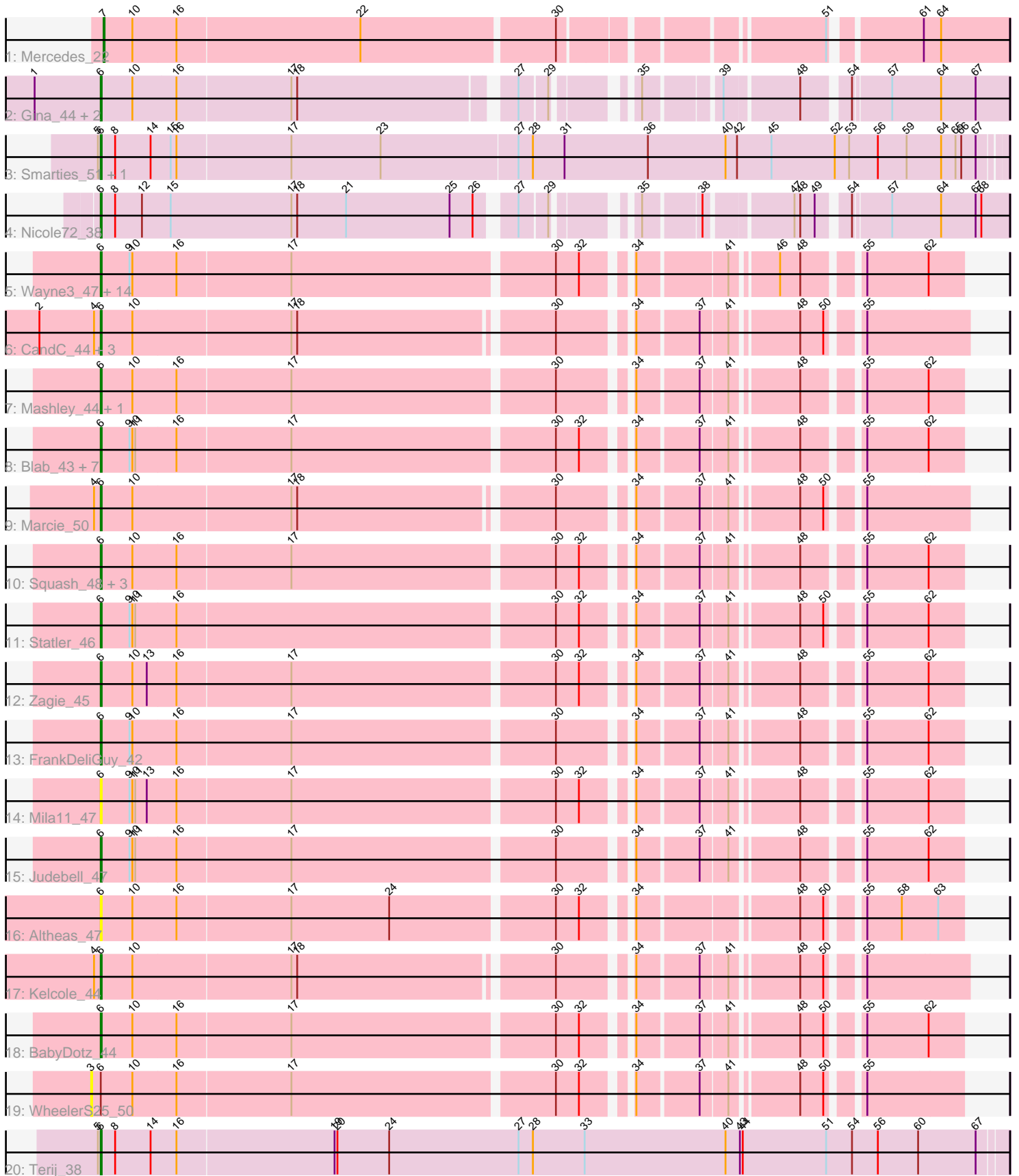


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 311693 Report

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

Pham number 311693 has 51 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Mercedes\_22
- Track 2 : Gina\_44, Skugga\_41, Teamocil\_44
- Track 3 : Smarties\_51, Ariadne\_51
- Track 4 : Nicole72\_38
- Track 5 : Wayne3\_47, Casend\_46, Jehoshaphat\_47, Sillytadpoles\_46, Teehee\_46, Zhafia\_48, Phabia\_45, Llemily\_45, DonaldDuck\_45, Quammi\_43, Viceroy\_44, Rudy\_43, Wheelie\_45, EverythinBagel\_44, Lonelysoil\_44
- Track 6 : CandC\_44, KillerQueen\_45, Romm\_47, RobinRose\_47
- Track 7 : Mashley\_44, MorillMayhem\_45
- Track 8 : Blab\_43, Kyva\_47, Grassboy\_46, SlySloth\_48, Namago\_45, StrawberryJamm\_47, Mentos\_49, SallyK\_46
- Track 9 : Marcie\_50
- Track 10 : Squash\_48, Rowlf\_41, Nike\_46, Tissue\_46
- Track 11 : Statler\_46
- Track 12 : Zagie\_45
- Track 13 : FrankDeliGuy\_42
- Track 14 : Mila11\_47
- Track 15 : Judebell\_47
- Track 16 : Altheas\_47
- Track 17 : Kelcole\_44
- Track 18 : BabyDotz\_44
- Track 19 : WheelerS25\_50
- Track 20 : Terij\_38

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

The start number called the most often in the published annotations is 6, it was called in 43 of the 44 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas\_47, Ariadne\_51, BabyDotz\_44, Blab\_43, CandC\_44, Casend\_46, DonaldDuck\_45, EverythinBagel\_44, FrankDeliGuy\_42, Gina\_44, Grassboy\_46, Jehoshaphat\_47, Judebell\_47, Kelcole\_44, KillerQueen\_45, Kyva\_47, Llemily\_45, Lonelysoil\_44, Marcie\_50, Mashley\_44, Mentos\_49, Mila11\_47, MorillMayhem\_45,

Namago\_45, Nicole72\_38, Nike\_46, Phabia\_45, Quammi\_43, RobinRose\_47, Romm\_47, Rowlf\_41, Rudy\_43, SallyK\_46, Sillytadpoles\_46, Skugga\_41, SlySloth\_48, Smarties\_51, Squash\_48, Statler\_46, StrawberryJamm\_47, Teamocil\_44, Teehee\_46, Terij\_38, Tissue\_46, Viceroy\_44, Wayne3\_47, Wheelie\_45, Zagie\_45, Zhafia\_48,

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

- WheelerS25\_50,

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

- Mercedes\_22,

### Summary by start number:

Start 3:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: WheelerS25\_50 (EG),

Start 6:

- Found in 50 of 51 ( 98.0% ) of genes in pham
- Manual Annotations of this start: 43 of 44
- Called 98.0% of time when present
- Phage (with cluster) where this start called: Altheas\_47 (EG), Ariadne\_51 (EC), BabyDotz\_44 (EG), Blab\_43 (EG), CandC\_44 (EG), Casend\_46 (EG), DonaldDuck\_45 (EG), EverythinBagel\_44 (EG), FrankDeliGuy\_42 (EG), Gina\_44 (EC), Grassboy\_46 (EG), Jehoshaphat\_47 (EG), Judebell\_47 (EG), Kelcole\_44 (EG), KillerQueen\_45 (EG), Kyva\_47 (EG), Llemily\_45 (EG), Lonelysoil\_44 (EG), Marcie\_50 (EG), Mashley\_44 (EG), Mentos\_49 (EG), Mila11\_47 (EG), MorillMayhem\_45 (EG), Namago\_45 (EG), Nicole72\_38 (EC), Nike\_46 (EG), Phabia\_45 (EG), Quammi\_43 (EG), RobinRose\_47 (EG), Romm\_47 (EG), Rowlf\_41 (EG), Rudy\_43 (EG), SallyK\_46 (EG), Sillytadpoles\_46 (EG), Skugga\_41 (EC), SlySloth\_48 (EG), Smarties\_51 (EC), Squash\_48 (EG), Statler\_46 (EG), StrawberryJamm\_47 (EG), Teamocil\_44 (EC), Teehee\_46 (EG), Terij\_38 (EI), Tissue\_46 (EG), Viceroy\_44 (EG), Wayne3\_47 (EG), Wheelie\_45 (EG), Zagie\_45 (EG), Zhafia\_48 (EG),

Start 7:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mercedes\_22 (EA),

### Summary by clusters:

There are 4 clusters represented in this pham: EI, EG, EA, EC,

Info for manual annotations of cluster EA:

- Start number 7 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EC:

- Start number 6 was manually annotated 5 times for cluster EC.

Info for manual annotations of cluster EG:

•Start number 6 was manually annotated 37 times for cluster EG.

Info for manual annotations of cluster EI:

•Start number 6 was manually annotated 1 time for cluster EI.

### **Gene Information:**

Gene: Altheas\_47 Start: 34777, Stop: 35598, Start Num: 6

Candidate Starts for Altheas\_47:

(Start: 6 @34777 has 43 MA's), (10, 34810), (16, 34855), (17, 34972), (24, 35074), (30, 35236), (32, 35260), (34, 35299), (48, 35449), (50, 35473), (55, 35500), (58, 35536), (63, 35572),

Gene: Ariadne\_51 Start: 31805, Stop: 32737, Start Num: 6

Candidate Starts for Ariadne\_51:

(5, 31802), (Start: 6 @31805 has 43 MA's), (8, 31820), (14, 31856), (15, 31877), (16, 31883), (17, 32000), (23, 32093), (27, 32234), (28, 32249), (31, 32282), (36, 32369), (40, 32450), (42, 32462), (45, 32498), (52, 32564), (53, 32579), (56, 32609), (59, 32639), (64, 32675), (65, 32690), (66, 32696), (67, 32711),

Gene: BabyDotz\_44 Start: 35141, Stop: 35962, Start Num: 6

Candidate Starts for BabyDotz\_44:

(Start: 6 @35141 has 43 MA's), (10, 35174), (16, 35219), (17, 35336), (30, 35600), (32, 35624), (34, 35663), (37, 35723), (41, 35750), (48, 35813), (50, 35837), (55, 35864), (62, 35927),

Gene: Blab\_43 Start: 34265, Stop: 35086, Start Num: 6

Candidate Starts for Blab\_43:

(Start: 6 @34265 has 43 MA's), (9, 34295), (10, 34298), (11, 34301), (16, 34343), (17, 34460), (30, 34724), (32, 34748), (34, 34787), (37, 34847), (41, 34874), (48, 34937), (55, 34988), (62, 35051),

Gene: CandC\_44 Start: 33313, Stop: 34134, Start Num: 6

Candidate Starts for CandC\_44:

(2, 33250), (4, 33307), (Start: 6 @33313 has 43 MA's), (10, 33346), (17, 33508), (18, 33514), (30, 33766), (34, 33829), (37, 33889), (41, 33916), (48, 33979), (50, 34003), (55, 34030),

Gene: Casend\_46 Start: 34902, Stop: 35723, Start Num: 6

Candidate Starts for Casend\_46:

(Start: 6 @34902 has 43 MA's), (9, 34932), (10, 34935), (16, 34980), (17, 35097), (30, 35361), (32, 35385), (34, 35424), (41, 35511), (46, 35553), (48, 35574), (55, 35625), (62, 35688),

Gene: DonaldDuck\_45 Start: 34251, Stop: 35072, Start Num: 6

Candidate Starts for DonaldDuck\_45:

(Start: 6 @34251 has 43 MA's), (9, 34281), (10, 34284), (16, 34329), (17, 34446), (30, 34710), (32, 34734), (34, 34773), (41, 34860), (46, 34902), (48, 34923), (55, 34974), (62, 35037),

Gene: EverythinBagel\_44 Start: 34639, Stop: 35460, Start Num: 6

Candidate Starts for EverythinBagel\_44:

(Start: 6 @34639 has 43 MA's), (9, 34669), (10, 34672), (16, 34717), (17, 34834), (30, 35098), (32, 35122), (34, 35161), (41, 35248), (46, 35290), (48, 35311), (55, 35362), (62, 35425),

Gene: FrankDeliGuy\_42 Start: 34202, Stop: 35023, Start Num: 6

Candidate Starts for FrankDeliGuy\_42:

(Start: 6 @34202 has 43 MA's), (9, 34232), (10, 34235), (16, 34280), (17, 34397), (30, 34661), (34, 34724), (37, 34784), (41, 34811), (48, 34874), (55, 34925), (62, 34988),

Gene: Gina\_44 Start: 29692, Stop: 30534, Start Num: 6

Candidate Starts for Gina\_44:

(1, 29623), (Start: 6 @29692 has 43 MA's), (10, 29725), (16, 29770), (17, 29887), (18, 29893), (27, 30103), (29, 30130), (35, 30193), (39, 30262), (48, 30334), (54, 30376), (57, 30412), (64, 30463), (67, 30499),

Gene: Grassboy\_46 Start: 34864, Stop: 35685, Start Num: 6

Candidate Starts for Grassboy\_46:

(Start: 6 @34864 has 43 MA's), (9, 34894), (10, 34897), (11, 34900), (16, 34942), (17, 35059), (30, 35323), (32, 35347), (34, 35386), (37, 35446), (41, 35473), (48, 35536), (55, 35587), (62, 35650),

Gene: Jehoshaphat\_47 Start: 35170, Stop: 35991, Start Num: 6

Candidate Starts for Jehoshaphat\_47:

(Start: 6 @35170 has 43 MA's), (9, 35200), (10, 35203), (16, 35248), (17, 35365), (30, 35629), (32, 35653), (34, 35692), (41, 35779), (46, 35821), (48, 35842), (55, 35893), (62, 35956),

Gene: Judebell\_47 Start: 34667, Stop: 35488, Start Num: 6

Candidate Starts for Judebell\_47:

(Start: 6 @34667 has 43 MA's), (9, 34697), (10, 34700), (11, 34703), (16, 34745), (17, 34862), (30, 35126), (34, 35189), (37, 35249), (41, 35276), (48, 35339), (55, 35390), (62, 35453),

Gene: Kelcole\_44 Start: 33768, Stop: 34589, Start Num: 6

Candidate Starts for Kelcole\_44:

(4, 33762), (Start: 6 @33768 has 43 MA's), (10, 33801), (17, 33963), (18, 33969), (30, 34221), (34, 34284), (37, 34344), (41, 34371), (48, 34434), (50, 34458), (55, 34485),

Gene: KillerQueen\_45 Start: 33563, Stop: 34384, Start Num: 6

Candidate Starts for KillerQueen\_45:

(2, 33500), (4, 33557), (Start: 6 @33563 has 43 MA's), (10, 33596), (17, 33758), (18, 33764), (30, 34016), (34, 34079), (37, 34139), (41, 34166), (48, 34229), (50, 34253), (55, 34280),

Gene: Kyva\_47 Start: 34899, Stop: 35720, Start Num: 6

Candidate Starts for Kyva\_47:

(Start: 6 @34899 has 43 MA's), (9, 34929), (10, 34932), (11, 34935), (16, 34977), (17, 35094), (30, 35358), (32, 35382), (34, 35421), (37, 35481), (41, 35508), (48, 35571), (55, 35622), (62, 35685),

Gene: Llemily\_45 Start: 33946, Stop: 34767, Start Num: 6

Candidate Starts for Llemily\_45:

(Start: 6 @33946 has 43 MA's), (9, 33976), (10, 33979), (16, 34024), (17, 34141), (30, 34405), (32, 34429), (34, 34468), (41, 34555), (46, 34597), (48, 34618), (55, 34669), (62, 34732),

Gene: Lonelysoil\_44 Start: 34188, Stop: 35009, Start Num: 6

Candidate Starts for Lonelysoil\_44:

(Start: 6 @34188 has 43 MA's), (9, 34218), (10, 34221), (16, 34266), (17, 34383), (30, 34647), (32, 34671), (34, 34710), (41, 34797), (46, 34839), (48, 34860), (55, 34911), (62, 34974),

Gene: Marcie\_50 Start: 34414, Stop: 35235, Start Num: 6

Candidate Starts for Marcie\_50:

(4, 34408), (Start: 6 @34414 has 43 MA's), (10, 34447), (17, 34609), (18, 34615), (30, 34867), (34, 34930), (37, 34990), (41, 35017), (48, 35080), (50, 35104), (55, 35131),

Gene: Mashley\_44 Start: 34586, Stop: 35407, Start Num: 6

Candidate Starts for Mashley\_44:

(Start: 6 @34586 has 43 MA's), (10, 34619), (16, 34664), (17, 34781), (30, 35045), (34, 35108), (37, 35168), (41, 35195), (48, 35258), (55, 35309), (62, 35372),

Gene: Mentos\_49 Start: 35680, Stop: 36501, Start Num: 6

Candidate Starts for Mentos\_49:

(Start: 6 @35680 has 43 MA's), (9, 35710), (10, 35713), (11, 35716), (16, 35758), (17, 35875), (30, 36139), (32, 36163), (34, 36202), (37, 36262), (41, 36289), (48, 36352), (55, 36403), (62, 36466),

Gene: Mercedes\_22 Start: 16548, Stop: 17417, Start Num: 7

Candidate Starts for Mercedes\_22:

(Start: 7 @16548 has 1 MA's), (10, 16578), (16, 16623), (22, 16812), (30, 17007), (51, 17247), (61, 17328), (64, 17346),

Gene: Mila11\_47 Start: 35553, Stop: 36374, Start Num: 6

Candidate Starts for Mila11\_47:

(Start: 6 @35553 has 43 MA's), (9, 35583), (10, 35586), (11, 35589), (13, 35601), (16, 35631), (17, 35748), (30, 36012), (32, 36036), (34, 36075), (37, 36135), (41, 36162), (48, 36225), (55, 36276), (62, 36339),

Gene: MorillMayhem\_45 Start: 34460, Stop: 35281, Start Num: 6

Candidate Starts for MorillMayhem\_45:

(Start: 6 @34460 has 43 MA's), (10, 34493), (16, 34538), (17, 34655), (30, 34919), (34, 34982), (37, 35042), (41, 35069), (48, 35132), (55, 35183), (62, 35246),

Gene: Namago\_45 Start: 34029, Stop: 34850, Start Num: 6

Candidate Starts for Namago\_45:

(Start: 6 @34029 has 43 MA's), (9, 34059), (10, 34062), (11, 34065), (16, 34107), (17, 34224), (30, 34488), (32, 34512), (34, 34551), (37, 34611), (41, 34638), (48, 34701), (55, 34752), (62, 34815),

Gene: Nicole72\_38 Start: 31673, Stop: 32521, Start Num: 6

Candidate Starts for Nicole72\_38:

(Start: 6 @31673 has 43 MA's), (8, 31688), (12, 31715), (15, 31745), (17, 31871), (18, 31877), (21, 31928), (25, 32036), (26, 32060), (27, 32090), (29, 32117), (35, 32180), (38, 32234), (47, 32315), (48, 32321), (49, 32336), (54, 32363), (57, 32399), (64, 32450), (67, 32486), (68, 32492),

Gene: Nike\_46 Start: 34984, Stop: 35805, Start Num: 6

Candidate Starts for Nike\_46:

(Start: 6 @34984 has 43 MA's), (10, 35017), (16, 35062), (17, 35179), (30, 35443), (32, 35467), (34, 35506), (37, 35566), (41, 35593), (48, 35656), (55, 35707), (62, 35770),

Gene: Phabia\_45 Start: 34361, Stop: 35182, Start Num: 6

Candidate Starts for Phabia\_45:

(Start: 6 @34361 has 43 MA's), (9, 34391), (10, 34394), (16, 34439), (17, 34556), (30, 34820), (32, 34844), (34, 34883), (41, 34970), (46, 35012), (48, 35033), (55, 35084), (62, 35147),

Gene: Quammi\_43 Start: 34061, Stop: 34882, Start Num: 6

Candidate Starts for Quammi\_43:

(Start: 6 @34061 has 43 MA's), (9, 34091), (10, 34094), (16, 34139), (17, 34256), (30, 34520), (32, 34544), (34, 34583), (41, 34670), (46, 34712), (48, 34733), (55, 34784), (62, 34847),

Gene: RobinRose\_47 Start: 33922, Stop: 34743, Start Num: 6

Candidate Starts for RobinRose\_47:

(2, 33859), (4, 33916), (Start: 6 @33922 has 43 MA's), (10, 33955), (17, 34117), (18, 34123), (30, 34375), (34, 34438), (37, 34498), (41, 34525), (48, 34588), (50, 34612), (55, 34639),

Gene: Romm\_47 Start: 33922, Stop: 34743, Start Num: 6

Candidate Starts for Romm\_47:

(2, 33859), (4, 33916), (Start: 6 @33922 has 43 MA's), (10, 33955), (17, 34117), (18, 34123), (30, 34375), (34, 34438), (37, 34498), (41, 34525), (48, 34588), (50, 34612), (55, 34639),

Gene: Rowlf\_41 Start: 34034, Stop: 34855, Start Num: 6

Candidate Starts for Rowlf\_41:

(Start: 6 @34034 has 43 MA's), (10, 34067), (16, 34112), (17, 34229), (30, 34493), (32, 34517), (34, 34556), (37, 34616), (41, 34643), (48, 34706), (55, 34757), (62, 34820),

Gene: Rudy\_43 Start: 34094, Stop: 34915, Start Num: 6

Candidate Starts for Rudy\_43:

(Start: 6 @34094 has 43 MA's), (9, 34124), (10, 34127), (16, 34172), (17, 34289), (30, 34553), (32, 34577), (34, 34616), (41, 34703), (46, 34745), (48, 34766), (55, 34817), (62, 34880),

Gene: SallyK\_46 Start: 35043, Stop: 35864, Start Num: 6

Candidate Starts for SallyK\_46:

(Start: 6 @35043 has 43 MA's), (9, 35073), (10, 35076), (11, 35079), (16, 35121), (17, 35238), (30, 35502), (32, 35526), (34, 35565), (37, 35625), (41, 35652), (48, 35715), (55, 35766), (62, 35829),

Gene: Sillytadpoles\_46 Start: 33934, Stop: 34755, Start Num: 6

Candidate Starts for Sillytadpoles\_46:

(Start: 6 @33934 has 43 MA's), (9, 33964), (10, 33967), (16, 34012), (17, 34129), (30, 34393), (32, 34417), (34, 34456), (41, 34543), (46, 34585), (48, 34606), (55, 34657), (62, 34720),

Gene: Skugga\_41 Start: 29708, Stop: 30550, Start Num: 6

Candidate Starts for Skugga\_41:

(1, 29639), (Start: 6 @29708 has 43 MA's), (10, 29741), (16, 29786), (17, 29903), (18, 29909), (27, 30119), (29, 30146), (35, 30209), (39, 30278), (48, 30350), (54, 30392), (57, 30428), (64, 30479), (67, 30515),

Gene: SlySloth\_48 Start: 34731, Stop: 35552, Start Num: 6

Candidate Starts for SlySloth\_48:

(Start: 6 @34731 has 43 MA's), (9, 34761), (10, 34764), (11, 34767), (16, 34809), (17, 34926), (30, 35190), (32, 35214), (34, 35253), (37, 35313), (41, 35340), (48, 35403), (55, 35454), (62, 35517),

Gene: Smarties\_51 Start: 31805, Stop: 32737, Start Num: 6

Candidate Starts for Smarties\_51:

(5, 31802), (Start: 6 @31805 has 43 MA's), (8, 31820), (14, 31856), (15, 31877), (16, 31883), (17, 32000), (23, 32093), (27, 32234), (28, 32249), (31, 32282), (36, 32369), (40, 32450), (42, 32462), (45, 32498), (52, 32564), (53, 32579), (56, 32609), (59, 32639), (64, 32675), (65, 32690), (66, 32696), (67, 32711),

Gene: Squash\_48 Start: 34995, Stop: 35816, Start Num: 6

Candidate Starts for Squash\_48:

(Start: 6 @34995 has 43 MA's), (10, 35028), (16, 35073), (17, 35190), (30, 35454), (32, 35478), (34, 35517), (37, 35577), (41, 35604), (48, 35667), (55, 35718), (62, 35781),

Gene: Statler\_46 Start: 34849, Stop: 35670, Start Num: 6

Candidate Starts for Statler\_46:

(Start: 6 @34849 has 43 MA's), (9, 34879), (10, 34882), (11, 34885), (16, 34927), (30, 35308), (32, 35332), (34, 35371), (37, 35431), (41, 35458), (48, 35521), (50, 35545), (55, 35572), (62, 35635),

Gene: StrawberryJamm\_47 Start: 34297, Stop: 35118, Start Num: 6

Candidate Starts for StrawberryJamm\_47:

(Start: 6 @34297 has 43 MA's), (9, 34327), (10, 34330), (11, 34333), (16, 34375), (17, 34492), (30, 34756), (32, 34780), (34, 34819), (37, 34879), (41, 34906), (48, 34969), (55, 35020), (62, 35083),

Gene: Teamocil\_44 Start: 29791, Stop: 30633, Start Num: 6

Candidate Starts for Teamocil\_44:

(1, 29722), (Start: 6 @29791 has 43 MA's), (10, 29824), (16, 29869), (17, 29986), (18, 29992), (27, 30202), (29, 30229), (35, 30292), (39, 30361), (48, 30433), (54, 30475), (57, 30511), (64, 30562), (67, 30598),

Gene: Teehee\_46 Start: 35167, Stop: 35988, Start Num: 6

Candidate Starts for Teehee\_46:

(Start: 6 @35167 has 43 MA's), (9, 35197), (10, 35200), (16, 35245), (17, 35362), (30, 35626), (32, 35650), (34, 35689), (41, 35776), (46, 35818), (48, 35839), (55, 35890), (62, 35953),

Gene: Terij\_38 Start: 28525, Stop: 29463, Start Num: 6

Candidate Starts for Terij\_38:

(5, 28522), (Start: 6 @28525 has 43 MA's), (8, 28540), (14, 28576), (16, 28603), (19, 28765), (20, 28768), (24, 28822), (27, 28957), (28, 28972), (33, 29026), (40, 29173), (43, 29188), (44, 29191), (51, 29278), (54, 29305), (56, 29332), (60, 29374), (67, 29434),

Gene: Tissue\_46 Start: 34672, Stop: 35493, Start Num: 6

Candidate Starts for Tissue\_46:

(Start: 6 @34672 has 43 MA's), (10, 34705), (16, 34750), (17, 34867), (30, 35131), (32, 35155), (34, 35194), (37, 35254), (41, 35281), (48, 35344), (55, 35395), (62, 35458),

Gene: Viceroy\_44 Start: 34064, Stop: 34885, Start Num: 6

Candidate Starts for Viceroy\_44:

(Start: 6 @34064 has 43 MA's), (9, 34094), (10, 34097), (16, 34142), (17, 34259), (30, 34523), (32, 34547), (34, 34586), (41, 34673), (46, 34715), (48, 34736), (55, 34787), (62, 34850),

Gene: Wayne3\_47 Start: 34930, Stop: 35751, Start Num: 6

Candidate Starts for Wayne3\_47:

(Start: 6 @34930 has 43 MA's), (9, 34960), (10, 34963), (16, 35008), (17, 35125), (30, 35389), (32, 35413), (34, 35452), (41, 35539), (46, 35581), (48, 35602), (55, 35653), (62, 35716),

Gene: WheelerS25\_50 Start: 35485, Stop: 36315, Start Num: 3

Candidate Starts for WheelerS25\_50:

(3, 35485), (Start: 6 @35494 has 43 MA's), (10, 35527), (16, 35572), (17, 35689), (30, 35953), (32, 35977), (34, 36016), (37, 36076), (41, 36103), (48, 36166), (50, 36190), (55, 36217),

Gene: Wheelie\_45 Start: 34251, Stop: 35072, Start Num: 6

Candidate Starts for Wheelie\_45:

(Start: 6 @34251 has 43 MA's), (9, 34281), (10, 34284), (16, 34329), (17, 34446), (30, 34710), (32, 34734), (34, 34773), (41, 34860), (46, 34902), (48, 34923), (55, 34974), (62, 35037),

Gene: Zagie\_45 Start: 34499, Stop: 35320, Start Num: 6

Candidate Starts for Zagie\_45:

(Start: 6 @34499 has 43 MA's), (10, 34532), (13, 34547), (16, 34577), (17, 34694), (30, 34958), (32, 34982), (34, 35021), (37, 35081), (41, 35108), (48, 35171), (55, 35222), (62, 35285),

Gene: Zhafia\_48 Start: 34731, Stop: 35552, Start Num: 6

Candidate Starts for Zhafia\_48:

(Start: 6 @34731 has 43 MA's), (9, 34761), (10, 34764), (16, 34809), (17, 34926), (30, 35190), (32, 35214), (34, 35253), (41, 35340), (46, 35382), (48, 35403), (55, 35454), (62, 35517),