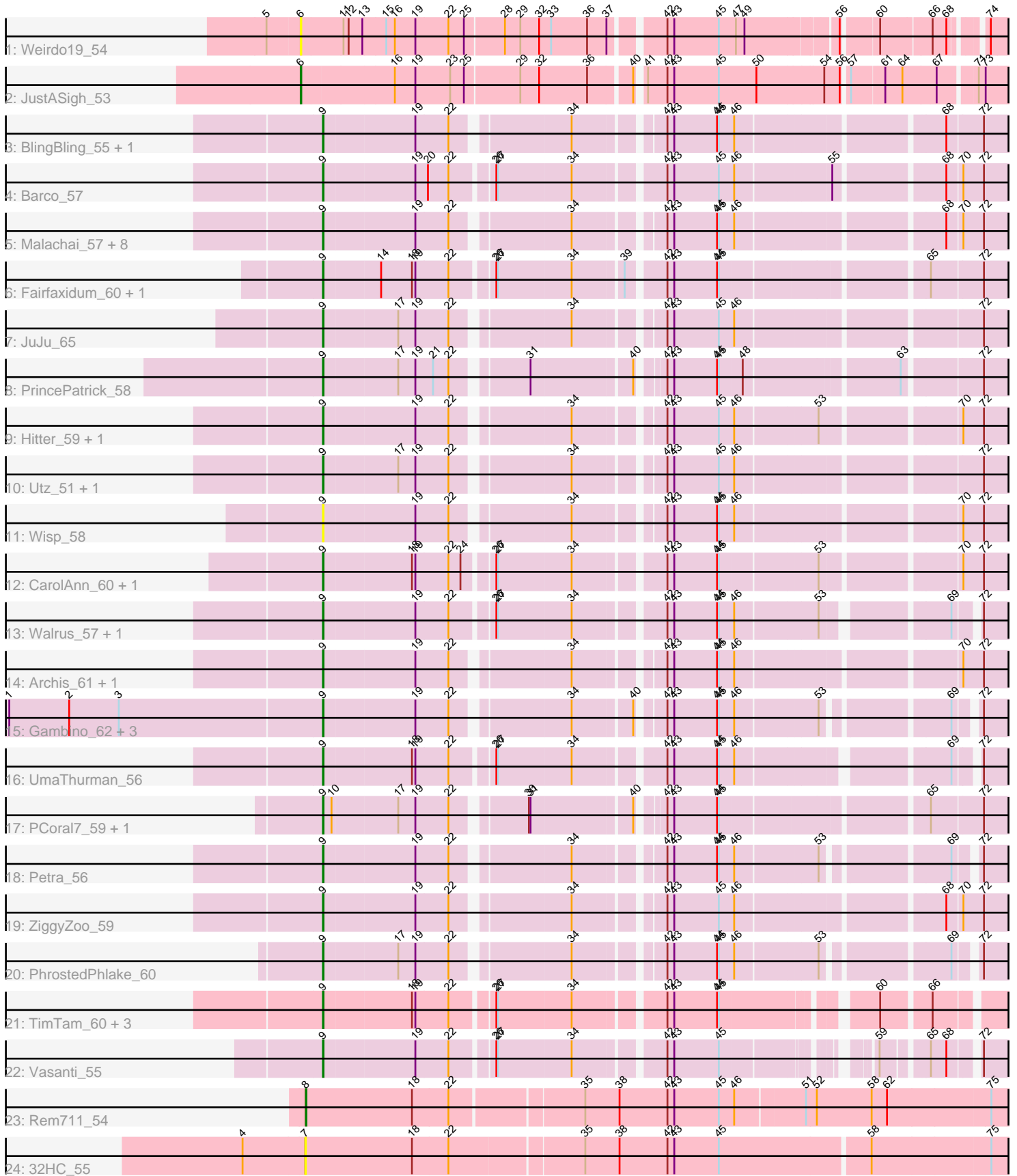


# Pham 168328



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 168328 Report

This analysis was run 07/09/24 on database version 566.

Pham number 168328 has 46 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Weirdo19\_54
- Track 2 : JustASigh\_53
- Track 3 : BlingBling\_55, Melba\_57
- Track 4 : Barco\_57
- Track 5 : Malachai\_57, Begonia\_57, MintFen\_59, Guacamole\_56, Delian\_62, Jalammah\_62, JasperJr\_56, CaptainKirk2\_59, Zarbodnamra\_58
- Track 6 : Fairfaxidum\_60, William\_61
- Track 7 : JuJu\_65
- Track 8 : PrincePatrick\_58
- Track 9 : Hitter\_59, Fenry\_57
- Track 10 : Utz\_51, Obliviate\_55
- Track 11 : Wisp\_58
- Track 12 : CarolAnn\_60, Blino\_61
- Track 13 : Walrus\_57, Pipp\_61
- Track 14 : Archis\_61, Samba\_58
- Track 15 : Gambino\_62, Azula\_60, Blueberry\_59, MissRona\_60
- Track 16 : UmaThurman\_56
- Track 17 : PCoral7\_59, Toast\_59
- Track 18 : Petra\_56
- Track 19 : ZiggyZoo\_59
- Track 20 : PhrostedPhlake\_60
- Track 21 : TimTam\_60, Eviarto\_60, Nymphadora\_60, BatStarr\_59
- Track 22 : Vasanti\_55
- Track 23 : Rem711\_54
- Track 24 : 32HC\_55

### ***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 41 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archis\_61, Azula\_60, Barco\_57, BatStarr\_59, Begonia\_57, BlingBling\_55, Blino\_61, Blueberry\_59, CaptainKirk2\_59, CarolAnn\_60, Delian\_62, Eviarto\_60,

Fairfaxidum\_60, Fenry\_57, Gambino\_62, Guacamole\_56, Hitter\_59, Jalammah\_62, JasperJr\_56, JuJu\_65, Malachai\_57, Melba\_57, MintFen\_59, MissRona\_60, Nymphadora\_60, Obliviate\_55, PCoral7\_59, Petra\_56, PhrostedPhlake\_60, Pipp\_61, PrincePatrick\_58, Samba\_58, TimTam\_60, Toast\_59, UmaThurman\_56, Utz\_51, Vasanti\_55, Walrus\_57, William\_61, Wisp\_58, Zarbodnamra\_58, ZiggyZoo\_59,

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

- 

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

- 32HC\_55, JustASigh\_53, Rem711\_54, Weirido19\_54,

### Summary by start number:

Start 6:

- Found in 2 of 46 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JustASigh\_53 (AH), Weirido19\_54 (AH),

Start 7:

- Found in 1 of 46 ( 2.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 32HC\_55 (Z),

Start 8:

- Found in 1 of 46 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rem711\_54 (Z),

Start 9:

- Found in 42 of 46 ( 91.3% ) of genes in pham
- Manual Annotations of this start: 41 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archis\_61 (CV), Azula\_60 (CV), Barco\_57 (CV), BatStarr\_59 (CZ1), Begonia\_57 (CV), BlingBling\_55 (CV), Blino\_61 (CV), Blueberry\_59 (CV), CaptainKirk2\_59 (CV), CarolAnn\_60 (CV), Delian\_62 (CV), Eviarto\_60 (CZ1), Fairfaxidum\_60 (CV), Fenry\_57 (CV), Gambino\_62 (CV), Guacamole\_56 (CV), Hitter\_59 (CV), Jalammah\_62 (CV), JasperJr\_56 (CV), JuJu\_65 (CV), Malachai\_57 (CV), Melba\_57 (CV), MintFen\_59 (CV), MissRona\_60 (CV), Nymphadora\_60 (CZ1), Obliviate\_55 (CV), PCoral7\_59 (CV), Petra\_56 (CV), PhrostedPhlake\_60 (CV), Pipp\_61 (CV), PrincePatrick\_58 (CV), Samba\_58 (CV), TimTam\_60 (CZ1), Toast\_59 (CV), UmaThurman\_56 (CV), Utz\_51 (CV), Vasanti\_55 (CZ2), Walrus\_57 (CV), William\_61 (CV), Wisp\_58 (CV), Zarbodnamra\_58 (CV), ZiggyZoo\_59 (CV),

### Summary by clusters:

There are 5 clusters represented in this pham: CZ2, AH, Z, CZ1, CV,

Info for manual annotations of cluster AH:

- Start number 6 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster CV:

- Start number 9 was manually annotated 36 times for cluster CV.

Info for manual annotations of cluster CZ1:

- Start number 9 was manually annotated 4 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 9 was manually annotated 1 time for cluster CZ2.

Info for manual annotations of cluster Z:

- Start number 8 was manually annotated 1 time for cluster Z.

### **Gene Information:**

Gene: 32HC\_55 Start: 37634, Stop: 38950, Start Num: 7

Candidate Starts for 32HC\_55:

(4, 37526), (7, 37634), (18, 37820), (22, 37883), (35, 38108), (38, 38168), (42, 38252), (43, 38264), (45, 38342), (58, 38597), (75, 38801),

Gene: Archis\_61 Start: 38380, Stop: 39471, Start Num: 9

Candidate Starts for Archis\_61:

(Start: 9 @38380 has 41 MA's), (19, 38536), (22, 38593), (34, 38776), (42, 38905), (43, 38917), (44, 38992), (45, 38995), (46, 39022), (70, 39373), (72, 39409),

Gene: Azula\_60 Start: 40662, Stop: 41723, Start Num: 9

Candidate Starts for Azula\_60:

(1, 40119), (2, 40224), (3, 40311), (Start: 9 @40662 has 41 MA's), (19, 40818), (22, 40875), (34, 41058), (40, 41154), (42, 41187), (43, 41199), (44, 41274), (45, 41277), (46, 41304), (53, 41439), (69, 41628), (72, 41661),

Gene: Barco\_57 Start: 37936, Stop: 39048, Start Num: 9

Candidate Starts for Barco\_57:

(Start: 9 @37936 has 41 MA's), (19, 38092), (20, 38113), (22, 38149), (26, 38215), (27, 38218), (34, 38344), (42, 38482), (43, 38494), (45, 38572), (46, 38599), (55, 38755), (68, 38926), (70, 38950), (72, 38986),

Gene: BatStarr\_59 Start: 42217, Stop: 43296, Start Num: 9

Candidate Starts for BatStarr\_59:

(Start: 9 @42217 has 41 MA's), (18, 42367), (19, 42373), (22, 42430), (26, 42496), (27, 42499), (34, 42625), (42, 42763), (43, 42775), (44, 42850), (45, 42853), (60, 43084), (66, 43162),

Gene: Begonia\_57 Start: 40175, Stop: 41266, Start Num: 9

Candidate Starts for Begonia\_57:

(Start: 9 @40175 has 41 MA's), (19, 40331), (22, 40388), (34, 40571), (42, 40700), (43, 40712), (44, 40787), (45, 40790), (46, 40817), (68, 41144), (70, 41168), (72, 41204),

Gene: BlingBling\_55 Start: 38393, Stop: 39484, Start Num: 9

Candidate Starts for BlingBling\_55:

(Start: 9 @38393 has 41 MA's), (19, 38549), (22, 38606), (34, 38789), (42, 38918), (43, 38930), (44, 39005), (45, 39008), (46, 39035), (68, 39362), (72, 39422),

Gene: Blino\_61 Start: 43357, Stop: 44466, Start Num: 9

Candidate Starts for Blino\_61:

(Start: 9 @43357 has 41 MA's), (18, 43507), (19, 43513), (22, 43570), (24, 43591), (26, 43636), (27, 43639), (34, 43765), (42, 43903), (43, 43915), (44, 43990), (45, 43993), (53, 44152), (70, 44368), (72, 44404),

Gene: Blueberry\_59 Start: 40662, Stop: 41723, Start Num: 9

Candidate Starts for Blueberry\_59:

(1, 40119), (2, 40224), (3, 40311), (Start: 9 @40662 has 41 MA's), (19, 40818), (22, 40875), (34, 41058), (40, 41154), (42, 41187), (43, 41199), (44, 41274), (45, 41277), (46, 41304), (53, 41439), (69, 41628), (72, 41661),

Gene: CaptainKirk2\_59 Start: 38175, Stop: 39266, Start Num: 9

Candidate Starts for CaptainKirk2\_59:

(Start: 9 @38175 has 41 MA's), (19, 38331), (22, 38388), (34, 38571), (42, 38700), (43, 38712), (44, 38787), (45, 38790), (46, 38817), (68, 39144), (70, 39168), (72, 39204),

Gene: CarolAnn\_60 Start: 43356, Stop: 44465, Start Num: 9

Candidate Starts for CarolAnn\_60:

(Start: 9 @43356 has 41 MA's), (18, 43506), (19, 43512), (22, 43569), (24, 43590), (26, 43635), (27, 43638), (34, 43764), (42, 43902), (43, 43914), (44, 43989), (45, 43992), (53, 44151), (70, 44367), (72, 44403),

Gene: Delian\_62 Start: 38173, Stop: 39264, Start Num: 9

Candidate Starts for Delian\_62:

(Start: 9 @38173 has 41 MA's), (19, 38329), (22, 38386), (34, 38569), (42, 38698), (43, 38710), (44, 38785), (45, 38788), (46, 38815), (68, 39142), (70, 39166), (72, 39202),

Gene: Eviarto\_60 Start: 42192, Stop: 43271, Start Num: 9

Candidate Starts for Eviarto\_60:

(Start: 9 @42192 has 41 MA's), (18, 42342), (19, 42348), (22, 42405), (26, 42471), (27, 42474), (34, 42600), (42, 42738), (43, 42750), (44, 42825), (45, 42828), (60, 43059), (66, 43137),

Gene: Fairfaxidum\_60 Start: 40525, Stop: 41622, Start Num: 9

Candidate Starts for Fairfaxidum\_60:

(Start: 9 @40525 has 41 MA's), (14, 40621), (18, 40675), (19, 40681), (22, 40738), (26, 40804), (27, 40807), (34, 40933), (39, 41014), (42, 41071), (43, 41083), (44, 41158), (45, 41161), (65, 41488), (72, 41575),

Gene: Fenry\_57 Start: 39683, Stop: 40777, Start Num: 9

Candidate Starts for Fenry\_57:

(Start: 9 @39683 has 41 MA's), (19, 39839), (22, 39896), (34, 40079), (42, 40208), (43, 40220), (45, 40298), (46, 40325), (53, 40460), (70, 40679), (72, 40715),

Gene: Gambino\_62 Start: 40662, Stop: 41723, Start Num: 9

Candidate Starts for Gambino\_62:

(1, 40119), (2, 40224), (3, 40311), (Start: 9 @40662 has 41 MA's), (19, 40818), (22, 40875), (34, 41058), (40, 41154), (42, 41187), (43, 41199), (44, 41274), (45, 41277), (46, 41304), (53, 41439), (69, 41628), (72, 41661),

Gene: Guacamole\_56 Start: 38402, Stop: 39493, Start Num: 9

Candidate Starts for Guacamole\_56:

(Start: 9 @38402 has 41 MA's), (19, 38558), (22, 38615), (34, 38798), (42, 38927), (43, 38939), (44, 39014), (45, 39017), (46, 39044), (68, 39371), (70, 39395), (72, 39431),

Gene: Hitter\_59 Start: 37978, Stop: 39072, Start Num: 9

Candidate Starts for Hitter\_59:

(Start: 9 @37978 has 41 MA's), (19, 38134), (22, 38191), (34, 38374), (42, 38503), (43, 38515), (45, 38593), (46, 38620), (53, 38755), (70, 38974), (72, 39010),

Gene: Jalammah\_62 Start: 40981, Stop: 42072, Start Num: 9

Candidate Starts for Jalammah\_62:

(Start: 9 @40981 has 41 MA's), (19, 41137), (22, 41194), (34, 41377), (42, 41506), (43, 41518), (44, 41593), (45, 41596), (46, 41623), (68, 41950), (70, 41974), (72, 42010),

Gene: JasperJr\_56 Start: 38402, Stop: 39493, Start Num: 9

Candidate Starts for JasperJr\_56:

(Start: 9 @38402 has 41 MA's), (19, 38558), (22, 38615), (34, 38798), (42, 38927), (43, 38939), (44, 39014), (45, 39017), (46, 39044), (68, 39371), (70, 39395), (72, 39431),

Gene: JuJu\_65 Start: 42107, Stop: 43198, Start Num: 9

Candidate Starts for JuJu\_65:

(Start: 9 @42107 has 41 MA's), (17, 42233), (19, 42263), (22, 42320), (34, 42503), (42, 42632), (43, 42644), (45, 42722), (46, 42749), (72, 43136),

Gene: JustASigh\_53 Start: 37832, Stop: 38998, Start Num: 6

Candidate Starts for JustASigh\_53:

(Start: 6 @37832 has 1 MA's), (16, 37988), (19, 38024), (23, 38084), (25, 38108), (29, 38201), (32, 38234), (36, 38318), (40, 38387), (41, 38396), (42, 38429), (43, 38441), (45, 38519), (50, 38585), (54, 38699), (56, 38726), (57, 38735), (61, 38789), (64, 38816), (67, 38873), (71, 38933), (73, 38945),

Gene: Malachai\_57 Start: 40175, Stop: 41266, Start Num: 9

Candidate Starts for Malachai\_57:

(Start: 9 @40175 has 41 MA's), (19, 40331), (22, 40388), (34, 40571), (42, 40700), (43, 40712), (44, 40787), (45, 40790), (46, 40817), (68, 41144), (70, 41168), (72, 41204),

Gene: Melba\_57 Start: 38218, Stop: 39309, Start Num: 9

Candidate Starts for Melba\_57:

(Start: 9 @38218 has 41 MA's), (19, 38374), (22, 38431), (34, 38614), (42, 38743), (43, 38755), (44, 38830), (45, 38833), (46, 38860), (68, 39187), (72, 39247),

Gene: MintFen\_59 Start: 38789, Stop: 39880, Start Num: 9

Candidate Starts for MintFen\_59:

(Start: 9 @38789 has 41 MA's), (19, 38945), (22, 39002), (34, 39185), (42, 39314), (43, 39326), (44, 39401), (45, 39404), (46, 39431), (68, 39758), (70, 39782), (72, 39818),

Gene: MissRona\_60 Start: 40663, Stop: 41724, Start Num: 9

Candidate Starts for MissRona\_60:

(1, 40120), (2, 40225), (3, 40312), (Start: 9 @40663 has 41 MA's), (19, 40819), (22, 40876), (34, 41059), (40, 41155), (42, 41188), (43, 41200), (44, 41275), (45, 41278), (46, 41305), (53, 41440), (69, 41629), (72, 41662),

Gene: Nymphadora\_60 Start: 42216, Stop: 43295, Start Num: 9

Candidate Starts for Nymphadora\_60:

(Start: 9 @42216 has 41 MA's), (18, 42366), (19, 42372), (22, 42429), (26, 42495), (27, 42498), (34, 42624), (42, 42762), (43, 42774), (44, 42849), (45, 42852), (60, 43083), (66, 43161),

Gene: Obliviate\_55 Start: 36786, Stop: 37877, Start Num: 9

Candidate Starts for Obliviate\_55:

(Start: 9 @36786 has 41 MA's), (17, 36912), (19, 36942), (22, 36999), (34, 37182), (42, 37311), (43, 37323), (45, 37401), (46, 37428), (72, 37815),

Gene: PCoral7\_59 Start: 39933, Stop: 41009, Start Num: 9

Candidate Starts for PCoral7\_59:

(Start: 9 @39933 has 41 MA's), (10, 39948), (17, 40059), (19, 40089), (22, 40146), (30, 40257), (31, 40260), (40, 40425), (42, 40458), (43, 40470), (44, 40545), (45, 40548), (65, 40875), (72, 40962),

Gene: Petra\_56 Start: 37438, Stop: 38499, Start Num: 9

Candidate Starts for Petra\_56:

(Start: 9 @37438 has 41 MA's), (19, 37594), (22, 37651), (34, 37834), (42, 37963), (43, 37975), (44, 38050), (45, 38053), (46, 38080), (53, 38215), (69, 38404), (72, 38437),

Gene: PhrostedPhlake\_60 Start: 38220, Stop: 39281, Start Num: 9

Candidate Starts for PhrostedPhlake\_60:

(Start: 9 @38220 has 41 MA's), (17, 38346), (19, 38376), (22, 38433), (34, 38616), (42, 38745), (43, 38757), (44, 38832), (45, 38835), (46, 38862), (53, 38997), (69, 39186), (72, 39219),

Gene: Pipp\_61 Start: 39485, Stop: 40570, Start Num: 9

Candidate Starts for Pipp\_61:

(Start: 9 @39485 has 41 MA's), (19, 39641), (22, 39698), (26, 39764), (27, 39767), (34, 39893), (42, 40031), (43, 40043), (44, 40118), (45, 40121), (46, 40148), (53, 40286), (69, 40475), (72, 40508),

Gene: PrincePatrick\_58 Start: 38282, Stop: 39358, Start Num: 9

Candidate Starts for PrincePatrick\_58:

(Start: 9 @38282 has 41 MA's), (17, 38408), (19, 38438), (21, 38468), (22, 38495), (31, 38609), (40, 38774), (42, 38807), (43, 38819), (44, 38894), (45, 38897), (48, 38936), (63, 39188), (72, 39311),

Gene: Rem711\_54 Start: 37619, Stop: 38953, Start Num: 8

Candidate Starts for Rem711\_54:

(Start: 8 @37619 has 1 MA's), (18, 37805), (22, 37868), (35, 38087), (38, 38147), (42, 38231), (43, 38243), (45, 38321), (46, 38348), (51, 38465), (52, 38483), (58, 38579), (62, 38606), (75, 38783),

Gene: Samba\_58 Start: 41011, Stop: 42102, Start Num: 9

Candidate Starts for Samba\_58:

(Start: 9 @41011 has 41 MA's), (19, 41167), (22, 41224), (34, 41407), (42, 41536), (43, 41548), (44, 41623), (45, 41626), (46, 41653), (70, 42004), (72, 42040),

Gene: TimTam\_60 Start: 42216, Stop: 43295, Start Num: 9

Candidate Starts for TimTam\_60:

(Start: 9 @42216 has 41 MA's), (18, 42366), (19, 42372), (22, 42429), (26, 42495), (27, 42498), (34, 42624), (42, 42762), (43, 42774), (44, 42849), (45, 42852), (60, 43083), (66, 43161),

Gene: Toast\_59 Start: 39933, Stop: 41009, Start Num: 9

Candidate Starts for Toast\_59:

(Start: 9 @39933 has 41 MA's), (10, 39948), (17, 40059), (19, 40089), (22, 40146), (30, 40257), (31, 40260), (40, 40425), (42, 40458), (43, 40470), (44, 40545), (45, 40548), (65, 40875), (72, 40962),

Gene: UmaThurman\_56 Start: 38930, Stop: 40009, Start Num: 9

Candidate Starts for UmaThurman\_56:

(Start: 9 @38930 has 41 MA's), (18, 39080), (19, 39086), (22, 39143), (26, 39209), (27, 39212), (34, 39338), (42, 39476), (43, 39488), (44, 39563), (45, 39566), (46, 39590), (69, 39914), (72, 39947),

Gene: Utz\_51 Start: 38758, Stop: 39849, Start Num: 9

Candidate Starts for Utz\_51:

(Start: 9 @38758 has 41 MA's), (17, 38884), (19, 38914), (22, 38971), (34, 39154), (42, 39283), (43, 39295), (45, 39373), (46, 39400), (72, 39787),

Gene: Vasanti\_55 Start: 36701, Stop: 37735, Start Num: 9

Candidate Starts for Vasanti\_55:

(Start: 9 @36701 has 41 MA's), (19, 36857), (22, 36914), (26, 36980), (27, 36983), (34, 37109), (42, 37247), (43, 37259), (45, 37337), (59, 37532), (65, 37598), (68, 37625), (72, 37667),

Gene: Walrus\_57 Start: 38293, Stop: 39378, Start Num: 9

Candidate Starts for Walrus\_57:

(Start: 9 @38293 has 41 MA's), (19, 38449), (22, 38506), (26, 38572), (27, 38575), (34, 38701), (42, 38839), (43, 38851), (44, 38926), (45, 38929), (46, 38956), (53, 39094), (69, 39283), (72, 39316),

Gene: Weirido19\_54 Start: 38200, Stop: 39324, Start Num: 6

Candidate Starts for Weirido19\_54:

(5, 38143), (Start: 6 @38200 has 1 MA's), (11, 38272), (12, 38281), (13, 38305), (15, 38344), (16, 38359), (19, 38395), (22, 38452), (25, 38479), (28, 38545), (29, 38572), (32, 38605), (33, 38626), (36, 38689), (37, 38722), (42, 38800), (43, 38812), (45, 38890), (47, 38920), (49, 38935), (56, 39082), (60, 39136), (66, 39217), (68, 39238), (74, 39283),

Gene: William\_61 Start: 40608, Stop: 41705, Start Num: 9

Candidate Starts for William\_61:

(Start: 9 @40608 has 41 MA's), (14, 40704), (18, 40758), (19, 40764), (22, 40821), (26, 40887), (27, 40890), (34, 41016), (39, 41097), (42, 41154), (43, 41166), (44, 41241), (45, 41244), (65, 41571), (72, 41658),

Gene: Wisp\_58 Start: 39201, Stop: 40292, Start Num: 9

Candidate Starts for Wisp\_58:

(Start: 9 @39201 has 41 MA's), (19, 39357), (22, 39414), (34, 39597), (42, 39726), (43, 39738), (44, 39813), (45, 39816), (46, 39843), (70, 40194), (72, 40230),

Gene: Zarbodnamra\_58 Start: 38197, Stop: 39285, Start Num: 9

Candidate Starts for Zarbodnamra\_58:

(Start: 9 @38197 has 41 MA's), (19, 38353), (22, 38410), (34, 38593), (42, 38722), (43, 38734), (44, 38809), (45, 38812), (46, 38839), (68, 39163), (70, 39187), (72, 39223),

Gene: ZiggyZoo\_59 Start: 40251, Stop: 41342, Start Num: 9

Candidate Starts for ZiggyZoo\_59:

(Start: 9 @40251 has 41 MA's), (19, 40407), (22, 40464), (34, 40647), (42, 40776), (43, 40788), (45, 40866), (46, 40893), (68, 41220), (70, 41244), (72, 41280),