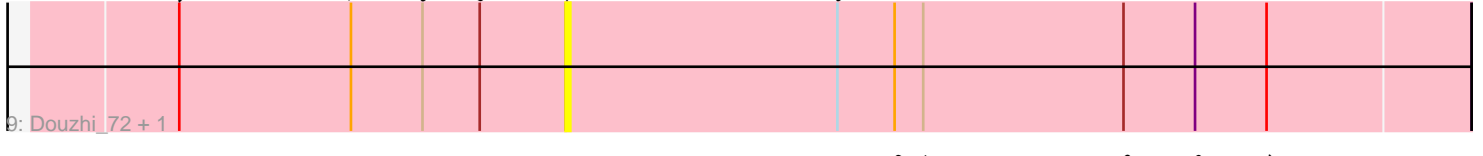
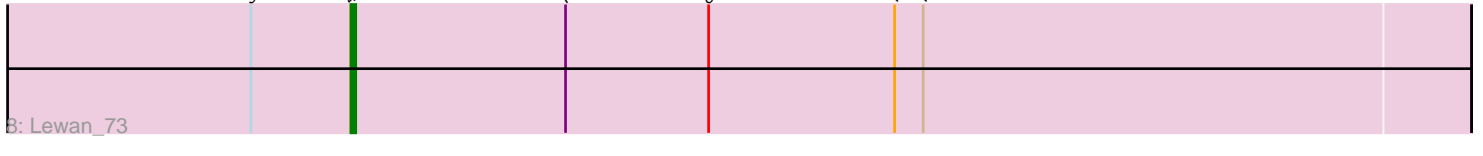
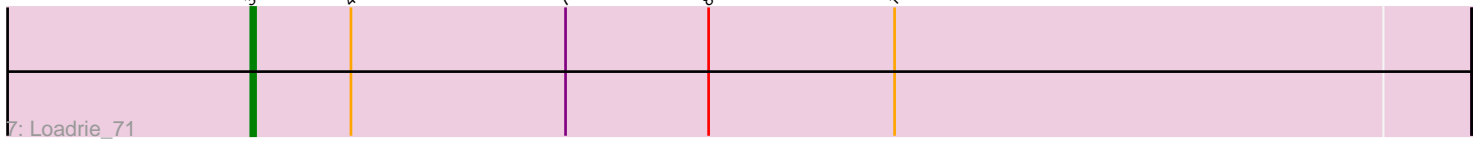
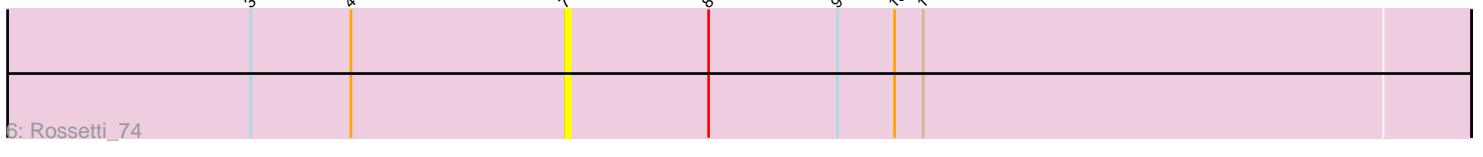
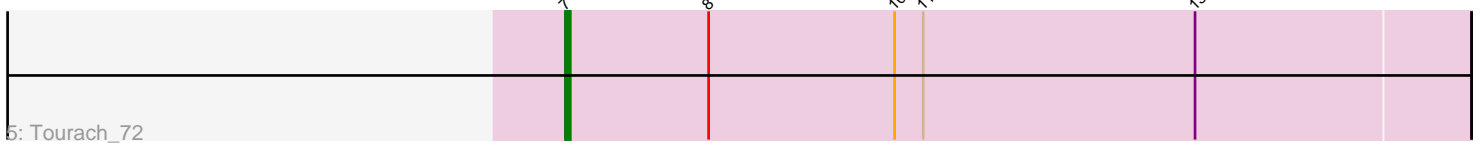
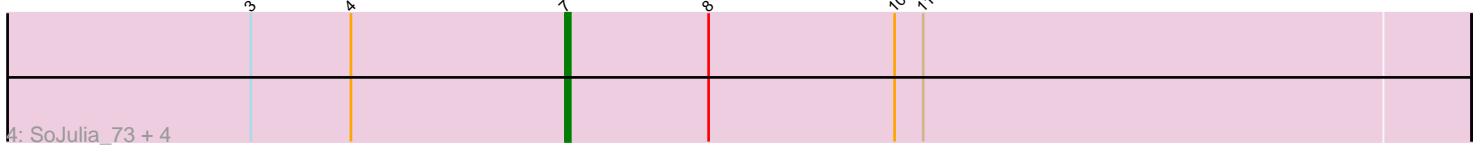
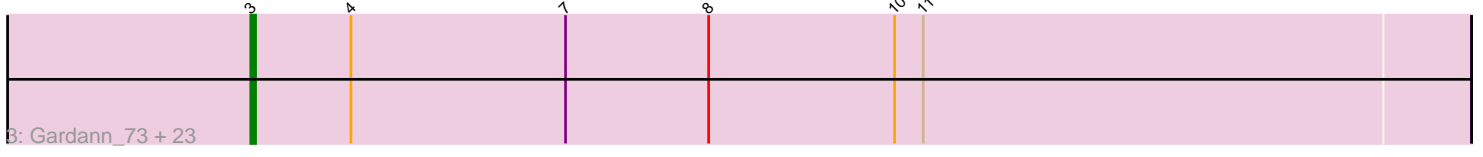
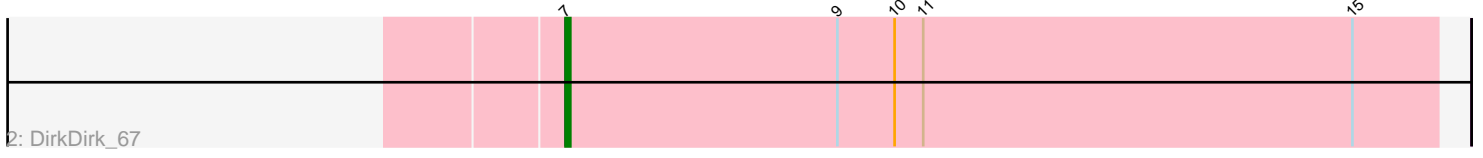
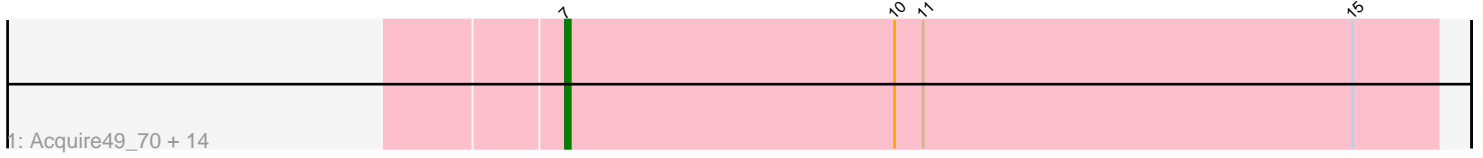


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 311674 Report

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

Pham number 311674 has 53 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Acquire49\_70, JoeDirt\_70, Calm\_72, Appletree2\_69, Halena\_68, MAckerman\_68, Zaria\_71, OhShagHennessy\_68, Silverleaf\_70, Rose5\_70, AvadaKedavra\_70, Tyson\_71, Poochiewood\_69, Enceladus\_67, Wyatt2\_71
- Track 2 : DirkDirk\_67
- Track 3 : Gardann\_73, Miley16\_72, Wigglewiggles\_72, Soap141\_72, DrSeegs\_72, Gabriela\_70, OverPar\_73, Zakai\_73, Itos\_71, LilDestine\_72, Underpass\_63, Rumpelstiltskin\_71, Breezona\_72, BigCheese\_72, Winky\_72, GuuelaD\_70, Netyap\_73, Nicholasp3\_72, Kahlid\_72, Faith1\_72, MkaliMitinis3\_73, Wilder\_73, Sarshaun\_73, BobsGarage\_72
- Track 4 : SoJulia\_73, DHan\_76, Hafay\_74, Crossroads\_72, Vetrix\_72
- Track 5 : Tourach\_72
- Track 6 : Rossetti\_74
- Track 7 : Loadrie\_71
- Track 8 : Lewan\_73
- Track 9 : Douzhi\_72, PYPDinur\_70
- Track 10 : Sheng711\_72, BrainDrainer\_72

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

The start number called the most often in the published annotations is 3, it was called in 23 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BigCheese\_72, BobsGarage\_72, Breezona\_72, DrSeegs\_72, Faith1\_72, Gabriela\_70, Gardann\_73, GuuelaD\_70, Itos\_71, Kahlid\_72, LilDestine\_72, Loadrie\_71, Miley16\_72, MkaliMitinis3\_73, Netyap\_73, Nicholasp3\_72, OverPar\_73, Rumpelstiltskin\_71, Sarshaun\_73, Soap141\_72, Underpass\_63, Wigglewiggles\_72, Wilder\_73, Winky\_72, Zakai\_73,

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

- Crossroads\_72, DHan\_76, Hafay\_74, Lewan\_73, Rossetti\_74, SoJulia\_73, Vetrix\_72,

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

- Acquire49\_70, Appletree2\_69, AvadaKedavra\_70, BrainDrainer\_72, Calm\_72, DirkDirk\_67, Douzhi\_72, Enceladus\_67, Halena\_68, JoeDirt\_70, MAckerman\_68, OhShagHennessy\_68, PYPDinur\_70, Poochiewood\_69, Rose5\_70, Sheng711\_72, Silverleaf\_70, Tourach\_72, Tyson\_71, Wyatt2\_71, Zaria\_71,

### Summary by start number:

#### Start 3:

- Found in 32 of 53 ( 60.4% ) of genes in pham
- Manual Annotations of this start: 23 of 42
- Called 78.1% of time when present
- Phage (with cluster) where this start called: BigCheese\_72 (L2), BobsGarage\_72 (L2), Breezona\_72 (L2), DrSeegs\_72 (L2), Faith1\_72 (L2), Gabriela\_70 (L2), Gardann\_73 (L2), GuuelaD\_70 (L2), Itos\_71 (L2), Kahlid\_72 (L2), LilDestine\_72 (L2), Loadrie\_71 (L2), Miley16\_72 (L2), MkaliMitinis3\_73 (L2), Netyap\_73 (L2), Nicholasp3\_72 (L2), OverPar\_73 (L2), Rumpelstiltskin\_71 (L2), Sarshaun\_73 (L2), Soap141\_72 (L2), Underpass\_63 (L2), Wigglewiggle\_72 (L2), Wilder\_73 (L2), Winky\_72 (L2), Zakai\_73 (L2),

#### Start 4:

- Found in 36 of 53 ( 67.9% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Lewan\_73 (L2),

#### Start 7:

- Found in 53 of 53 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 18 of 42
- Called 50.9% of time when present
- Phage (with cluster) where this start called: Acquire49\_70 (L1), Appletree2\_69 (L1), AvadaKedavra\_70 (L1), BrainDrainer\_72 (L4), Calm\_72 (L1), Crossroads\_72 (L2), DHan\_76 (L2), DirkDirk\_67 (L1), Douzhi\_72 (L4), Enceladus\_67 (L1), Hafay\_74 (L2), Halena\_68 (L1), JoeDirt\_70 (L1), MAckerman\_68 (L1), OhShagHennessy\_68 (L1), PYPDinur\_70 (L4), Poochiewood\_69 (L1), Rose5\_70 (L1), Rossetti\_74 (L2), Sheng711\_72 (L4), Silverleaf\_70 (L1), SoJulia\_73 (L2), Tourach\_72 (L2), Tyson\_71 (L1), Vetrix\_72 (L2), Wyatt2\_71 (L1), Zaria\_71 (L1),

### Summary by clusters:

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

#### Info for manual annotations of cluster L1:

- Start number 7 was manually annotated 15 times for cluster L1.

#### Info for manual annotations of cluster L2:

- Start number 3 was manually annotated 23 times for cluster L2.
- Start number 4 was manually annotated 1 time for cluster L2.
- Start number 7 was manually annotated 3 times for cluster L2.

### Gene Information:

Gene: Acquire49\_70 Start: 47539, Stop: 47721, Start Num: 7  
Candidate Starts for Acquire49\_70:  
(Start: 7 @47539 has 18 MA's), (10, 47608), (11, 47614), (15, 47704),

Gene: Appletree2\_69 Start: 47154, Stop: 47336, Start Num: 7  
Candidate Starts for Appletree2\_69:  
(Start: 7 @47154 has 18 MA's), (10, 47223), (11, 47229), (15, 47319),

Gene: AvadaKedavra\_70 Start: 47612, Stop: 47794, Start Num: 7  
Candidate Starts for AvadaKedavra\_70:  
(Start: 7 @47612 has 18 MA's), (10, 47681), (11, 47687), (15, 47777),

Gene: BigCheese\_72 Start: 49129, Stop: 49383, Start Num: 3  
Candidate Starts for BigCheese\_72:  
(Start: 3 @49129 has 23 MA's), (Start: 4 @49150 has 1 MA's), (Start: 7 @49195 has 18 MA's), (8, 49225), (10, 49264), (11, 49270),

Gene: BobsGarage\_72 Start: 49129, Stop: 49383, Start Num: 3  
Candidate Starts for BobsGarage\_72:  
(Start: 3 @49129 has 23 MA's), (Start: 4 @49150 has 1 MA's), (Start: 7 @49195 has 18 MA's), (8, 49225), (10, 49264), (11, 49270),

Gene: BrainDrainer\_72 Start: 48423, Stop: 48611, Start Num: 7  
Candidate Starts for BrainDrainer\_72:  
(1, 48327), (2, 48342), (Start: 4 @48378 has 1 MA's), (Start: 7 @48423 has 18 MA's), (9, 48480), (10, 48492), (11, 48498), (12, 48540), (13, 48555), (14, 48570),

Gene: Breezona\_72 Start: 49129, Stop: 49383, Start Num: 3  
Candidate Starts for Breezona\_72:  
(Start: 3 @49129 has 23 MA's), (Start: 4 @49150 has 1 MA's), (Start: 7 @49195 has 18 MA's), (8, 49225), (10, 49264), (11, 49270),

Gene: Calm\_72 Start: 47865, Stop: 48047, Start Num: 7  
Candidate Starts for Calm\_72:  
(Start: 7 @47865 has 18 MA's), (10, 47934), (11, 47940), (15, 48030),

Gene: Crossroads\_72 Start: 49270, Stop: 49458, Start Num: 7  
Candidate Starts for Crossroads\_72:  
(Start: 3 @49204 has 23 MA's), (Start: 4 @49225 has 1 MA's), (Start: 7 @49270 has 18 MA's), (8, 49300), (10, 49339), (11, 49345),

Gene: DHan\_76 Start: 49484, Stop: 49672, Start Num: 7  
Candidate Starts for DHan\_76:  
(Start: 3 @49418 has 23 MA's), (Start: 4 @49439 has 1 MA's), (Start: 7 @49484 has 18 MA's), (8, 49514), (10, 49553), (11, 49559),

Gene: DirkDirk\_67 Start: 46740, Stop: 46922, Start Num: 7  
Candidate Starts for DirkDirk\_67:  
(Start: 7 @46740 has 18 MA's), (9, 46797), (10, 46809), (11, 46815), (15, 46905),

Gene: Douzhi\_72 Start: 48239, Stop: 48427, Start Num: 7  
Candidate Starts for Douzhi\_72:

(2, 48158), (Start: 4 @48194 has 1 MA's), (5, 48209), (6, 48221), (Start: 7 @48239 has 18 MA's), (9, 48296), (10, 48308), (11, 48314), (12, 48356), (13, 48371), (14, 48386),

Gene: DrSeegs\_72 Start: 49129, Stop: 49383, Start Num: 3

Candidate Starts for DrSeegs\_72:

(Start: 3 @49129 has 23 MA's), (Start: 4 @49150 has 1 MA's), (Start: 7 @49195 has 18 MA's), (8, 49225), (10, 49264), (11, 49270),

Gene: Enceladus\_67 Start: 47497, Stop: 47679, Start Num: 7

Candidate Starts for Enceladus\_67:

(Start: 7 @47497 has 18 MA's), (10, 47566), (11, 47572), (15, 47662),

Gene: Faith1\_72 Start: 49129, Stop: 49383, Start Num: 3

Candidate Starts for Faith1\_72:

(Start: 3 @49129 has 23 MA's), (Start: 4 @49150 has 1 MA's), (Start: 7 @49195 has 18 MA's), (8, 49225), (10, 49264), (11, 49270),

Gene: Gabriela\_70 Start: 47976, Stop: 48230, Start Num: 3

Candidate Starts for Gabriela\_70:

(Start: 3 @47976 has 23 MA's), (Start: 4 @47997 has 1 MA's), (Start: 7 @48042 has 18 MA's), (8, 48072), (10, 48111), (11, 48117),

Gene: Gardann\_73 Start: 49162, Stop: 49416, Start Num: 3

Candidate Starts for Gardann\_73:

(Start: 3 @49162 has 23 MA's), (Start: 4 @49183 has 1 MA's), (Start: 7 @49228 has 18 MA's), (8, 49258), (10, 49297), (11, 49303),

Gene: GuuelaD\_70 Start: 49244, Stop: 49498, Start Num: 3

Candidate Starts for GuuelaD\_70:

(Start: 3 @49244 has 23 MA's), (Start: 4 @49265 has 1 MA's), (Start: 7 @49310 has 18 MA's), (8, 49340), (10, 49379), (11, 49385),

Gene: Hafay\_74 Start: 49299, Stop: 49487, Start Num: 7

Candidate Starts for Hafay\_74:

(Start: 3 @49233 has 23 MA's), (Start: 4 @49254 has 1 MA's), (Start: 7 @49299 has 18 MA's), (8, 49329), (10, 49368), (11, 49374),

Gene: Halena\_68 Start: 46777, Stop: 46959, Start Num: 7

Candidate Starts for Halena\_68:

(Start: 7 @46777 has 18 MA's), (10, 46846), (11, 46852), (15, 46942),

Gene: Itos\_71 Start: 48035, Stop: 48289, Start Num: 3

Candidate Starts for Itos\_71:

(Start: 3 @48035 has 23 MA's), (Start: 4 @48056 has 1 MA's), (Start: 7 @48101 has 18 MA's), (8, 48131), (10, 48170), (11, 48176),

Gene: JoeDirt\_70 Start: 47930, Stop: 48112, Start Num: 7

Candidate Starts for JoeDirt\_70:

(Start: 7 @47930 has 18 MA's), (10, 47999), (11, 48005), (15, 48095),

Gene: Kahlid\_72 Start: 49135, Stop: 49389, Start Num: 3

Candidate Starts for Kahlid\_72:

(Start: 3 @49135 has 23 MA's), (Start: 4 @49156 has 1 MA's), (Start: 7 @49201 has 18 MA's), (8, 49231), (10, 49270), (11, 49276),

Gene: Lewan\_73 Start: 49207, Stop: 49440, Start Num: 4

Candidate Starts for Lewan\_73:

(Start: 3 @49186 has 23 MA's), (Start: 4 @49207 has 1 MA's), (Start: 7 @49252 has 18 MA's), (8, 49282), (10, 49321), (11, 49327),

Gene: LilDestine\_72 Start: 49162, Stop: 49416, Start Num: 3

Candidate Starts for LilDestine\_72:

(Start: 3 @49162 has 23 MA's), (Start: 4 @49183 has 1 MA's), (Start: 7 @49228 has 18 MA's), (8, 49258), (10, 49297), (11, 49303),

Gene: Loadrie\_71 Start: 49214, Stop: 49468, Start Num: 3

Candidate Starts for Loadrie\_71:

(Start: 3 @49214 has 23 MA's), (Start: 4 @49235 has 1 MA's), (Start: 7 @49280 has 18 MA's), (8, 49310), (10, 49349),

Gene: MAckerman\_68 Start: 46770, Stop: 46952, Start Num: 7

Candidate Starts for MAckerman\_68:

(Start: 7 @46770 has 18 MA's), (10, 46839), (11, 46845), (15, 46935),

Gene: Miley16\_72 Start: 49129, Stop: 49383, Start Num: 3

Candidate Starts for Miley16\_72:

(Start: 3 @49129 has 23 MA's), (Start: 4 @49150 has 1 MA's), (Start: 7 @49195 has 18 MA's), (8, 49225), (10, 49264), (11, 49270),

Gene: MkaliMitinis3\_73 Start: 49198, Stop: 49452, Start Num: 3

Candidate Starts for MkaliMitinis3\_73:

(Start: 3 @49198 has 23 MA's), (Start: 4 @49219 has 1 MA's), (Start: 7 @49264 has 18 MA's), (8, 49294), (10, 49333), (11, 49339),

Gene: Netyap\_73 Start: 49130, Stop: 49384, Start Num: 3

Candidate Starts for Netyap\_73:

(Start: 3 @49130 has 23 MA's), (Start: 4 @49151 has 1 MA's), (Start: 7 @49196 has 18 MA's), (8, 49226), (10, 49265), (11, 49271),

Gene: Nicholasp3\_72 Start: 49162, Stop: 49416, Start Num: 3

Candidate Starts for Nicholasp3\_72:

(Start: 3 @49162 has 23 MA's), (Start: 4 @49183 has 1 MA's), (Start: 7 @49228 has 18 MA's), (8, 49258), (10, 49297), (11, 49303),

Gene: OhShagHennessy\_68 Start: 46646, Stop: 46828, Start Num: 7

Candidate Starts for OhShagHennessy\_68:

(Start: 7 @46646 has 18 MA's), (10, 46715), (11, 46721), (15, 46811),

Gene: OverPar\_73 Start: 49214, Stop: 49468, Start Num: 3

Candidate Starts for OverPar\_73:

(Start: 3 @49214 has 23 MA's), (Start: 4 @49235 has 1 MA's), (Start: 7 @49280 has 18 MA's), (8, 49310), (10, 49349), (11, 49355),

Gene: PYPDinur\_70 Start: 48269, Stop: 48457, Start Num: 7

Candidate Starts for PYPDinur\_70:

(2, 48188), (Start: 4 @48224 has 1 MA's), (5, 48239), (6, 48251), (Start: 7 @48269 has 18 MA's), (9, 48326), (10, 48338), (11, 48344), (12, 48386), (13, 48401), (14, 48416),

Gene: Poochiewood\_69 Start: 47938, Stop: 48120, Start Num: 7  
Candidate Starts for Poochiewood\_69:  
(Start: 7 @47938 has 18 MA's), (10, 48007), (11, 48013), (15, 48103),

Gene: Rose5\_70 Start: 47950, Stop: 48132, Start Num: 7  
Candidate Starts for Rose5\_70:  
(Start: 7 @47950 has 18 MA's), (10, 48019), (11, 48025), (15, 48115),

Gene: Rossetti\_74 Start: 49774, Stop: 49962, Start Num: 7  
Candidate Starts for Rossetti\_74:  
(Start: 3 @49708 has 23 MA's), (Start: 4 @49729 has 1 MA's), (Start: 7 @49774 has 18 MA's), (8, 49804), (9, 49831), (10, 49843), (11, 49849),

Gene: Rumpelstiltskin\_71 Start: 48955, Stop: 49209, Start Num: 3  
Candidate Starts for Rumpelstiltskin\_71:  
(Start: 3 @48955 has 23 MA's), (Start: 4 @48976 has 1 MA's), (Start: 7 @49021 has 18 MA's), (8, 49051), (10, 49090), (11, 49096),

Gene: Sarshaun\_73 Start: 49222, Stop: 49476, Start Num: 3  
Candidate Starts for Sarshaun\_73:  
(Start: 3 @49222 has 23 MA's), (Start: 4 @49243 has 1 MA's), (Start: 7 @49288 has 18 MA's), (8, 49318), (10, 49357), (11, 49363),

Gene: Sheng711\_72 Start: 48277, Stop: 48465, Start Num: 7  
Candidate Starts for Sheng711\_72:  
(1, 48181), (2, 48196), (Start: 4 @48232 has 1 MA's), (Start: 7 @48277 has 18 MA's), (9, 48334), (10, 48346), (11, 48352), (12, 48394), (13, 48409), (14, 48424),

Gene: Silverleaf\_70 Start: 47400, Stop: 47582, Start Num: 7  
Candidate Starts for Silverleaf\_70:  
(Start: 7 @47400 has 18 MA's), (10, 47469), (11, 47475), (15, 47565),

Gene: SoJulia\_73 Start: 49857, Stop: 50045, Start Num: 7  
Candidate Starts for SoJulia\_73:  
(Start: 3 @49791 has 23 MA's), (Start: 4 @49812 has 1 MA's), (Start: 7 @49857 has 18 MA's), (8, 49887), (10, 49926), (11, 49932),

Gene: Soap141\_72 Start: 49222, Stop: 49476, Start Num: 3  
Candidate Starts for Soap141\_72:  
(Start: 3 @49222 has 23 MA's), (Start: 4 @49243 has 1 MA's), (Start: 7 @49288 has 18 MA's), (8, 49318), (10, 49357), (11, 49363),

Gene: Tourach\_72 Start: 49495, Stop: 49683, Start Num: 7  
Candidate Starts for Tourach\_72:  
(Start: 7 @49495 has 18 MA's), (8, 49525), (10, 49564), (11, 49570), (13, 49627),

Gene: Tyson\_71 Start: 47876, Stop: 48058, Start Num: 7  
Candidate Starts for Tyson\_71:  
(Start: 7 @47876 has 18 MA's), (10, 47945), (11, 47951), (15, 48041),

Gene: Underpass\_63 Start: 44198, Stop: 44452, Start Num: 3

Candidate Starts for Underpass\_63:

(Start: 3 @44198 has 23 MA's), (Start: 4 @44219 has 1 MA's), (Start: 7 @44264 has 18 MA's), (8, 44294), (10, 44333), (11, 44339),

Gene: Vetric\_72 Start: 49235, Stop: 49423, Start Num: 7

Candidate Starts for Vetric\_72:

(Start: 3 @49169 has 23 MA's), (Start: 4 @49190 has 1 MA's), (Start: 7 @49235 has 18 MA's), (8, 49265), (10, 49304), (11, 49310),

Gene: Wigglewigg\_72 Start: 49186, Stop: 49440, Start Num: 3

Candidate Starts for Wigglewigg\_72:

(Start: 3 @49186 has 23 MA's), (Start: 4 @49207 has 1 MA's), (Start: 7 @49252 has 18 MA's), (8, 49282), (10, 49321), (11, 49327),

Gene: Wilder\_73 Start: 49135, Stop: 49389, Start Num: 3

Candidate Starts for Wilder\_73:

(Start: 3 @49135 has 23 MA's), (Start: 4 @49156 has 1 MA's), (Start: 7 @49201 has 18 MA's), (8, 49231), (10, 49270), (11, 49276),

Gene: Winky\_72 Start: 49129, Stop: 49383, Start Num: 3

Candidate Starts for Winky\_72:

(Start: 3 @49129 has 23 MA's), (Start: 4 @49150 has 1 MA's), (Start: 7 @49195 has 18 MA's), (8, 49225), (10, 49264), (11, 49270),

Gene: Wyatt2\_71 Start: 47874, Stop: 48056, Start Num: 7

Candidate Starts for Wyatt2\_71:

(Start: 7 @47874 has 18 MA's), (10, 47943), (11, 47949), (15, 48039),

Gene: Zakai\_73 Start: 49455, Stop: 49709, Start Num: 3

Candidate Starts for Zakai\_73:

(Start: 3 @49455 has 23 MA's), (Start: 4 @49476 has 1 MA's), (Start: 7 @49521 has 18 MA's), (8, 49551), (10, 49590), (11, 49596),

Gene: Zaria\_71 Start: 47330, Stop: 47512, Start Num: 7

Candidate Starts for Zaria\_71:

(Start: 7 @47330 has 18 MA's), (10, 47399), (11, 47405), (15, 47495),