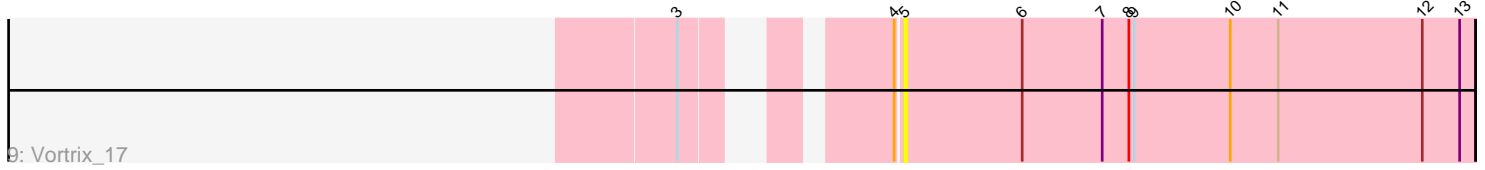
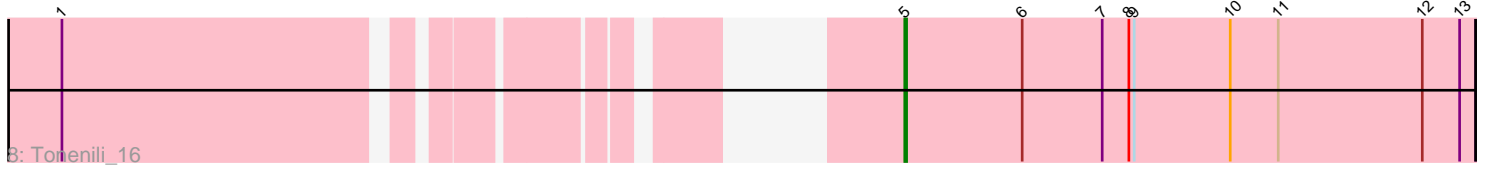
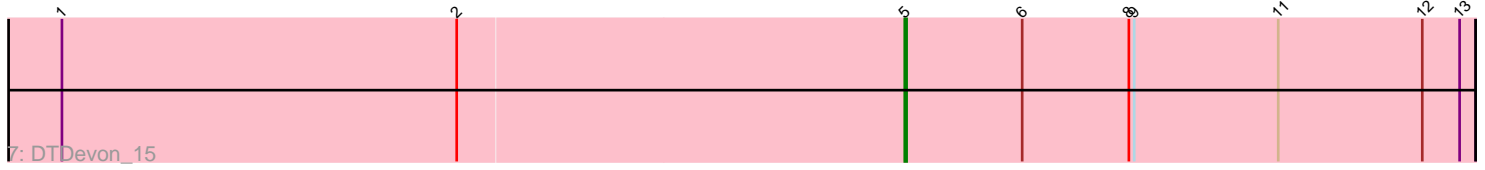
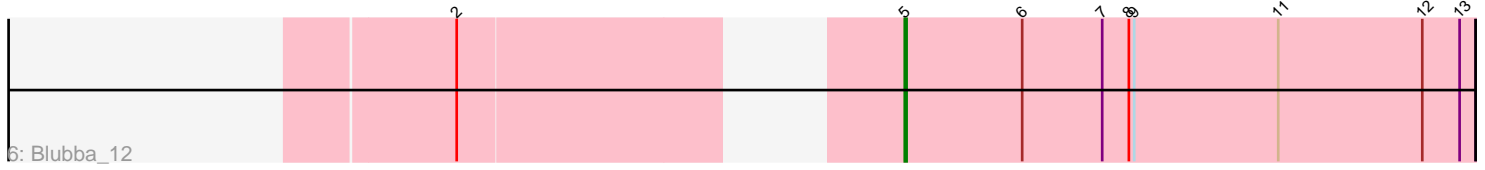
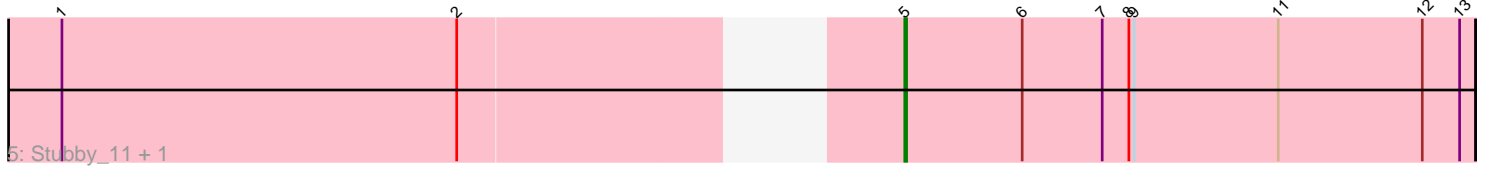
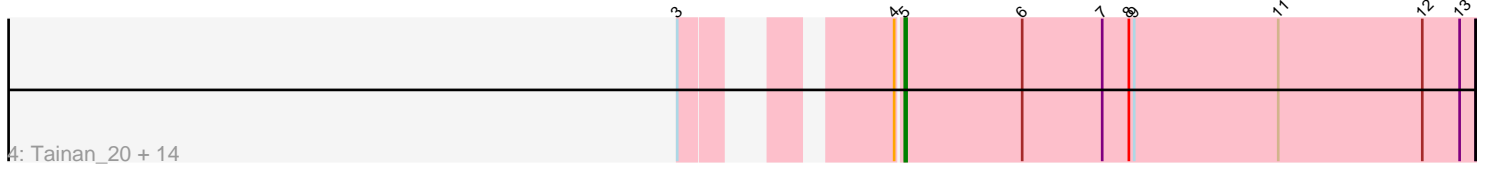
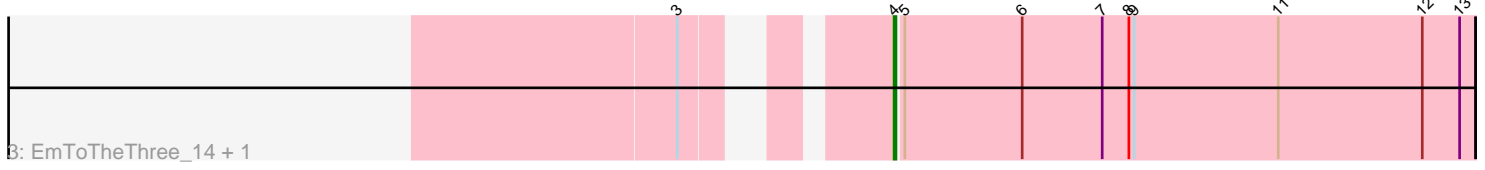
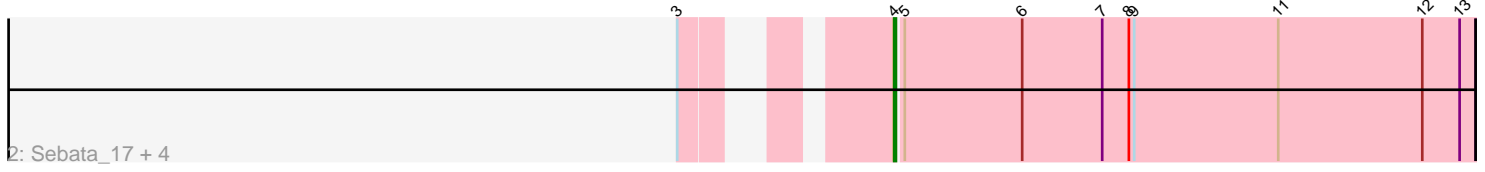
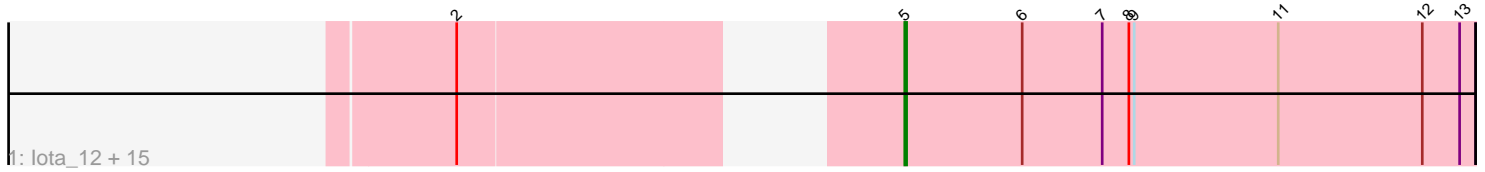


Pham 311753



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 311753 Report

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

Pham number 311753 has 44 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Iota\_12, MoMoMixon\_16, Delylah\_13, Colt\_12, Caravan\_13, Naval22\_17, Pio\_17, Lethe\_16, Bxz1\_16, Mangeria\_17, Tyke\_16, Shelob\_14, Spud\_17, Nidhogg\_16, Cane17\_12, ErnieJ\_13
- Track 2 : Sebata\_17, LolaVinca\_17, Grasshills\_19, InterFolia\_20, LinStu\_17
- Track 3 : EmToTheThree\_14, NuevoMundo\_18
- Track 4 : Tainan\_20, BigCity\_19, Pupusa\_20, JayJay\_17, Dandelion\_19, Nappy\_16, FrayBell\_20, Specks\_18, JigglyPuff\_15, PharkleMinkus\_20, EggyFarm\_19, Bigswole\_19, LookingGlass\_17, QBert\_13, LordLeafolot\_20
- Track 5 : Stubby\_11, Sauce\_16
- Track 6 : Blubba\_12
- Track 7 : DTDevon\_15
- Track 8 : Tonenili\_16
- Track 9 : Vortrix\_17

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

The start number called the most often in the published annotations is 5, it was called in 29 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BigCity\_19, Bigswole\_19, Blubba\_12, Bxz1\_16, Cane17\_12, Caravan\_13, Colt\_12, DTDevon\_15, Dandelion\_19, Delylah\_13, EggyFarm\_19, ErnieJ\_13, FrayBell\_20, Iota\_12, JayJay\_17, JigglyPuff\_15, Lethe\_16, LookingGlass\_17, LordLeafolot\_20, Mangeria\_17, MoMoMixon\_16, Nappy\_16, Naval22\_17, Nidhogg\_16, PharkleMinkus\_20, Pio\_17, Pupusa\_20, QBert\_13, Sauce\_16, Shelob\_14, Specks\_18, Spud\_17, Stubby\_11, Tainan\_20, Tonenili\_16, Tyke\_16, Vortrix\_17,

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

- EmToTheThree\_14, Grasshills\_19, InterFolia\_20, LinStu\_17, LolaVinca\_17, NuevoMundo\_18, Sebata\_17,

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

-

## Summary by start number:

### Start 4:

- Found in 23 of 44 ( 52.3% ) of genes in pham
- Manual Annotations of this start: 6 of 35
- Called 30.4% of time when present
- Phage (with cluster) where this start called: EmToTheThree\_14 (C1), Grasshills\_19 (C1), InterFolia\_20 (C1), LinStu\_17 (C1), LolaVinca\_17 (C1), NuevoMundo\_18 (C1), Sebata\_17 (C1),

### Start 5:

- Found in 44 of 44 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 29 of 35
- Called 84.1% of time when present
- Phage (with cluster) where this start called: BigCity\_19 (C1), Bigswole\_19 (C1), Blubba\_12 (C1), Bxz1\_16 (C1), Cane17\_12 (C1), Caravan\_13 (C1), Colt\_12 (C1), DTDevon\_15 (C1), Dandelion\_19 (C1), Delylah\_13 (C1), EggyFarm\_19 (C1), ErnieJ\_13 (C1), FrayBell\_20 (C1), Iota\_12 (C1), JayJay\_17 (C1), JigglyPuff\_15 (C1), Lethe\_16 (C1), LookingGlass\_17 (C1), LordLeafot\_20 (C1), Mangeria\_17 (C1), MoMoMixon\_16 (C1), Nappy\_16 (C1), Naval22\_17 (C1), Nidhogg\_16 (C1), PharkleMinkus\_20 (C1), Pio\_17 (C1), Pupusa\_20 (C1), QBert\_13 (C1), Sauce\_16 (C1), Shelob\_14 (C1), Specks\_18 (C1), Spud\_17 (C1), Stubby\_11 (C1), Tainan\_20 (C1), Tonenili\_16 (C1), Tyke\_16 (C1), Vortrix\_17 (C1),

## Summary by clusters:

There is one cluster represented in this pham: C1

### Info for manual annotations of cluster C1:

- Start number 4 was manually annotated 6 times for cluster C1.
- Start number 5 was manually annotated 29 times for cluster C1.

## Gene Information:

Gene: BigCity\_19 Start: 6828, Stop: 7148, Start Num: 5

Candidate Starts for BigCity\_19:

(3, 6744), (Start: 4 @6825 has 6 MA's), (Start: 5 @6828 has 29 MA's), (6, 6894), (7, 6939), (8, 6954), (9, 6957), (11, 7038), (12, 7119), (13, 7140),

Gene: Bigswole\_19 Start: 6258, Stop: 6578, Start Num: 5

Candidate Starts for Bigswole\_19:

(3, 6174), (Start: 4 @6255 has 6 MA's), (Start: 5 @6258 has 29 MA's), (6, 6324), (7, 6369), (8, 6384), (9, 6387), (11, 6468), (12, 6549), (13, 6570),

Gene: Blubba\_12 Start: 4998, Stop: 5318, Start Num: 5

Candidate Starts for Blubba\_12:

(2, 4809), (Start: 5 @4998 has 29 MA's), (6, 5064), (7, 5109), (8, 5124), (9, 5127), (11, 5208), (12, 5289), (13, 5310),

Gene: Bxz1\_16 Start: 5407, Stop: 5727, Start Num: 5

Candidate Starts for Bxz1\_16:

(2, 5218), (Start: 5 @5407 has 29 MA's), (6, 5473), (7, 5518), (8, 5533), (9, 5536), (11, 5617), (12, 5698), (13, 5719),

Gene: Cane17\_12 Start: 4998, Stop: 5318, Start Num: 5

Candidate Starts for Cane17\_12:

(2, 4809), (Start: 5 @4998 has 29 MA's), (6, 5064), (7, 5109), (8, 5124), (9, 5127), (11, 5208), (12, 5289), (13, 5310),

Gene: Caravan\_13 Start: 4155, Stop: 4475, Start Num: 5

Candidate Starts for Caravan\_13:

(2, 3966), (Start: 5 @4155 has 29 MA's), (6, 4221), (7, 4266), (8, 4281), (9, 4284), (11, 4365), (12, 4446), (13, 4467),

Gene: Colt\_12 Start: 5004, Stop: 5324, Start Num: 5

Candidate Starts for Colt\_12:

(2, 4815), (Start: 5 @5004 has 29 MA's), (6, 5070), (7, 5115), (8, 5130), (9, 5133), (11, 5214), (12, 5295), (13, 5316),

Gene: DTDevon\_15 Start: 5028, Stop: 5348, Start Num: 5

Candidate Starts for DTDevon\_15:

(1, 4557), (2, 4779), (Start: 5 @5028 has 29 MA's), (6, 5094), (8, 5154), (9, 5157), (11, 5238), (12, 5319), (13, 5340),

Gene: Dandelion\_19 Start: 6466, Stop: 6786, Start Num: 5

Candidate Starts for Dandelion\_19:

(3, 6382), (Start: 4 @6463 has 6 MA's), (Start: 5 @6466 has 29 MA's), (6, 6532), (7, 6577), (8, 6592), (9, 6595), (11, 6676), (12, 6757), (13, 6778),

Gene: Delylah\_13 Start: 4155, Stop: 4475, Start Num: 5

Candidate Starts for Delylah\_13:

(2, 3966), (Start: 5 @4155 has 29 MA's), (6, 4221), (7, 4266), (8, 4281), (9, 4284), (11, 4365), (12, 4446), (13, 4467),

Gene: EggyFarm\_19 Start: 6828, Stop: 7148, Start Num: 5

Candidate Starts for EggyFarm\_19:

(3, 6744), (Start: 4 @6825 has 6 MA's), (Start: 5 @6828 has 29 MA's), (6, 6894), (7, 6939), (8, 6954), (9, 6957), (11, 7038), (12, 7119), (13, 7140),

Gene: EmToTheThree\_14 Start: 5539, Stop: 5862, Start Num: 4

Candidate Starts for EmToTheThree\_14:

(3, 5458), (Start: 4 @5539 has 6 MA's), (Start: 5 @5542 has 29 MA's), (6, 5608), (7, 5653), (8, 5668), (9, 5671), (11, 5752), (12, 5833), (13, 5854),

Gene: ErnieJ\_13 Start: 4219, Stop: 4539, Start Num: 5

Candidate Starts for ErnieJ\_13:

(2, 4030), (Start: 5 @4219 has 29 MA's), (6, 4285), (7, 4330), (8, 4345), (9, 4348), (11, 4429), (12, 4510), (13, 4531),

Gene: FrayBell\_20 Start: 6515, Stop: 6835, Start Num: 5

Candidate Starts for FrayBell\_20:

(3, 6431), (Start: 4 @6512 has 6 MA's), (Start: 5 @6515 has 29 MA's), (6, 6581), (7, 6626), (8, 6641), (9, 6644), (11, 6725), (12, 6806), (13, 6827),

Gene: Grasshills\_19 Start: 6825, Stop: 7148, Start Num: 4

Candidate Starts for Grasshills\_19:

(3, 6744), (Start: 4 @6825 has 6 MA's), (Start: 5 @6828 has 29 MA's), (6, 6894), (7, 6939), (8, 6954), (9, 6957), (11, 7038), (12, 7119), (13, 7140),

Gene: InterFolia\_20 Start: 6509, Stop: 6832, Start Num: 4

Candidate Starts for InterFolia\_20:

(3, 6428), (Start: 4 @6509 has 6 MA's), (Start: 5 @6512 has 29 MA's), (6, 6578), (7, 6623), (8, 6638), (9, 6641), (11, 6722), (12, 6803), (13, 6824),

Gene: Iota\_12 Start: 4943, Stop: 5263, Start Num: 5

Candidate Starts for Iota\_12:

(2, 4754), (Start: 5 @4943 has 29 MA's), (6, 5009), (7, 5054), (8, 5069), (9, 5072), (11, 5153), (12, 5234), (13, 5255),

Gene: JayJay\_17 Start: 5183, Stop: 5503, Start Num: 5

Candidate Starts for JayJay\_17:

(3, 5099), (Start: 4 @5180 has 6 MA's), (Start: 5 @5183 has 29 MA's), (6, 5249), (7, 5294), (8, 5309), (9, 5312), (11, 5393), (12, 5474), (13, 5495),

Gene: JigglyPuff\_15 Start: 5028, Stop: 5348, Start Num: 5

Candidate Starts for JigglyPuff\_15:

(3, 4944), (Start: 4 @5025 has 6 MA's), (Start: 5 @5028 has 29 MA's), (6, 5094), (7, 5139), (8, 5154), (9, 5157), (11, 5238), (12, 5319), (13, 5340),

Gene: Lethe\_16 Start: 5303, Stop: 5623, Start Num: 5

Candidate Starts for Lethe\_16:

(2, 5114), (Start: 5 @5303 has 29 MA's), (6, 5369), (7, 5414), (8, 5429), (9, 5432), (11, 5513), (12, 5594), (13, 5615),

Gene: LinStu\_17 Start: 5951, Stop: 6274, Start Num: 4

Candidate Starts for LinStu\_17:

(3, 5870), (Start: 4 @5951 has 6 MA's), (Start: 5 @5954 has 29 MA's), (6, 6020), (7, 6065), (8, 6080), (9, 6083), (11, 6164), (12, 6245), (13, 6266),

Gene: LolaVinca\_17 Start: 5615, Stop: 5938, Start Num: 4

Candidate Starts for LolaVinca\_17:

(3, 5534), (Start: 4 @5615 has 6 MA's), (Start: 5 @5618 has 29 MA's), (6, 5684), (7, 5729), (8, 5744), (9, 5747), (11, 5828), (12, 5909), (13, 5930),

Gene: LookingGlass\_17 Start: 5493, Stop: 5813, Start Num: 5

Candidate Starts for LookingGlass\_17:

(3, 5409), (Start: 4 @5490 has 6 MA's), (Start: 5 @5493 has 29 MA's), (6, 5559), (7, 5604), (8, 5619), (9, 5622), (11, 5703), (12, 5784), (13, 5805),

Gene: LordLeafolot\_20 Start: 6514, Stop: 6834, Start Num: 5

Candidate Starts for LordLeafolot\_20:

(3, 6430), (Start: 4 @6511 has 6 MA's), (Start: 5 @6514 has 29 MA's), (6, 6580), (7, 6625), (8, 6640), (9, 6643), (11, 6724), (12, 6805), (13, 6826),

Gene: Mangeria\_17 Start: 5794, Stop: 6114, Start Num: 5

Candidate Starts for Mangeria\_17:

(2, 5605), (Start: 5 @5794 has 29 MA's), (6, 5860), (7, 5905), (8, 5920), (9, 5923), (11, 6004), (12, 6085), (13, 6106),

Gene: MoMoMixon\_16 Start: 5636, Stop: 5956, Start Num: 5

Candidate Starts for MoMoMixon\_16:

(2, 5447), (Start: 5 @5636 has 29 MA's), (6, 5702), (7, 5747), (8, 5762), (9, 5765), (11, 5846), (12, 5927), (13, 5948),

Gene: Nappy\_16 Start: 5341, Stop: 5661, Start Num: 5

Candidate Starts for Nappy\_16:

(3, 5257), (Start: 4 @5338 has 6 MA's), (Start: 5 @5341 has 29 MA's), (6, 5407), (7, 5452), (8, 5467), (9, 5470), (11, 5551), (12, 5632), (13, 5653),

Gene: Naval22\_17 Start: 5636, Stop: 5956, Start Num: 5

Candidate Starts for Naval22\_17:

(2, 5447), (Start: 5 @5636 has 29 MA's), (6, 5702), (7, 5747), (8, 5762), (9, 5765), (11, 5846), (12, 5927), (13, 5948),

Gene: Nidhogg\_16 Start: 5636, Stop: 5956, Start Num: 5

Candidate Starts for Nidhogg\_16:

(2, 5447), (Start: 5 @5636 has 29 MA's), (6, 5702), (7, 5747), (8, 5762), (9, 5765), (11, 5846), (12, 5927), (13, 5948),

Gene: NuevoMundo\_18 Start: 6296, Stop: 6619, Start Num: 4

Candidate Starts for NuevoMundo\_18:

(3, 6215), (Start: 4 @6296 has 6 MA's), (Start: 5 @6299 has 29 MA's), (6, 6365), (7, 6410), (8, 6425), (9, 6428), (11, 6509), (12, 6590), (13, 6611),

Gene: PharkleMinkus\_20 Start: 6515, Stop: 6835, Start Num: 5

Candidate Starts for PharkleMinkus\_20:

(3, 6431), (Start: 4 @6512 has 6 MA's), (Start: 5 @6515 has 29 MA's), (6, 6581), (7, 6626), (8, 6641), (9, 6644), (11, 6725), (12, 6806), (13, 6827),

Gene: Pio\_17 Start: 5796, Stop: 6116, Start Num: 5

Candidate Starts for Pio\_17:

(2, 5607), (Start: 5 @5796 has 29 MA's), (6, 5862), (7, 5907), (8, 5922), (9, 5925), (11, 6006), (12, 6087), (13, 6108),

Gene: Pupusa\_20 Start: 6514, Stop: 6834, Start Num: 5

Candidate Starts for Pupusa\_20:

(3, 6430), (Start: 4 @6511 has 6 MA's), (Start: 5 @6514 has 29 MA's), (6, 6580), (7, 6625), (8, 6640), (9, 6643), (11, 6724), (12, 6805), (13, 6826),

Gene: QBert\_13 Start: 5382, Stop: 5702, Start Num: 5

Candidate Starts for QBert\_13:

(3, 5298), (Start: 4 @5379 has 6 MA's), (Start: 5 @5382 has 29 MA's), (6, 5448), (7, 5493), (8, 5508), (9, 5511), (11, 5592), (12, 5673), (13, 5694),

Gene: Sauce\_16 Start: 5342, Stop: 5662, Start Num: 5

Candidate Starts for Sauce\_16:

(1, 4931), (2, 5153), (Start: 5 @5342 has 29 MA's), (6, 5408), (7, 5453), (8, 5468), (9, 5471), (11, 5552), (12, 5633), (13, 5654),

Gene: Sebata\_17 Start: 5951, Stop: 6274, Start Num: 4

Candidate Starts for Sebata\_17:

(3, 5870), (Start: 4 @5951 has 6 MA's), (Start: 5 @5954 has 29 MA's), (6, 6020), (7, 6065), (8, 6080), (9, 6083), (11, 6164), (12, 6245), (13, 6266),

Gene: Shelob\_14 Start: 5302, Stop: 5622, Start Num: 5

Candidate Starts for Shelob\_14:

(2, 5113), (Start: 5 @5302 has 29 MA's), (6, 5368), (7, 5413), (8, 5428), (9, 5431), (11, 5512), (12, 5593), (13, 5614),

Gene: Specks\_18 Start: 5695, Stop: 6015, Start Num: 5

Candidate Starts for Specks\_18:

(3, 5611), (Start: 4 @5692 has 6 MA's), (Start: 5 @5695 has 29 MA's), (6, 5761), (7, 5806), (8, 5821), (9, 5824), (11, 5905), (12, 5986), (13, 6007),

Gene: Spud\_17 Start: 5796, Stop: 6116, Start Num: 5

Candidate Starts for Spud\_17:

(2, 5607), (Start: 5 @5796 has 29 MA's), (6, 5862), (7, 5907), (8, 5922), (9, 5925), (11, 6006), (12, 6087), (13, 6108),

Gene: Stubby\_11 Start: 4534, Stop: 4854, Start Num: 5

Candidate Starts for Stubby\_11:

(1, 4123), (2, 4345), (Start: 5 @4534 has 29 MA's), (6, 4600), (7, 4645), (8, 4660), (9, 4663), (11, 4744), (12, 4825), (13, 4846),

Gene: Tainan\_20 Start: 6514, Stop: 6834, Start Num: 5

Candidate Starts for Tainan\_20:

(3, 6430), (Start: 4 @6511 has 6 MA's), (Start: 5 @6514 has 29 MA's), (6, 6580), (7, 6625), (8, 6640), (9, 6643), (11, 6724), (12, 6805), (13, 6826),

Gene: Tonenili\_16 Start: 4962, Stop: 5282, Start Num: 5

Candidate Starts for Tonenili\_16:

(1, 4599), (Start: 5 @4962 has 29 MA's), (6, 5028), (7, 5073), (8, 5088), (9, 5091), (10, 5145), (11, 5172), (12, 5253), (13, 5274),

Gene: Tyke\_16 Start: 5272, Stop: 5592, Start Num: 5

Candidate Starts for Tyke\_16:

(2, 5083), (Start: 5 @5272 has 29 MA's), (6, 5338), (7, 5383), (8, 5398), (9, 5401), (11, 5482), (12, 5563), (13, 5584),

Gene: Vortrix\_17 Start: 5232, Stop: 5552, Start Num: 5

Candidate Starts for Vortrix\_17:

(3, 5148), (Start: 4 @5229 has 6 MA's), (Start: 5 @5232 has 29 MA's), (6, 5298), (7, 5343), (8, 5358), (9, 5361), (10, 5415), (11, 5442), (12, 5523), (13, 5544),