnae\_93 (L2), Miley16\_92 (L2), OverPar\_94 (L2), Rossetti\_92 (L2), Sarshaun\_93 (L2), SoJulia\_94 (L2), Soap141\_92 (L2), Tourach\_92 (L2), Wigglewiggle\_92 (L2),

Start 2:

- Found in 62 of 62 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 45 of 51
- Called 80.6% of time when present
- Phage (with cluster) where this start called: Acquire49\_88 (L1), Appletree2\_87 (L1), Archie\_89 (L2), AvadaKedavra\_88 (L1), Baoshan\_92 (L2), Bazzle\_89 (L2), BigCheese\_92 (L2), BobsGarage\_91 (L2), Breezona\_92 (L2), Bromden\_92 (L4), Calm\_89 (L1), CicholasNage\_85 (L1), Claus\_90 (L2), Crossroads\_92 (L2), DHan\_95 (L2), DanBing\_91 (L2), DirkDirk\_85 (L1), DrSeegs\_91 (L2), Enceladus\_85 (L1), Faith1\_92 (L2), Finemlucis\_93 (L2), Gabriela\_92 (L2), Gardann\_92 (L2), Hafay\_92 (L2), Halena\_85 (L1), JoeDirt\_89 (L1), Kropertea\_88 (L4), LeBron\_87 (L1), Lewan\_93 (L2), LilDestine\_90 (L2), Loadrie\_91 (L2), MAckerman\_86 (L1), MkaliMitinis3\_94 (L2), Netyap\_91 (L2), Nicholasp3\_92 (L2), OhShagHennessy\_84 (L1), Poochiewood\_86 (L1), Rose5\_89 (L1), Rumpelstiltskin\_88 (L2), Tyson\_89 (L1), UPIE\_87 (L1), Underpass\_84 (L2), Vetrix\_90 (L2), Wamburgrxpress\_87 (L1), Wilder\_93 (L2), Winky\_92 (L2), Wyatt2\_89 (L1), Zakai\_93 (L2), Zaria\_88 (L1), ZhongYanYuan\_89 (L2),

### Summary by clusters:

There are 3 clusters represented in this pham: L4, L2, L1,

Info for manual annotations of cluster L1:

- Start number 2 was manually annotated 18 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 1 was manually annotated 6 times for cluster L2.
- Start number 2 was manually annotated 25 times for cluster L2.

Info for manual annotations of cluster L4:

- Start number 2 was manually annotated 2 times for cluster L4.

**Gene Information:**

Gene: Acquire49\_88 Start: 56636, Stop: 56743, Start Num: 2

Candidate Starts for Acquire49\_88:

(Start: 2 @56636 has 45 MA's), (4, 56657), (5, 56663), (6, 56675), (7, 56684), (8, 56717),

Gene: Appletree2\_87 Start: 56360, Stop: 56467, Start Num: 2

Candidate Starts for Appletree2\_87:

(Start: 2 @56360 has 45 MA's), (4, 56381), (5, 56387), (6, 56399), (7, 56408),

Gene: Archie\_89 Start: 58324, Stop: 58434, Start Num: 2

Candidate Starts for Archie\_89:

(Start: 1 @58300 has 6 MA's), (Start: 2 @58324 has 45 MA's), (4, 58345), (5, 58351),

Gene: AvadaKedavra\_88 Start: 56712, Stop: 56819, Start Num: 2

Candidate Starts for AvadaKedavra\_88:

(Start: 2 @56712 has 45 MA's), (4, 56733), (5, 56739), (6, 56751), (7, 56760), (8, 56793),

Gene: Baoshan\_92 Start: 58996, Stop: 59100, Start Num: 2

Candidate Starts for Baoshan\_92:

(Start: 2 @58996 has 45 MA's), (4, 59017), (5, 59023), (7, 59044),

Gene: Bazzle\_89 Start: 58880, Stop: 58990, Start Num: 2

Candidate Starts for Bazzle\_89:

(Start: 1 @58856 has 6 MA's), (Start: 2 @58880 has 45 MA's), (4, 58901), (5, 58907),

Gene: BigCheese\_92 Start: 59090, Stop: 59200, Start Num: 2

Candidate Starts for BigCheese\_92:

(Start: 1 @59066 has 6 MA's), (Start: 2 @59090 has 45 MA's), (3, 59102), (4, 59111), (5, 59117),

Gene: BobsGarage\_91 Start: 59090, Stop: 59200, Start Num: 2

Candidate Starts for BobsGarage\_91:

(Start: 1 @59066 has 6 MA's), (Start: 2 @59090 has 45 MA's), (3, 59102), (4, 59111), (5, 59117),

Gene: Breezona\_92 Start: 59090, Stop: 59200, Start Num: 2

Candidate Starts for Breezona\_92:

(Start: 1 @59066 has 6 MA's), (Start: 2 @59090 has 45 MA's), (3, 59102), (4, 59111), (5, 59117),

Gene: Bromden\_92 Start: 59460, Stop: 59564, Start Num: 2

Candidate Starts for Bromden\_92:

(Start: 2 @59460 has 45 MA's), (5, 59487), (6, 59499),

Gene: Calm\_89 Start: 56611, Stop: 56718, Start Num: 2

Candidate Starts for Calm\_89:

(Start: 2 @56611 has 45 MA's), (4, 56632), (5, 56638), (6, 56650), (7, 56659), (8, 56692),

Gene: CicholasNage\_85 Start: 56300, Stop: 56407, Start Num: 2

Candidate Starts for CicholasNage\_85:

(Start: 2 @56300 has 45 MA's), (4, 56321), (5, 56327), (6, 56339), (7, 56348), (8, 56381),

Gene: Claus\_90 Start: 58647, Stop: 58751, Start Num: 2

Candidate Starts for Claus\_90:

(Start: 2 @58647 has 45 MA's), (4, 58668), (5, 58674), (7, 58695),

Gene: Crossroads\_92 Start: 58802, Stop: 58912, Start Num: 2  
Candidate Starts for Crossroads\_92:  
(Start: 1 @58778 has 6 MA's), (Start: 2 @58802 has 45 MA's), (3, 58814), (4, 58823), (5, 58829),

Gene: DHan\_95 Start: 59026, Stop: 59133, Start Num: 2  
Candidate Starts for DHan\_95:  
(Start: 2 @59026 has 45 MA's), (4, 59047), (5, 59053),

Gene: DanBing\_91 Start: 58722, Stop: 58826, Start Num: 2  
Candidate Starts for DanBing\_91:  
(Start: 2 @58722 has 45 MA's), (4, 58743), (5, 58749), (7, 58770),

Gene: DirkDirk\_85 Start: 55940, Stop: 56047, Start Num: 2  
Candidate Starts for DirkDirk\_85:  
(Start: 2 @55940 has 45 MA's), (4, 55961), (5, 55967), (6, 55979), (7, 55988), (8, 56021),

Gene: DrSeegs\_91 Start: 59090, Stop: 59200, Start Num: 2  
Candidate Starts for DrSeegs\_91:  
(Start: 1 @59066 has 6 MA's), (Start: 2 @59090 has 45 MA's), (3, 59102), (4, 59111), (5, 59117),

Gene: Enceladus\_85 Start: 56641, Stop: 56748, Start Num: 2  
Candidate Starts for Enceladus\_85:  
(Start: 2 @56641 has 45 MA's), (4, 56662), (5, 56668), (6, 56680), (7, 56689), (8, 56722),

Gene: Faith1\_92 Start: 58727, Stop: 58837, Start Num: 2  
Candidate Starts for Faith1\_92:  
(Start: 1 @58703 has 6 MA's), (Start: 2 @58727 has 45 MA's), (3, 58739), (4, 58748), (5, 58754),

Gene: Finemlucis\_93 Start: 59858, Stop: 59962, Start Num: 2  
Candidate Starts for Finemlucis\_93:  
(Start: 1 @59834 has 6 MA's), (Start: 2 @59858 has 45 MA's), (3, 59870), (4, 59879), (5, 59885),

Gene: Gabriela\_92 Start: 58073, Stop: 58183, Start Num: 2  
Candidate Starts for Gabriela\_92:  
(Start: 1 @58049 has 6 MA's), (Start: 2 @58073 has 45 MA's), (3, 58085), (4, 58094), (5, 58100),

Gene: Gardann\_92 Start: 58574, Stop: 58684, Start Num: 2  
Candidate Starts for Gardann\_92:  
(Start: 1 @58550 has 6 MA's), (Start: 2 @58574 has 45 MA's), (3, 58586), (4, 58595), (5, 58601),

Gene: GuuelaD\_89 Start: 58662, Stop: 58796, Start Num: 1  
Candidate Starts for GuuelaD\_89:  
(Start: 1 @58662 has 6 MA's), (Start: 2 @58686 has 45 MA's), (3, 58698), (4, 58707), (5, 58713),

Gene: Hafay\_92 Start: 58642, Stop: 58746, Start Num: 2  
Candidate Starts for Hafay\_92:  
(Start: 2 @58642 has 45 MA's), (4, 58663), (5, 58669), (7, 58690),

Gene: Halena\_85 Start: 55527, Stop: 55634, Start Num: 2  
Candidate Starts for Halena\_85:  
(Start: 2 @55527 has 45 MA's), (4, 55548), (5, 55554), (6, 55566), (7, 55575), (8, 55608),

Gene: Itos\_92 Start: 57609, Stop: 57743, Start Num: 1  
Candidate Starts for Itos\_92:  
(Start: 1 @57609 has 6 MA's), (Start: 2 @57633 has 45 MA's), (3, 57645), (4, 57654), (5, 57660),

Gene: JoeDirt\_89 Start: 57202, Stop: 57309, Start Num: 2  
Candidate Starts for JoeDirt\_89:  
(Start: 2 @57202 has 45 MA's), (4, 57223), (5, 57229), (6, 57241), (7, 57250), (8, 57283),

Gene: Kahlid\_91 Start: 58468, Stop: 58602, Start Num: 1  
Candidate Starts for Kahlid\_91:  
(Start: 1 @58468 has 6 MA's), (Start: 2 @58492 has 45 MA's), (3, 58504), (4, 58513), (5, 58519),

Gene: Kropertea\_88 Start: 57855, Stop: 57962, Start Num: 2  
Candidate Starts for Kropertea\_88:  
(Start: 2 @57855 has 45 MA's), (5, 57882),

Gene: LeBron\_87 Start: 55870, Stop: 55977, Start Num: 2  
Candidate Starts for LeBron\_87:  
(Start: 2 @55870 has 45 MA's), (4, 55891), (5, 55897), (6, 55909), (7, 55918), (8, 55951),

Gene: Lewan\_93 Start: 58726, Stop: 58836, Start Num: 2  
Candidate Starts for Lewan\_93:  
(Start: 1 @58702 has 6 MA's), (Start: 2 @58726 has 45 MA's), (3, 58738), (4, 58747), (5, 58753),

Gene: LilDestine\_90 Start: 58403, Stop: 58513, Start Num: 2  
Candidate Starts for LilDestine\_90:  
(Start: 1 @58379 has 6 MA's), (Start: 2 @58403 has 45 MA's), (3, 58415), (4, 58424), (5, 58430),

Gene: Loadrie\_91 Start: 58894, Stop: 59004, Start Num: 2  
Candidate Starts for Loadrie\_91:  
(Start: 1 @58870 has 6 MA's), (Start: 2 @58894 has 45 MA's), (3, 58906), (4, 58915), (5, 58921),

Gene: Lynnae\_93 Start: 58480, Stop: 58614, Start Num: 1  
Candidate Starts for Lynnae\_93:  
(Start: 1 @58480 has 6 MA's), (Start: 2 @58504 has 45 MA's), (3, 58516), (4, 58525), (5, 58531),

Gene: MAckerman\_86 Start: 55520, Stop: 55627, Start Num: 2  
Candidate Starts for MAckerman\_86:  
(Start: 2 @55520 has 45 MA's), (4, 55541), (5, 55547), (6, 55559), (7, 55568), (8, 55601),

Gene: Miley16\_92 Start: 59066, Stop: 59200, Start Num: 1  
Candidate Starts for Miley16\_92:  
(Start: 1 @59066 has 6 MA's), (Start: 2 @59090 has 45 MA's), (3, 59102), (4, 59111), (5, 59117),

Gene: MkaliMitinis3\_94 Start: 58857, Stop: 58967, Start Num: 2  
Candidate Starts for MkaliMitinis3\_94:  
(Start: 1 @58833 has 6 MA's), (Start: 2 @58857 has 45 MA's), (3, 58869), (4, 58878), (5, 58884),

Gene: Netyap\_91 Start: 58728, Stop: 58838, Start Num: 2  
Candidate Starts for Netyap\_91:  
(Start: 1 @58704 has 6 MA's), (Start: 2 @58728 has 45 MA's), (3, 58740), (4, 58749), (5, 58755),

Gene: Nicholasp3\_92 Start: 58574, Stop: 58684, Start Num: 2

Candidate Starts for Nicholasp3\_92:  
(Start: 1 @58550 has 6 MA's), (Start: 2 @58574 has 45 MA's), (3, 58586), (4, 58595), (5, 58601),

Gene: OhShagHennessy\_84 Start: 55777, Stop: 55884, Start Num: 2  
Candidate Starts for OhShagHennessy\_84:  
(Start: 2 @55777 has 45 MA's), (4, 55798), (5, 55804), (6, 55816), (7, 55825),

Gene: OverPar\_94 Start: 58870, Stop: 59004, Start Num: 1  
Candidate Starts for OverPar\_94:  
(Start: 1 @58870 has 6 MA's), (Start: 2 @58894 has 45 MA's), (3, 58906), (4, 58915), (5, 58921),

Gene: Poochiewood\_86 Start: 57210, Stop: 57317, Start Num: 2  
Candidate Starts for Poochiewood\_86:  
(Start: 2 @57210 has 45 MA's), (4, 57231), (5, 57237), (6, 57249), (7, 57258), (8, 57291),

Gene: Rose5\_89 Start: 57044, Stop: 57151, Start Num: 2  
Candidate Starts for Rose5\_89:  
(Start: 2 @57044 has 45 MA's), (4, 57065), (5, 57071), (6, 57083), (7, 57092), (8, 57125),

Gene: Rossetti\_92 Start: 58869, Stop: 59003, Start Num: 1  
Candidate Starts for Rossetti\_92:  
(Start: 1 @58869 has 6 MA's), (Start: 2 @58893 has 45 MA's), (3, 58905), (4, 58914), (5, 58920),

Gene: Rumpelstiltskin\_88 Start: 58367, Stop: 58477, Start Num: 2  
Candidate Starts for Rumpelstiltskin\_88:  
(Start: 1 @58343 has 6 MA's), (Start: 2 @58367 has 45 MA's), (3, 58379), (4, 58388), (5, 58394),

Gene: Sarshaun\_93 Start: 59461, Stop: 59595, Start Num: 1  
Candidate Starts for Sarshaun\_93:  
(Start: 1 @59461 has 6 MA's), (Start: 2 @59485 has 45 MA's), (3, 59497), (4, 59506), (5, 59512),

Gene: SoJulia\_94 Start: 60226, Stop: 60360, Start Num: 1  
Candidate Starts for SoJulia\_94:  
(Start: 1 @60226 has 6 MA's), (Start: 2 @60250 has 45 MA's), (3, 60262), (4, 60271), (5, 60277),

Gene: Soap141\_92 Start: 59461, Stop: 59595, Start Num: 1  
Candidate Starts for Soap141\_92:  
(Start: 1 @59461 has 6 MA's), (Start: 2 @59485 has 45 MA's), (3, 59497), (4, 59506), (5, 59512),

Gene: Tourach\_92 Start: 59457, Stop: 59588, Start Num: 1  
Candidate Starts for Tourach\_92:  
(Start: 1 @59457 has 6 MA's), (Start: 2 @59481 has 45 MA's), (4, 59502), (5, 59508), (8, 59562),

Gene: Tyson\_89 Start: 56973, Stop: 57080, Start Num: 2  
Candidate Starts for Tyson\_89:  
(Start: 2 @56973 has 45 MA's), (4, 56994), (5, 57000), (6, 57012), (7, 57021), (8, 57054),

Gene: UPIE\_87 Start: 56569, Stop: 56676, Start Num: 2  
Candidate Starts for UPIE\_87:  
(Start: 2 @56569 has 45 MA's), (4, 56590), (5, 56596), (6, 56608), (7, 56617), (8, 56650),

Gene: Underpass\_84 Start: 53610, Stop: 53720, Start Num: 2  
Candidate Starts for Underpass\_84:

(Start: 1 @53586 has 6 MA's), (Start: 2 @53610 has 45 MA's), (3, 53622), (4, 53631), (5, 53637),

Gene: Vetric\_90 Start: 58348, Stop: 58458, Start Num: 2

Candidate Starts for Vetric\_90:

(Start: 1 @58324 has 6 MA's), (Start: 2 @58348 has 45 MA's), (3, 58360), (4, 58369), (5, 58375),

Gene: Wamburgrxpress\_87 Start: 56661, Stop: 56768, Start Num: 2

Candidate Starts for Wamburgrxpress\_87:

(Start: 2 @56661 has 45 MA's), (4, 56682), (5, 56688), (6, 56700), (7, 56709), (8, 56742),

Gene: Wigglewigggle\_92 Start: 58626, Stop: 58760, Start Num: 1

Candidate Starts for Wigglewigggle\_92:

(Start: 1 @58626 has 6 MA's), (Start: 2 @58650 has 45 MA's), (3, 58662), (4, 58671), (5, 58677),

Gene: Wilder\_93 Start: 58492, Stop: 58602, Start Num: 2

Candidate Starts for Wilder\_93:

(Start: 1 @58468 has 6 MA's), (Start: 2 @58492 has 45 MA's), (3, 58504), (4, 58513), (5, 58519),

Gene: Winky\_92 Start: 59090, Stop: 59200, Start Num: 2

Candidate Starts for Winky\_92:

(Start: 1 @59066 has 6 MA's), (Start: 2 @59090 has 45 MA's), (3, 59102), (4, 59111), (5, 59117),

Gene: Wyatt2\_89 Start: 56968, Stop: 57075, Start Num: 2

Candidate Starts for Wyatt2\_89:

(Start: 2 @56968 has 45 MA's), (4, 56989), (5, 56995), (6, 57007), (7, 57016), (8, 57049),

Gene: Zakai\_93 Start: 59135, Stop: 59245, Start Num: 2

Candidate Starts for Zakai\_93:

(Start: 1 @59111 has 6 MA's), (Start: 2 @59135 has 45 MA's), (3, 59147), (4, 59156), (5, 59162),

Gene: Zaria\_88 Start: 56076, Stop: 56183, Start Num: 2

Candidate Starts for Zaria\_88:

(Start: 2 @56076 has 45 MA's), (4, 56097), (5, 56103), (6, 56115), (7, 56124), (8, 56157),

Gene: ZhongYanYuan\_89 Start: 58546, Stop: 58653, Start Num: 2

Candidate Starts for ZhongYanYuan\_89:

(Start: 2 @58546 has 45 MA's), (4, 58567), (5, 58573),