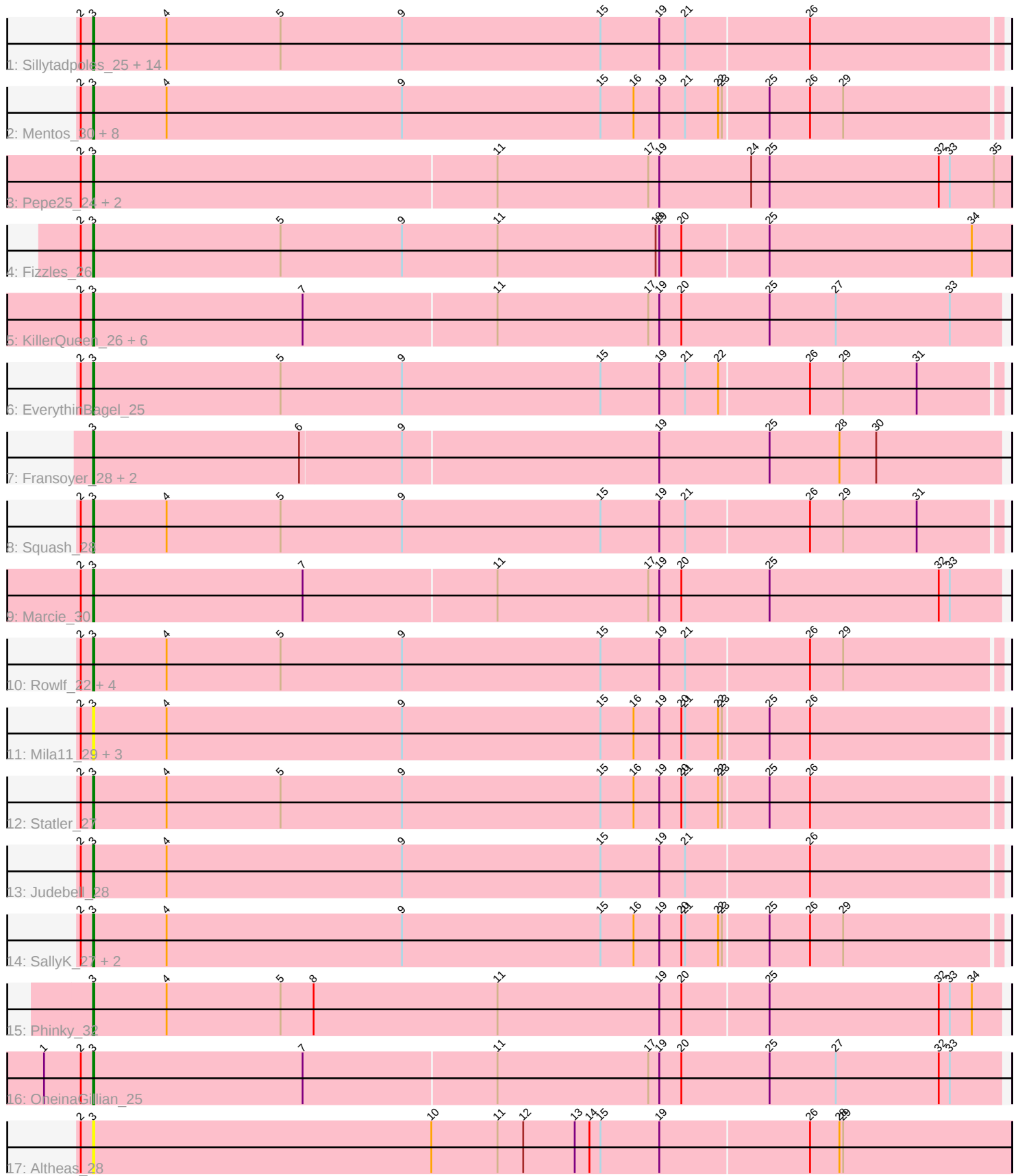


## Pham 270920



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 270920 Report

This analysis was run 02/07/26 on database version 634.

Pham number 270920 has 58 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Sillytadpoles\_25, Jehoshaphat\_28, Viceroy\_25, DonaldDuck\_25, Llemily\_25, Zhafia\_28, FrankDeliGuy\_23, Phabia\_26, Quammi\_24, Teehee\_27, Lonelysoil\_25, Casend\_27, Wayne3\_27, Wheelie\_25, Rudy\_24
- Track 2 : Mentos\_30, Kyva\_28, AluminumJesus\_24, Gazebo\_25, Grassboy\_27, Mashley\_24, Namago\_26, Hyperion\_25, StrawberryJamm\_28
- Track 3 : Pepe25\_24, Wilca\_25, BirdInFrench\_25
- Track 4 : Fizzles\_26
- Track 5 : KillerQueen\_26, Romm\_27, RobinRose\_27, Tempo\_25, Kelcole\_24, Fregley\_26, CandC\_24
- Track 6 : EverythinBagel\_25
- Track 7 : Fransoyer\_28, RubyRalph\_28, SadLad\_30
- Track 8 : Squash\_28
- Track 9 : Marcie\_30
- Track 10 : Rowlf\_22, Nike\_26, SlySloth\_28, Zagie\_26, BabyDotz\_25
- Track 11 : Mila11\_29, MorillMayhem\_25, WheelerS25\_31, BaconCheese\_29
- Track 12 : Statler\_27
- Track 13 : Judebell\_28
- Track 14 : SallyK\_27, Tissue\_26, Blab\_24
- Track 15 : Phinky\_32
- Track 16 : OneinaGillian\_25
- Track 17 : Altheas\_28

### ***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 50 of the 50 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas\_28, AluminumJesus\_24, BabyDotz\_25, BaconCheese\_29, BirdInFrench\_25, Blab\_24, CandC\_24, Casend\_27, DonaldDuck\_25, EverythinBagel\_25, Fizzles\_26, FrankDeliGuy\_23, Fransoyer\_28, Fregley\_26, Gazebo\_25, Grassboy\_27, Hyperion\_25, Jehoshaphat\_28, Judebell\_28, Kelcole\_24, KillerQueen\_26, Kyva\_28, Llemily\_25, Lonelysoil\_25, Marcie\_30, Mashley\_24, Mentos\_30, Mila11\_29, MorillMayhem\_25, Namago\_26, Nike\_26, OneinaGillian\_25,

Pepe25\_24, Phabia\_26, Phinky\_32, Quammi\_24, RobinRose\_27, Romm\_27, Rowlf\_22, RubyRalph\_28, Rudy\_24, SadLad\_30, SallyK\_27, Sillytadpoles\_25, SlySloth\_28, Squash\_28, Statler\_27, StrawberryJamm\_28, Teehee\_27, Tempo\_25, Tissue\_26, Viceroy\_25, Wayne3\_27, WheelerS25\_31, Wheelie\_25, Wilca\_25, Zagie\_26, Zhafia\_28,

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

- 

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

- 

### Summary by start number:

Start 3:

- Found in 58 of 58 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 50 of 50
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas\_28 (EG), AluminumJesus\_24 (EG), BabyDotz\_25 (EG), BaconCheese\_29 (EG), BirdInFrench\_25 (EG), Blab\_24 (EG), CandC\_24 (EG), Casend\_27 (EG), DonaldDuck\_25 (EG), EverythinBage1\_25 (EG), Fizzles\_26 (EG), FrankDeliGuy\_23 (EG), Fransoyer\_28 (EG), Fregley\_26 (EG), Gazebo\_25 (EG), Grassboy\_27 (EG), Hyperion\_25 (EG), Jehoshaphat\_28 (EG), Judebell\_28 (EG), Kelcole\_24 (EG), KillerQueen\_26 (EG), Kyva\_28 (EG), Llemily\_25 (EG), Lonelysoil\_25 (EG), Marcie\_30 (EG), Mashley\_24 (EG), Mentos\_30 (EG), Mila11\_29 (EG), MorillMayhem\_25 (EG), Namago\_26 (EG), Nike\_26 (EG), OneinaGillian\_25 (EG), Pepe25\_24 (EG), Phabia\_26 (EG), Phinky\_32 (EG), Quammi\_24 (EG), RobinRose\_27 (EG), Romm\_27 (EG), Rowlf\_22 (EG), RubyRalph\_28 (EG), Rudy\_24 (EG), SadLad\_30 (EG), SallyK\_27 (EG), Sillytadpoles\_25 (EG), SlySloth\_28 (EG), Squash\_28 (EG), Statler\_27 (EG), StrawberryJamm\_28 (EG), Teehee\_27 (EG), Tempo\_25 (EG), Tissue\_26 (EG), Viceroy\_25 (EG), Wayne3\_27 (EG), WheelerS25\_31 (EG), Wheelie\_25 (EG), Wilca\_25 (EG), Zagie\_26 (EG), Zhafia\_28 (EG),

### Summary by clusters:

There is one cluster represented in this pham: EG

Info for manual annotations of cluster EG:

- Start number 3 was manually annotated 50 times for cluster EG.

### Gene Information:

Gene: Altheas\_28 Start: 16384, Stop: 17130, Start Num: 3

Candidate Starts for Altheas\_28:

(2, 16375), (Start: 3 @16384 has 50 MA's), (10, 16660), (11, 16714), (12, 16735), (13, 16777), (14, 16789), (15, 16798), (19, 16846), (26, 16966), (28, 16990), (29, 16993),

Gene: AluminumJesus\_24 Start: 15744, Stop: 16478, Start Num: 3

Candidate Starts for AluminumJesus\_24:

(2, 15735), (Start: 3 @15744 has 50 MA's), (4, 15804), (9, 15996), (15, 16158), (16, 16185), (19, 16206), (21, 16227), (22, 16254), (23, 16257), (25, 16293), (26, 16326), (29, 16353),

Gene: BabyDotz\_25 Start: 16013, Stop: 16747, Start Num: 3

Candidate Starts for BabyDotz\_25:

(2, 16004), (Start: 3 @16013 has 50 MA's), (4, 16073), (5, 16166), (9, 16265), (15, 16427), (19, 16475), (21, 16496), (26, 16595), (29, 16622),

Gene: BaconCheese\_29 Start: 17262, Stop: 17996, Start Num: 3

Candidate Starts for BaconCheese\_29:

(2, 17253), (Start: 3 @17262 has 50 MA's), (4, 17322), (9, 17514), (15, 17676), (16, 17703), (19, 17724), (20, 17742), (21, 17745), (22, 17772), (23, 17775), (25, 17811), (26, 17844),

Gene: BirdInFrench\_25 Start: 14837, Stop: 15583, Start Num: 3

Candidate Starts for BirdInFrench\_25:

(2, 14828), (Start: 3 @14837 has 50 MA's), (11, 15164), (17, 15287), (19, 15296), (24, 15371), (25, 15386), (32, 15524), (33, 15533), (35, 15569),

Gene: Blab\_24 Start: 15642, Stop: 16376, Start Num: 3

Candidate Starts for Blab\_24:

(2, 15633), (Start: 3 @15642 has 50 MA's), (4, 15702), (9, 15894), (15, 16056), (16, 16083), (19, 16104), (20, 16122), (21, 16125), (22, 16152), (23, 16155), (25, 16191), (26, 16224), (29, 16251),

Gene: CandC\_24 Start: 14442, Stop: 15179, Start Num: 3

Candidate Starts for CandC\_24:

(2, 14433), (Start: 3 @14442 has 50 MA's), (7, 14613), (11, 14769), (17, 14892), (19, 14901), (20, 14919), (25, 14991), (27, 15045), (33, 15138),

Gene: Casend\_27 Start: 16359, Stop: 17093, Start Num: 3

Candidate Starts for Casend\_27:

(2, 16350), (Start: 3 @16359 has 50 MA's), (4, 16419), (5, 16512), (9, 16611), (15, 16773), (19, 16821), (21, 16842), (26, 16941),

Gene: DonaldDuck\_25 Start: 15705, Stop: 16439, Start Num: 3

Candidate Starts for DonaldDuck\_25:

(2, 15696), (Start: 3 @15705 has 50 MA's), (4, 15765), (5, 15858), (9, 15957), (15, 16119), (19, 16167), (21, 16188), (26, 16287),

Gene: EverythinBagel\_25 Start: 16093, Stop: 16827, Start Num: 3

Candidate Starts for EverythinBagel\_25:

(2, 16084), (Start: 3 @16093 has 50 MA's), (5, 16246), (9, 16345), (15, 16507), (19, 16555), (21, 16576), (22, 16603), (26, 16675), (29, 16702), (31, 16762),

Gene: Fizzles\_26 Start: 15665, Stop: 16411, Start Num: 3

Candidate Starts for Fizzles\_26:

(2, 15656), (Start: 3 @15665 has 50 MA's), (5, 15818), (9, 15917), (11, 15995), (18, 16124), (19, 16127), (20, 16145), (25, 16214), (34, 16379),

Gene: FrankDeliGuy\_23 Start: 15667, Stop: 16401, Start Num: 3

Candidate Starts for FrankDeliGuy\_23:

(2, 15658), (Start: 3 @15667 has 50 MA's), (4, 15727), (5, 15820), (9, 15919), (15, 16081), (19, 16129), (21, 16150), (26, 16249),

Gene: Fransoyer\_28 Start: 15730, Stop: 16464, Start Num: 3

Candidate Starts for Fransoyer\_28:

(Start: 3 @15730 has 50 MA's), (6, 15898), (9, 15979), (19, 16186), (25, 16276), (28, 16333), (30, 16363),

Gene: Fregley\_26 Start: 15015, Stop: 15752, Start Num: 3

Candidate Starts for Fregley\_26:

(2, 15006), (Start: 3 @15015 has 50 MA's), (7, 15186), (11, 15342), (17, 15465), (19, 15474), (20, 15492), (25, 15564), (27, 15618), (33, 15711),

Gene: Gazebo\_25 Start: 16208, Stop: 16942, Start Num: 3

Candidate Starts for Gazebo\_25:

(2, 16199), (Start: 3 @16208 has 50 MA's), (4, 16268), (9, 16460), (15, 16622), (16, 16649), (19, 16670), (21, 16691), (22, 16718), (23, 16721), (25, 16757), (26, 16790), (29, 16817),

Gene: Grassboy\_27 Start: 16381, Stop: 17115, Start Num: 3

Candidate Starts for Grassboy\_27:

(2, 16372), (Start: 3 @16381 has 50 MA's), (4, 16441), (9, 16633), (15, 16795), (16, 16822), (19, 16843), (21, 16864), (22, 16891), (23, 16894), (25, 16930), (26, 16963), (29, 16990),

Gene: Hyperion\_25 Start: 16168, Stop: 16902, Start Num: 3

Candidate Starts for Hyperion\_25:

(2, 16159), (Start: 3 @16168 has 50 MA's), (4, 16228), (9, 16420), (15, 16582), (16, 16609), (19, 16630), (21, 16651), (22, 16678), (23, 16681), (25, 16717), (26, 16750), (29, 16777),

Gene: Jehoshaphat\_28 Start: 16624, Stop: 17358, Start Num: 3

Candidate Starts for Jehoshaphat\_28:

(2, 16615), (Start: 3 @16624 has 50 MA's), (4, 16684), (5, 16777), (9, 16876), (15, 17038), (19, 17086), (21, 17107), (26, 17206),

Gene: Judebell\_28 Start: 16165, Stop: 16899, Start Num: 3

Candidate Starts for Judebell\_28:

(2, 16156), (Start: 3 @16165 has 50 MA's), (4, 16225), (9, 16417), (15, 16579), (19, 16627), (21, 16648), (26, 16747),

Gene: Kelcole\_24 Start: 14867, Stop: 15604, Start Num: 3

Candidate Starts for Kelcole\_24:

(2, 14858), (Start: 3 @14867 has 50 MA's), (7, 15038), (11, 15194), (17, 15317), (19, 15326), (20, 15344), (25, 15416), (27, 15470), (33, 15563),

Gene: KillerQueen\_26 Start: 14689, Stop: 15426, Start Num: 3

Candidate Starts for KillerQueen\_26:

(2, 14680), (Start: 3 @14689 has 50 MA's), (7, 14860), (11, 15016), (17, 15139), (19, 15148), (20, 15166), (25, 15238), (27, 15292), (33, 15385),

Gene: Kyva\_28 Start: 16416, Stop: 17150, Start Num: 3

Candidate Starts for Kyva\_28:

(2, 16407), (Start: 3 @16416 has 50 MA's), (4, 16476), (9, 16668), (15, 16830), (16, 16857), (19, 16878), (21, 16899), (22, 16926), (23, 16929), (25, 16965), (26, 16998), (29, 17025),

Gene: Llemily\_25 Start: 15400, Stop: 16134, Start Num: 3

Candidate Starts for Llemily\_25:

(2, 15391), (Start: 3 @15400 has 50 MA's), (4, 15460), (5, 15553), (9, 15652), (15, 15814), (19, 15862), (21, 15883), (26, 15982),

Gene: Lonelysoil\_25 Start: 15645, Stop: 16379, Start Num: 3

Candidate Starts for Lonelysoil\_25:

(2, 15636), (Start: 3 @15645 has 50 MA's), (4, 15705), (5, 15798), (9, 15897), (15, 16059), (19, 16107), (21, 16128), (26, 16227),

Gene: Marcie\_30 Start: 15548, Stop: 16285, Start Num: 3

Candidate Starts for Marcie\_30:

(2, 15539), (Start: 3 @15548 has 50 MA's), (7, 15719), (11, 15875), (17, 15998), (19, 16007), (20, 16025), (25, 16097), (32, 16235), (33, 16244),

Gene: Mashley\_24 Start: 15979, Stop: 16713, Start Num: 3

Candidate Starts for Mashley\_24:

(2, 15970), (Start: 3 @15979 has 50 MA's), (4, 16039), (9, 16231), (15, 16393), (16, 16420), (19, 16441), (21, 16462), (22, 16489), (23, 16492), (25, 16528), (26, 16561), (29, 16588),

Gene: Mentos\_30 Start: 17066, Stop: 17800, Start Num: 3

Candidate Starts for Mentos\_30:

(2, 17057), (Start: 3 @17066 has 50 MA's), (4, 17126), (9, 17318), (15, 17480), (16, 17507), (19, 17528), (21, 17549), (22, 17576), (23, 17579), (25, 17615), (26, 17648), (29, 17675),

Gene: Mila11\_29 Start: 16952, Stop: 17686, Start Num: 3

Candidate Starts for Mila11\_29:

(2, 16943), (Start: 3 @16952 has 50 MA's), (4, 17012), (9, 17204), (15, 17366), (16, 17393), (19, 17414), (20, 17432), (21, 17435), (22, 17462), (23, 17465), (25, 17501), (26, 17534),

Gene: MorillMayhem\_25 Start: 15978, Stop: 16712, Start Num: 3

Candidate Starts for MorillMayhem\_25:

(2, 15969), (Start: 3 @15978 has 50 MA's), (4, 16038), (9, 16230), (15, 16392), (16, 16419), (19, 16440), (20, 16458), (21, 16461), (22, 16488), (23, 16491), (25, 16527), (26, 16560),

Gene: Namago\_26 Start: 15546, Stop: 16280, Start Num: 3

Candidate Starts for Namago\_26:

(2, 15537), (Start: 3 @15546 has 50 MA's), (4, 15606), (9, 15798), (15, 15960), (16, 15987), (19, 16008), (21, 16029), (22, 16056), (23, 16059), (25, 16095), (26, 16128), (29, 16155),

Gene: Nike\_26 Start: 16444, Stop: 17178, Start Num: 3

Candidate Starts for Nike\_26:

(2, 16435), (Start: 3 @16444 has 50 MA's), (4, 16504), (5, 16597), (9, 16696), (15, 16858), (19, 16906), (21, 16927), (26, 17026), (29, 17053),

Gene: OneinaGillian\_25 Start: 14517, Stop: 15254, Start Num: 3

Candidate Starts for OneinaGillian\_25:

(1, 14478), (2, 14508), (Start: 3 @14517 has 50 MA's), (7, 14688), (11, 14844), (17, 14967), (19, 14976), (20, 14994), (25, 15066), (27, 15120), (32, 15204), (33, 15213),

Gene: Pepe25\_24 Start: 14854, Stop: 15600, Start Num: 3

Candidate Starts for Pepe25\_24:

(2, 14845), (Start: 3 @14854 has 50 MA's), (11, 15181), (17, 15304), (19, 15313), (24, 15388), (25, 15403), (32, 15541), (33, 15550), (35, 15586),

Gene: Phabia\_26 Start: 15818, Stop: 16552, Start Num: 3

Candidate Starts for Phabia\_26:

(2, 15809), (Start: 3 @15818 has 50 MA's), (4, 15878), (5, 15971), (9, 16070), (15, 16232), (19, 16280), (21, 16301), (26, 16400),

Gene: Phinky\_32 Start: 16706, Stop: 17443, Start Num: 3

Candidate Starts for Phinky\_32:

(Start: 3 @16706 has 50 MA's), (4, 16766), (5, 16859), (8, 16886), (11, 17036), (19, 17168), (20, 17186), (25, 17255), (32, 17393), (33, 17402), (34, 17420),

Gene: Quammi\_24 Start: 15389, Stop: 16123, Start Num: 3

Candidate Starts for Quammi\_24:

(2, 15380), (Start: 3 @15389 has 50 MA's), (4, 15449), (5, 15542), (9, 15641), (15, 15803), (19, 15851), (21, 15872), (26, 15971),

Gene: RobinRose\_27 Start: 15018, Stop: 15755, Start Num: 3

Candidate Starts for RobinRose\_27:

(2, 15009), (Start: 3 @15018 has 50 MA's), (7, 15189), (11, 15345), (17, 15468), (19, 15477), (20, 15495), (25, 15567), (27, 15621), (33, 15714),

Gene: Romm\_27 Start: 15018, Stop: 15755, Start Num: 3

Candidate Starts for Romm\_27:

(2, 15009), (Start: 3 @15018 has 50 MA's), (7, 15189), (11, 15345), (17, 15468), (19, 15477), (20, 15495), (25, 15567), (27, 15621), (33, 15714),

Gene: Rowlf\_22 Start: 15147, Stop: 15881, Start Num: 3

Candidate Starts for Rowlf\_22:

(2, 15138), (Start: 3 @15147 has 50 MA's), (4, 15207), (5, 15300), (9, 15399), (15, 15561), (19, 15609), (21, 15630), (26, 15729), (29, 15756),

Gene: RubyRalph\_28 Start: 15664, Stop: 16398, Start Num: 3

Candidate Starts for RubyRalph\_28:

(Start: 3 @15664 has 50 MA's), (6, 15832), (9, 15913), (19, 16120), (25, 16210), (28, 16267), (30, 16297),

Gene: Rudy\_24 Start: 15389, Stop: 16123, Start Num: 3

Candidate Starts for Rudy\_24:

(2, 15380), (Start: 3 @15389 has 50 MA's), (4, 15449), (5, 15542), (9, 15641), (15, 15803), (19, 15851), (21, 15872), (26, 15971),

Gene: SadLad\_30 Start: 16601, Stop: 17335, Start Num: 3

Candidate Starts for SadLad\_30:

(Start: 3 @16601 has 50 MA's), (6, 16769), (9, 16850), (19, 17057), (25, 17147), (28, 17204), (30, 17234),

Gene: SallyK\_27 Start: 16535, Stop: 17269, Start Num: 3

Candidate Starts for SallyK\_27:

(2, 16526), (Start: 3 @16535 has 50 MA's), (4, 16595), (9, 16787), (15, 16949), (16, 16976), (19, 16997), (20, 17015), (21, 17018), (22, 17045), (23, 17048), (25, 17084), (26, 17117), (29, 17144),

Gene: Sillytadpoles\_25 Start: 15387, Stop: 16121, Start Num: 3

Candidate Starts for Sillytadpoles\_25:

(2, 15378), (Start: 3 @15387 has 50 MA's), (4, 15447), (5, 15540), (9, 15639), (15, 15801), (19, 15849), (21, 15870), (26, 15969),

Gene: SlySloth\_28 Start: 16444, Stop: 17178, Start Num: 3

Candidate Starts for SlySloth\_28:

(2, 16435), (Start: 3 @16444 has 50 MA's), (4, 16504), (5, 16597), (9, 16696), (15, 16858), (19, 16906), (21, 16927), (26, 17026), (29, 17053),

Gene: Squash\_28 Start: 16457, Stop: 17191, Start Num: 3

Candidate Starts for Squash\_28:

(2, 16448), (Start: 3 @16457 has 50 MA's), (4, 16517), (5, 16610), (9, 16709), (15, 16871), (19, 16919), (21, 16940), (26, 17039), (29, 17066), (31, 17126),

Gene: Statler\_27 Start: 16369, Stop: 17103, Start Num: 3

Candidate Starts for Statler\_27:

(2, 16360), (Start: 3 @16369 has 50 MA's), (4, 16429), (5, 16522), (9, 16621), (15, 16783), (16, 16810), (19, 16831), (20, 16849), (21, 16852), (22, 16879), (23, 16882), (25, 16918), (26, 16951),

Gene: StrawberryJamm\_28 Start: 15689, Stop: 16423, Start Num: 3

Candidate Starts for StrawberryJamm\_28:

(2, 15680), (Start: 3 @15689 has 50 MA's), (4, 15749), (9, 15941), (15, 16103), (16, 16130), (19, 16151), (21, 16172), (22, 16199), (23, 16202), (25, 16238), (26, 16271), (29, 16298),

Gene: Teehee\_27 Start: 16624, Stop: 17358, Start Num: 3

Candidate Starts for Teehee\_27:

(2, 16615), (Start: 3 @16624 has 50 MA's), (4, 16684), (5, 16777), (9, 16876), (15, 17038), (19, 17086), (21, 17107), (26, 17206),

Gene: Tempo\_25 Start: 14894, Stop: 15631, Start Num: 3

Candidate Starts for Tempo\_25:

(2, 14885), (Start: 3 @14894 has 50 MA's), (7, 15065), (11, 15221), (17, 15344), (19, 15353), (20, 15371), (25, 15443), (27, 15497), (33, 15590),

Gene: Tissue\_26 Start: 16180, Stop: 16914, Start Num: 3

Candidate Starts for Tissue\_26:

(2, 16171), (Start: 3 @16180 has 50 MA's), (4, 16240), (9, 16432), (15, 16594), (16, 16621), (19, 16642), (20, 16660), (21, 16663), (22, 16690), (23, 16693), (25, 16729), (26, 16762), (29, 16789),

Gene: Viceroy\_25 Start: 15389, Stop: 16123, Start Num: 3

Candidate Starts for Viceroy\_25:

(2, 15380), (Start: 3 @15389 has 50 MA's), (4, 15449), (5, 15542), (9, 15641), (15, 15803), (19, 15851), (21, 15872), (26, 15971),

Gene: Wayne3\_27 Start: 16354, Stop: 17088, Start Num: 3

Candidate Starts for Wayne3\_27:

(2, 16345), (Start: 3 @16354 has 50 MA's), (4, 16414), (5, 16507), (9, 16606), (15, 16768), (19, 16816), (21, 16837), (26, 16936),

Gene: WheelerS25\_31 Start: 17184, Stop: 17918, Start Num: 3

Candidate Starts for WheelerS25\_31:

(2, 17175), (Start: 3 @17184 has 50 MA's), (4, 17244), (9, 17436), (15, 17598), (16, 17625), (19, 17646), (20, 17664), (21, 17667), (22, 17694), (23, 17697), (25, 17733), (26, 17766),

Gene: Wheelie\_25 Start: 15705, Stop: 16439, Start Num: 3

Candidate Starts for Wheelie\_25:

(2, 15696), (Start: 3 @15705 has 50 MA's), (4, 15765), (5, 15858), (9, 15957), (15, 16119), (19, 16167), (21, 16188), (26, 16287),

Gene: Wilca\_25 Start: 14837, Stop: 15583, Start Num: 3

Candidate Starts for Wilca\_25:

(2, 14828), (Start: 3 @14837 has 50 MA's), (11, 15164), (17, 15287), (19, 15296), (24, 15371), (25, 15386), (32, 15524), (33, 15533), (35, 15569),

Gene: Zagie\_26 Start: 15893, Stop: 16627, Start Num: 3

Candidate Starts for Zagie\_26:

(2, 15884), (Start: 3 @15893 has 50 MA's), (4, 15953), (5, 16046), (9, 16145), (15, 16307), (19, 16355), (21, 16376), (26, 16475), (29, 16502),

Gene: Zhafia\_28 Start: 16216, Stop: 16950, Start Num: 3

Candidate Starts for Zhafia\_28:

(2, 16207), (Start: 3 @16216 has 50 MA's), (4, 16276), (5, 16369), (9, 16468), (15, 16630), (19, 16678), (21, 16699), (26, 16798),