

# Pham 283813



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 283813 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283813 has 62 members, 23 are drafts.

Phages represented in each track:

- Track 1 : Toad24\_53, Shen\_50, Zixiang\_54, Amanises\_60
- Track 2 : Gravel\_60, Pelletreau\_60, Westrich\_59
- Track 3 : Vulpecula\_49, Brynnie\_49
- Track 4 : WileyE\_55, Chickaboom\_51
- Track 5 : Orcanus\_51
- Track 6 : Chicken\_51
- Track 7 : Eesa\_50
- Track 8 : Abidatro\_52
- Track 9 : Jamun\_49
- Track 10 : Galaxy\_49
- Track 11 : Niblet\_54
- Track 12 : Ruchi\_49, Basilisk\_50
- Track 13 : KendraB23\_61
- Track 14 : TaylorSipt\_51
- Track 15 : PhirstandPhine\_60, Kepler\_53, OtsoOtso\_53, Amelia\_52, HannahPhantana\_53, Bibble12\_56, Cote\_54, Bedetta\_57, Polka\_52, Lunar\_53, Jerole\_53, Colusalem\_53
- Track 16 : Kuleana\_53
- Track 17 : Coral\_52
- Track 18 : Melons\_53, Pineda\_55, Daob\_54
- Track 19 : DanHam62\_53, AdoptaAdorbs\_52, Amphitrite\_53, Juno112\_52, Fingolfin\_53, KHumphrey\_53, AmiCi24\_52, RedFox\_53, Atlantica\_53, HamCheese\_53, Glotell\_54, Laphuphu24k\_52, Camara\_53, Rattail\_53, Oppalora\_52
- Track 20 : Babushka\_50
- Track 21 : Renna12\_52
- Track 22 : StuartMinion\_44, AlexMinion\_54
- Track 23 : PhluffyCoco\_53
- Track 24 : Azaz\_54, Leona\_52, Andrew\_54

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

The start number called the most often in the published annotations is 9, it was called in 39 of the 39 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abidatro\_52, AdoptaAdorbs\_52, AlexMinion\_54, Amanises\_60, Amelia\_52, AmiCi24\_52, Amphitrite\_53, Andrew\_54, Atlantica\_53, Azaz\_54, Babushka\_50, Basilisk\_50, Bedetta\_57, Bibble12\_56, Brynnie\_49, Camara\_53, Chickaboom\_51, Chicken\_51, Colusalem\_53, Coral\_52, Cote\_54, DanHam62\_53, Daob\_54, Eesa\_50, Fingolfin\_53, Galaxy\_49, Glotell\_54, Gravel\_60, HamCheese\_53, HannahPhantana\_53, Jamun\_49, Jerole\_53, Juno112\_52, KHumphrey\_53, KendraB23\_61, Kepler\_53, Kuleana\_53, Laphuphu24k\_52, Leona\_52, Lunar\_53, Melons\_53, Niblet\_54, Oppalora\_52, Orcanus\_51, OtsoOtso\_53, Pelletreau\_60, PhirstandPhine\_60, PhluffyCoco\_53, Pineda\_55, Polka\_52, Rattail\_53, RedFox\_53, Renna12\_52, Ruchi\_49, Shen\_50, StuartMinion\_44, TaylorSipht\_51, Toad24\_53, Vulpecula\_49, Westrich\_59, WileyE\_55, Zixiang\_54,

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 9:

- Found in 62 of 62 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 39 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro\_52 (AS1), AdoptaAdorbs\_52 (AS3), AlexMinion\_54 (AS3), Amanises\_60 (AS1), Amelia\_52 (AS2), AmiCi24\_52 (AS3), Amphitrite\_53 (AS3), Andrew\_54 (AS3), Atlantica\_53 (AS3), Azaz\_54 (AS3), Babushka\_50 (AS3), Basilisk\_50 (AS1), Bedetta\_57 (AS2), Bibble12\_56 (AS2), Brynnie\_49 (AS1), Camara\_53 (AS3), Chickaboom\_51 (AS1), Chicken\_51 (AS1), Colusalem\_53 (AS2), Coral\_52 (AS2), Cote\_54 (AS2), DanHam62\_53 (AS3), Daob\_54 (AS2), Eesa\_50 (AS1), Fingolfin\_53 (AS3), Galaxy\_49 (AS1), Glotell\_54 (AS3), Gravel\_60 (AS1), HamCheese\_53 (AS3), HannahPhantana\_53 (AS2), Jamun\_49 (AS1), Jerole\_53 (AS2), Juno112\_52 (AS3), KHumphrey\_53 (AS3), KendraB23\_61 (AS1), Kepler\_53 (AS2), Kuleana\_53 (AS2), Laphuphu24k\_52 (AS3), Leona\_52 (AS3), Lunar\_53 (AS2), Melons\_53 (AS2), Niblet\_54 (AS1), Oppalora\_52 (AS3), Orcanus\_51 (AS1), OtsoOtso\_53 (AS2), Pelletreau\_60 (AS1), PhirstandPhine\_60 (AS2), PhluffyCoco\_53 (AS3), Pineda\_55 (AS2), Polka\_52 (AS2), Rattail\_53 (AS3), RedFox\_53 (AS3), Renna12\_52 (AS3), Ruchi\_49 (AS1), Shen\_50 (AS1), StuartMinion\_44 (AS3), TaylorSipht\_51 (AS1), Toad24\_53 (AS1), Vulpecula\_49 (AS1), Westrich\_59 (AS1), WileyE\_55 (AS1), Zixiang\_54 (AS1),

### Summary by clusters:

There are 3 clusters represented in this pham: AS3, AS2, AS1,

Info for manual annotations of cluster AS1:

- Start number 9 was manually annotated 12 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 9 was manually annotated 13 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 9 was manually annotated 14 times for cluster AS3.

### **Gene Information:**

Gene: Abidatro\_52 Start: 33557, Stop: 33799, Start Num: 9

Candidate Starts for Abidatro\_52:

(Start: 9 @33557 has 39 MA's), (11, 33596), (14, 33605), (17, 33620), (20, 33629),

Gene: AdoptaAdorbs\_52 Start: 32792, Stop: 33037, Start Num: 9

Candidate Starts for AdoptaAdorbs\_52:

(Start: 9 @32792 has 39 MA's), (10, 32801), (12, 32837), (13, 32840), (17, 32858), (19, 32864), (27, 32951), (31, 32972),

Gene: AlexMinion\_54 Start: 32816, Stop: 33064, Start Num: 9

Candidate Starts for AlexMinion\_54:

(6, 32708), (Start: 9 @32816 has 39 MA's), (10, 32825), (12, 32861), (13, 32864), (17, 32882), (19, 32888), (27, 32975), (28, 32978), (31, 32996),

Gene: Amanises\_60 Start: 34420, Stop: 34662, Start Num: 9

Candidate Starts for Amanises\_60:

(Start: 9 @34420 has 39 MA's), (11, 34459), (17, 34483), (20, 34492), (24, 34528), (32, 34612),

Gene: Amelia\_52 Start: 32428, Stop: 32658, Start Num: 9

Candidate Starts for Amelia\_52:

(3, 32263), (8, 32338), (Start: 9 @32428 has 39 MA's), (13, 32461), (20, 32485), (22, 32506), (25, 32551), (26, 32560), (29, 32578), (33, 32614),

Gene: AmiCi24\_52 Start: 32901, Stop: 33146, Start Num: 9

Candidate Starts for AmiCi24\_52:

(Start: 9 @32901 has 39 MA's), (10, 32910), (12, 32946), (13, 32949), (17, 32967), (19, 32973), (27, 33060), (31, 33081),

Gene: Amphitrite\_53 Start: 32791, Stop: 33036, Start Num: 9

Candidate Starts for Amphitrite\_53:

(Start: 9 @32791 has 39 MA's), (10, 32800), (12, 32836), (13, 32839), (17, 32857), (19, 32863), (27, 32950), (31, 32971),

Gene: Andrew\_54 Start: 32798, Stop: 33043, Start Num: 9

Candidate Starts for Andrew\_54:

(Start: 9 @32798 has 39 MA's), (10, 32807), (12, 32843), (13, 32846), (17, 32864), (27, 32957), (31, 32978),

Gene: Atlantica\_53 Start: 32903, Stop: 33148, Start Num: 9

Candidate Starts for Atlantica\_53:

(Start: 9 @32903 has 39 MA's), (10, 32912), (12, 32948), (13, 32951), (17, 32969), (19, 32975), (27, 33062), (31, 33083),

Gene: Azaz\_54 Start: 32983, Stop: 33228, Start Num: 9

Candidate Starts for Azaz\_54:

(Start: 9 @32983 has 39 MA's), (10, 32992), (12, 33028), (13, 33031), (17, 33049), (27, 33142), (31, 33163),

Gene: Babushka\_50 Start: 32713, Stop: 32955, Start Num: 9

Candidate Starts for Babushka\_50:

(Start: 9 @32713 has 39 MA's), (10, 32722), (12, 32758), (13, 32761), (17, 32779), (18, 32782), (20, 32788), (21, 32791), (28, 32875), (31, 32893),

Gene: Basilisk\_50 Start: 32777, Stop: 33019, Start Num: 9

Candidate Starts for Basilisk\_50:

(Start: 9 @32777 has 39 MA's), (11, 32816), (14, 32825), (17, 32840), (20, 32849), (27, 32930),

Gene: Bedetta\_57 Start: 32590, Stop: 32817, Start Num: 9

Candidate Starts for Bedetta\_57:

(3, 32425), (8, 32500), (Start: 9 @32590 has 39 MA's), (13, 32620), (20, 32644), (22, 32665), (25, 32710), (26, 32719), (29, 32737), (33, 32773),

Gene: Bible12\_56 Start: 32423, Stop: 32653, Start Num: 9

Candidate Starts for Bible12\_56:

(3, 32258), (8, 32333), (Start: 9 @32423 has 39 MA's), (13, 32456), (20, 32480), (22, 32501), (25, 32546), (26, 32555), (29, 32573), (33, 32609),

Gene: Brynnie\_49 Start: 32634, Stop: 32876, Start Num: 9

Candidate Starts for Brynnie\_49:

(Start: 9 @32634 has 39 MA's), (11, 32673), (14, 32682), (17, 32697), (19, 32703), (20, 32706), (27, 32787),

Gene: Camara\_53 Start: 32794, Stop: 33039, Start Num: 9

Candidate Starts for Camara\_53:

(Start: 9 @32794 has 39 MA's), (10, 32803), (12, 32839), (13, 32842), (17, 32860), (19, 32866), (27, 32953), (31, 32974),

Gene: Chickaboom\_51 Start: 33089, Stop: 33352, Start Num: 9

Candidate Starts for Chickaboom\_51:

(2, 32888), (4, 32942), (5, 32957), (Start: 9 @33089 has 39 MA's), (11, 33128), (14, 33137), (15, 33152), (16, 33158), (17, 33173), (19, 33179), (20, 33182), (27, 33263),

Gene: Chicken\_51 Start: 33736, Stop: 33987, Start Num: 9

Candidate Starts for Chicken\_51:

(Start: 9 @33736 has 39 MA's), (11, 33775), (17, 33799), (20, 33808), (27, 33889),

Gene: Colusalem\_53 Start: 32405, Stop: 32635, Start Num: 9

Candidate Starts for Colusalem\_53:

(3, 32240), (8, 32315), (Start: 9 @32405 has 39 MA's), (13, 32438), (20, 32462), (22, 32483), (25, 32528), (26, 32537), (29, 32555), (33, 32591),

Gene: Coral\_52 Start: 32296, Stop: 32523, Start Num: 9

Candidate Starts for Coral\_52:

(3, 32131), (8, 32206), (Start: 9 @32296 has 39 MA's), (13, 32326), (20, 32350), (22, 32371), (26, 32425), (29, 32443), (33, 32479),

Gene: Cote\_54 Start: 32769, Stop: 32996, Start Num: 9

Candidate Starts for Cote\_54:

(3, 32604), (8, 32679), (Start: 9 @32769 has 39 MA's), (13, 32799), (20, 32823), (22, 32844), (25, 32889), (26, 32898), (29, 32916), (33, 32952),

Gene: DanHam62\_53 Start: 32902, Stop: 33147, Start Num: 9  
Candidate Starts for DanHam62\_53:  
(Start: 9 @32902 has 39 MA's), (10, 32911), (12, 32947), (13, 32950), (17, 32968), (19, 32974), (27, 33061), (31, 33082),

Gene: Daob\_54 Start: 32780, Stop: 33007, Start Num: 9  
Candidate Starts for Daob\_54:  
(3, 32615), (8, 32690), (Start: 9 @32780 has 39 MA's), (13, 32810), (20, 32834), (22, 32855), (25, 32900), (29, 32927), (33, 32963),

Gene: Eesa\_50 Start: 34151, Stop: 34402, Start Num: 9  
Candidate Starts for Eesa\_50:  
(Start: 9 @34151 has 39 MA's), (11, 34190), (17, 34214), (20, 34223), (24, 34259), (27, 34304),

Gene: Fingolfin\_53 Start: 32905, Stop: 33150, Start Num: 9  
Candidate Starts for Fingolfin\_53:  
(Start: 9 @32905 has 39 MA's), (10, 32914), (12, 32950), (13, 32953), (17, 32971), (19, 32977), (27, 33064), (31, 33085),

Gene: Galaxy\_49 Start: 31972, Stop: 32214, Start Num: 9  
Candidate Starts for Galaxy\_49:  
(Start: 9 @31972 has 39 MA's), (11, 32011), (14, 32020), (17, 32035), (20, 32044), (28, 32128),

Gene: Glotell\_54 Start: 32949, Stop: 33194, Start Num: 9  
Candidate Starts for Glotell\_54:  
(Start: 9 @32949 has 39 MA's), (10, 32958), (12, 32994), (13, 32997), (17, 33015), (19, 33021), (27, 33108), (31, 33129),

Gene: Gravel\_60 Start: 34235, Stop: 34486, Start Num: 9  
Candidate Starts for Gravel\_60:  
(Start: 9 @34235 has 39 MA's), (11, 34274), (17, 34298), (20, 34307), (24, 34343), (27, 34388),

Gene: HamCheese\_53 Start: 32889, Stop: 33134, Start Num: 9  
Candidate Starts for HamCheese\_53:  
(Start: 9 @32889 has 39 MA's), (10, 32898), (12, 32934), (13, 32937), (17, 32955), (19, 32961), (27, 33048), (31, 33069),

Gene: HannahPhantana\_53 Start: 32423, Stop: 32653, Start Num: 9  
Candidate Starts for HannahPhantana\_53:  
(3, 32258), (8, 32333), (Start: 9 @32423 has 39 MA's), (13, 32456), (20, 32480), (22, 32501), (25, 32546), (26, 32555), (29, 32573), (33, 32609),

Gene: Jamun\_49 Start: 33216, Stop: 33458, Start Num: 9  
Candidate Starts for Jamun\_49:  
(4, 33069), (5, 33084), (Start: 9 @33216 has 39 MA's), (11, 33255), (14, 33264), (20, 33288), (27, 33369),

Gene: Jerole\_53 Start: 32547, Stop: 32777, Start Num: 9  
Candidate Starts for Jerole\_53:  
(3, 32382), (8, 32457), (Start: 9 @32547 has 39 MA's), (13, 32580), (20, 32604), (22, 32625), (25, 32670), (26, 32679), (29, 32697), (33, 32733),

Gene: Juno112\_52 Start: 32905, Stop: 33150, Start Num: 9  
Candidate Starts for Juno112\_52:  
(Start: 9 @32905 has 39 MA's), (10, 32914), (12, 32950), (13, 32953), (17, 32971), (19, 32977), (27, 33064), (31, 33085),

Gene: KHumphrey\_53 Start: 32793, Stop: 33038, Start Num: 9  
Candidate Starts for KHumphrey\_53:  
(Start: 9 @32793 has 39 MA's), (10, 32802), (12, 32838), (13, 32841), (17, 32859), (19, 32865), (27, 32952), (31, 32973),

Gene: KendraB23\_61 Start: 34421, Stop: 34663, Start Num: 9  
Candidate Starts for KendraB23\_61:  
(Start: 9 @34421 has 39 MA's), (11, 34460), (17, 34484), (20, 34493), (24, 34529), (32, 34613),

Gene: Kepler\_53 Start: 32544, Stop: 32774, Start Num: 9  
Candidate Starts for Kepler\_53:  
(3, 32379), (8, 32454), (Start: 9 @32544 has 39 MA's), (13, 32577), (20, 32601), (22, 32622), (25, 32667), (26, 32676), (29, 32694), (33, 32730),

Gene: Kuleana\_53 Start: 32118, Stop: 32369, Start Num: 9  
Candidate Starts for Kuleana\_53:  
(1, 31848), (7, 32004), (8, 32028), (Start: 9 @32118 has 39 MA's), (12, 32163), (13, 32166), (19, 32190), (21, 32196), (22, 32214), (23, 32217), (26, 32268), (27, 32280), (28, 32283), (29, 32286),

Gene: Laphuphu24k\_52 Start: 32889, Stop: 33134, Start Num: 9  
Candidate Starts for Laphuphu24k\_52:  
(Start: 9 @32889 has 39 MA's), (10, 32898), (12, 32934), (13, 32937), (17, 32955), (19, 32961), (27, 33048), (31, 33069),

Gene: Leona\_52 Start: 32984, Stop: 33229, Start Num: 9  
Candidate Starts for Leona\_52:  
(Start: 9 @32984 has 39 MA's), (10, 32993), (12, 33029), (13, 33032), (17, 33050), (27, 33143), (31, 33164),

Gene: Lunar\_53 Start: 32459, Stop: 32686, Start Num: 9  
Candidate Starts for Lunar\_53:  
(3, 32294), (8, 32369), (Start: 9 @32459 has 39 MA's), (13, 32489), (20, 32513), (22, 32534), (25, 32579), (26, 32588), (29, 32606), (33, 32642),

Gene: Melons\_53 Start: 32273, Stop: 32500, Start Num: 9  
Candidate Starts for Melons\_53:  
(3, 32108), (8, 32183), (Start: 9 @32273 has 39 MA's), (13, 32303), (20, 32327), (22, 32348), (25, 32393), (29, 32420), (33, 32456),

Gene: Niblet\_54 Start: 33823, Stop: 34074, Start Num: 9  
Candidate Starts for Niblet\_54:  
(Start: 9 @33823 has 39 MA's), (11, 33862), (17, 33886), (20, 33895), (27, 33976),

Gene: Oppalora\_52 Start: 32903, Stop: 33148, Start Num: 9  
Candidate Starts for Oppalora\_52:  
(Start: 9 @32903 has 39 MA's), (10, 32912), (12, 32948), (13, 32951), (17, 32969), (19, 32975), (27, 33062), (31, 33083),

Gene: Orcanus\_51 Start: 33804, Stop: 34046, Start Num: 9

Candidate Starts for Orcanus\_51:

(Start: 9 @33804 has 39 MA's), (11, 33843), (17, 33867), (20, 33876), (24, 33912),

Gene: OtsoOtso\_53 Start: 32277, Stop: 32507, Start Num: 9

Candidate Starts for OtsoOtso\_53:

(3, 32112), (8, 32187), (Start: 9 @32277 has 39 MA's), (13, 32310), (20, 32334), (22, 32355), (25, 32400), (26, 32409), (29, 32427), (33, 32463),

Gene: Pelletreau\_60 Start: 34235, Stop: 34486, Start Num: 9

Candidate Starts for Pelletreau\_60:

(Start: 9 @34235 has 39 MA's), (11, 34274), (17, 34298), (20, 34307), (24, 34343), (27, 34388),

Gene: PhirstandPhine\_60 Start: 32419, Stop: 32646, Start Num: 9

Candidate Starts for PhirstandPhine\_60:

(3, 32254), (8, 32329), (Start: 9 @32419 has 39 MA's), (13, 32449), (20, 32473), (22, 32494), (25, 32539), (26, 32548), (29, 32566), (33, 32602),

Gene: PhluffyCoco\_53 Start: 33003, Stop: 33248, Start Num: 9

Candidate Starts for PhluffyCoco\_53:

(Start: 9 @33003 has 39 MA's), (10, 33012), (12, 33048), (13, 33051), (17, 33069), (19, 33075), (27, 33162), (30, 33177), (31, 33183),

Gene: Pineda\_55 Start: 32588, Stop: 32815, Start Num: 9

Candidate Starts for Pineda\_55:

(3, 32423), (8, 32498), (Start: 9 @32588 has 39 MA's), (13, 32618), (20, 32642), (22, 32663), (25, 32708), (29, 32735), (33, 32771),

Gene: Polka\_52 Start: 32277, Stop: 32507, Start Num: 9

Candidate Starts for Polka\_52:

(3, 32112), (8, 32187), (Start: 9 @32277 has 39 MA's), (13, 32310), (20, 32334), (22, 32355), (25, 32400), (26, 32409), (29, 32427), (33, 32463),

Gene: Rattail\_53 Start: 33089, Stop: 33334, Start Num: 9

Candidate Starts for Rattail\_53:

(Start: 9 @33089 has 39 MA's), (10, 33098), (12, 33134), (13, 33137), (17, 33155), (19, 33161), (27, 33248), (31, 33269),

Gene: RedFox\_53 Start: 33002, Stop: 33247, Start Num: 9

Candidate Starts for RedFox\_53:

(Start: 9 @33002 has 39 MA's), (10, 33011), (12, 33047), (13, 33050), (17, 33068), (19, 33074), (27, 33161), (31, 33182),

Gene: Renna12\_52 Start: 32855, Stop: 33100, Start Num: 9

Candidate Starts for Renna12\_52:

(Start: 9 @32855 has 39 MA's), (10, 32864), (12, 32900), (13, 32903), (17, 32921), (19, 32927), (27, 33014), (29, 33020), (31, 33035),

Gene: Ruchi\_49 Start: 32699, Stop: 32941, Start Num: 9

Candidate Starts for Ruchi\_49:

(Start: 9 @32699 has 39 MA's), (11, 32738), (14, 32747), (17, 32762), (20, 32771), (27, 32852),

Gene: Shen\_50 Start: 32334, Stop: 32576, Start Num: 9

Candidate Starts for Shen\_50:

(Start: 9 @32334 has 39 MA's), (11, 32373), (17, 32397), (20, 32406), (24, 32442), (32, 32526),

Gene: StuartMinion\_44 Start: 29715, Stop: 29963, Start Num: 9

Candidate Starts for StuartMinion\_44:

(6, 29607), (Start: 9 @29715 has 39 MA's), (10, 29724), (12, 29760), (13, 29763), (17, 29781), (19, 29787), (27, 29874), (28, 29877), (31, 29895),

Gene: TaylorSipht\_51 Start: 33344, Stop: 33586, Start Num: 9

Candidate Starts for TaylorSipht\_51:

(Start: 9 @33344 has 39 MA's), (11, 33383), (17, 33407), (20, 33416), (32, 33536),

Gene: Toad24\_53 Start: 34474, Stop: 34716, Start Num: 9

Candidate Starts for Toad24\_53:

(Start: 9 @34474 has 39 MA's), (11, 34513), (17, 34537), (20, 34546), (24, 34582), (32, 34666),

Gene: Vulpecula\_49 Start: 32359, Stop: 32601, Start Num: 9

Candidate Starts for Vulpecula\_49:

(Start: 9 @32359 has 39 MA's), (11, 32398), (14, 32407), (17, 32422), (19, 32428), (20, 32431), (27, 32512),

Gene: Westrich\_59 Start: 34159, Stop: 34410, Start Num: 9

Candidate Starts for Westrich\_59:

(Start: 9 @34159 has 39 MA's), (11, 34198), (17, 34222), (20, 34231), (24, 34267), (27, 34312),

Gene: WileyE\_55 Start: 33089, Stop: 33352, Start Num: 9

Candidate Starts for WileyE\_55:

(2, 32888), (4, 32942), (5, 32957), (Start: 9 @33089 has 39 MA's), (11, 33128), (14, 33137), (15, 33152), (16, 33158), (17, 33173), (19, 33179), (20, 33182), (27, 33263),

Gene: Zixiang\_54 Start: 33838, Stop: 34080, Start Num: 9

Candidate Starts for Zixiang\_54:

(Start: 9 @33838 has 39 MA's), (11, 33877), (17, 33901), (20, 33910), (24, 33946), (32, 34030),