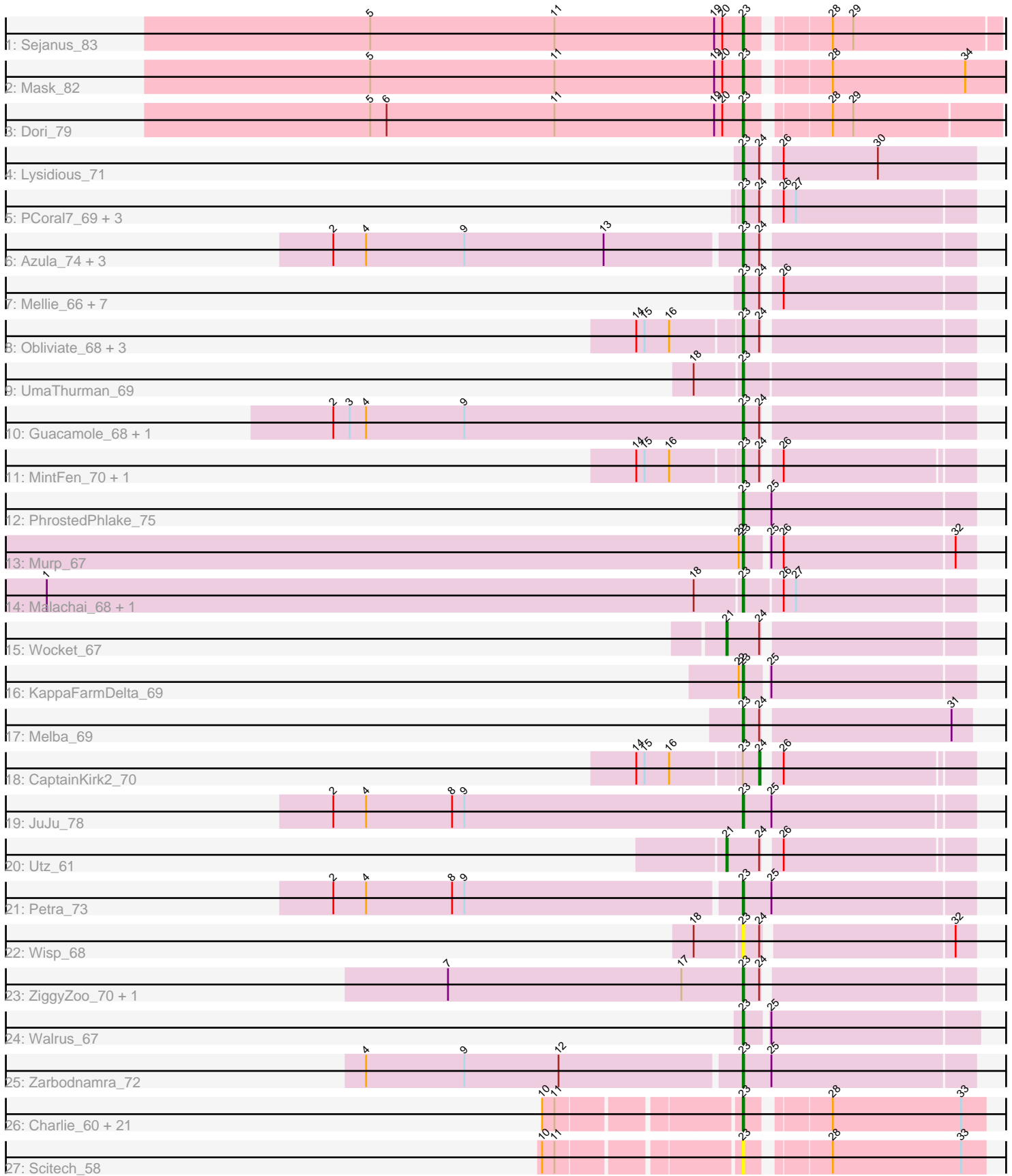


# Pham 163580



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 163580 Report

This analysis was run 05/04/24 on database version 560.

Pham number 163580 has 68 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Sejanus\_83
- Track 2 : Mask\_82
- Track 3 : Dori\_79
- Track 4 : Lysidious\_71
- Track 5 : PCoral7\_69, PrincePatrick\_70, William\_72, Toast\_69
- Track 6 : Azula\_74, MissRona\_74, Blueberry\_73, Gambino\_76
- Track 7 : Mellie\_66, Jalamamah\_72, CarolAnn\_70, Fenry\_68, Hitter\_69, Blino\_71, Samba\_69, Fairfaxidum\_72
- Track 8 : Obliviate\_68, Barco\_66, Pipp\_73, BlingBling\_65
- Track 9 : UmaThurman\_69
- Track 10 : Guacamole\_68, JasperJr\_68
- Track 11 : MintFen\_70, Delian\_73
- Track 12 : PhrostedPhlake\_75
- Track 13 : Murp\_67
- Track 14 : Malachai\_68, Begonia\_68
- Track 15 : Wocket\_67
- Track 16 : KappaFarmDelta\_69
- Track 17 : Melba\_69
- Track 18 : CaptainKirk2\_70
- Track 19 : JuJu\_78
- Track 20 : Utz\_61
- Track 21 : Petra\_73
- Track 22 : Wisp\_68
- Track 23 : ZiggyZoo\_70, Archis\_71
- Track 24 : Walrus\_67
- Track 25 : Zarbodnamra\_72
- Track 26 : Charlie\_60, Melville\_68, Magsby\_62, Bosection6\_62, Chewbacca\_66, Pipsqueaks\_64, Xerxes\_63, Schnauzer\_64, Philonius\_63, Gex\_64, Smurph\_63, Aggie\_59, Silvafighter\_65, SkinnyPete\_60, Phloss\_61, Fulbright\_61, Parmesanjohn\_63, Tapioca\_61, Andies\_57, Carcharodon\_63, Duplicity\_61, Silvy\_59
- Track 27 : Scitech\_58

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

The start number called the most often in the published annotations is 23, it was called in 60 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aggie\_59, Andies\_57, Archis\_71, Azula\_74, Barco\_66, Begonia\_68, BlingBling\_65, Blino\_71, Blueberry\_73, Bosection6\_62, Carcharodon\_63, CarolAnn\_70, Charlie\_60, Chewbacca\_66, Delian\_73, Dori\_79, Duplicity\_61, Fairfaxidum\_72, Fenry\_68, Fulbright\_61, Gambino\_76, Gex\_64, Guacamole\_68, Hitter\_69, Jalammah\_72, JasperJr\_68, JuJu\_78, KappaFarmDelta\_69, Lysidious\_71, Magsby\_62, Malachai\_68, Mask\_82, Melba\_69, Mellie\_66, Melville\_68, MintFen\_70, MissRona\_74, Murp\_67, Obliviate\_68, PCoral7\_69, Parmesanjohn\_63, Petra\_73, Philonius\_63, Phloss\_61, PhrostedPhlake\_75, Pipp\_73, Pipsqueaks\_64, PrincePatrick\_70, Samba\_69, Schnauzer\_64, Scitech\_58, Sejanus\_83, Silvafighter\_65, Silvy\_59, SkinnyPete\_60, Smurph\_63, Tapioca\_61, Toast\_69, UmaThurman\_69, Walrus\_67, William\_72, Wisp\_68, Xerxes\_63, Zarbodnamra\_72, ZiggyZoo\_70,

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

- CaptainKirk2\_70,

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

- Utz\_61, Wocket\_67,

### Summary by start number:

Start 21:

- Found in 2 of 68 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 2 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Utz\_61 (CV), Wocket\_67 (CV),

Start 23:

- Found in 66 of 68 ( 97.1% ) of genes in pham
- Manual Annotations of this start: 60 of 63
- Called 98.5% of time when present
- Phage (with cluster) where this start called: Aggie\_59 (N), Andies\_57 (N), Archis\_71 (CV), Azula\_74 (CV), Barco\_66 (CV), Begonia\_68 (CV), BlingBling\_65 (CV), Blino\_71 (CV), Blueberry\_73 (CV), Bosection6\_62 (N), Carcharodon\_63 (N), CarolAnn\_70 (CV), Charlie\_60 (N), Chewbacca\_66 (N), Delian\_73 (CV), Dori\_79 (AD), Duplicity\_61 (N), Fairfaxidum\_72 (CV), Fenry\_68 (CV), Fulbright\_61 (N), Gambino\_76 (CV), Gex\_64 (N), Guacamole\_68 (CV), Hitter\_69 (CV), Jalammah\_72 (CV), JasperJr\_68 (CV), JuJu\_78 (CV), KappaFarmDelta\_69 (CV), Lysidious\_71 (CV), Magsby\_62 (N), Malachai\_68 (CV), Mask\_82 (AD), Melba\_69 (CV), Mellie\_66 (CV), Melville\_68 (N), MintFen\_70 (CV), MissRona\_74 (CV), Murp\_67 (CV), Obliviate\_68 (CV), PCoral7\_69 (CV), Parmesanjohn\_63 (N), Petra\_73 (CV), Philonius\_63 (N), Phloss\_61 (N), PhrostedPhlake\_75 (CV), Pipp\_73 (CV), Pipsqueaks\_64 (N), PrincePatrick\_70 (CV), Samba\_69 (CV), Schnauzer\_64 (N), Scitech\_58 (N), Sejanus\_83 (AD), Silvafighter\_65 (N), Silvy\_59 (N), SkinnyPete\_60 (N), Smurph\_63 (N), Tapioca\_61 (N), Toast\_69 (CV), UmaThurman\_69 (CV), Walrus\_67 (CV), William\_72 (CV), Wisp\_68 (CV), Xerxes\_63 (N), Zarbodnamra\_72 (CV), ZiggyZoo\_70 (CV),

Start 24:

- Found in 32 of 68 ( 47.1% ) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 3.1% of time when present
- Phage (with cluster) where this start called: CaptainKirk2\_70 (CV),

### **Summary by clusters:**

There are 3 clusters represented in this pham: AD, CV, N,

Info for manual annotations of cluster AD:

- Start number 23 was manually annotated 3 times for cluster AD.

Info for manual annotations of cluster CV:

- Start number 21 was manually annotated 2 times for cluster CV.
- Start number 23 was manually annotated 37 times for cluster CV.
- Start number 24 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster N:

- Start number 23 was manually annotated 20 times for cluster N.

### **Gene Information:**

Gene: Aggie\_59 Start: 39996, Stop: 40157, Start Num: 23

Candidate Starts for Aggie\_59:

(10, 39867), (11, 39876), (Start: 23 @39996 has 60 MA's), (28, 40047), (33, 40140),

Gene: Andies\_57 Start: 39441, Stop: 39602, Start Num: 23

Candidate Starts for Andies\_57:

(10, 39312), (11, 39321), (Start: 23 @39441 has 60 MA's), (28, 39492), (33, 39585),

Gene: Archis\_71 Start: 42723, Stop: 42881, Start Num: 23

Candidate Starts for Archis\_71:

(7, 42507), (17, 42678), (Start: 23 @42723 has 60 MA's), (Start: 24 @42735 has 1 MA's),

Gene: Azula\_74 Start: 46615, Stop: 46773, Start Num: 23

Candidate Starts for Azula\_74:

(2, 46321), (4, 46345), (9, 46417), (13, 46519), (Start: 23 @46615 has 60 MA's), (Start: 24 @46627 has 1 MA's),

Gene: Barco\_66 Start: 42553, Stop: 42711, Start Num: 23

Candidate Starts for Barco\_66:

(14, 42481), (15, 42487), (16, 42505), (Start: 23 @42553 has 60 MA's), (Start: 24 @42565 has 1 MA's),

Gene: Begonia\_68 Start: 45480, Stop: 45644, Start Num: 23

Candidate Starts for Begonia\_68:

(1, 44973), (18, 45447), (Start: 23 @45480 has 60 MA's), (26, 45507), (27, 45516),

Gene: BlingBling\_65 Start: 43435, Stop: 43593, Start Num: 23

Candidate Starts for BlingBling\_65:

(14, 43363), (15, 43369), (16, 43387), (Start: 23 @43435 has 60 MA's), (Start: 24 @43447 has 1 MA's),

Gene: Blino\_71 Start: 48216, Stop: 48371, Start Num: 23

Candidate Starts for Blino\_71:

(Start: 23 @48216 has 60 MA's), (Start: 24 @48228 has 1 MA's), (26, 48237),

Gene: Blueberry\_73 Start: 46615, Stop: 46773, Start Num: 23

Candidate Starts for Blueberry\_73:

(2, 46321), (4, 46345), (9, 46417), (13, 46519), (Start: 23 @46615 has 60 MA's), (Start: 24 @46627 has 1 MA's),

Gene: Bosection6\_62 Start: 39045, Stop: 39206, Start Num: 23

Candidate Starts for Bosection6\_62:

(10, 38916), (11, 38925), (Start: 23 @39045 has 60 MA's), (28, 39096), (33, 39189),

Gene: CaptainKirk2\_70 Start: 42213, Stop: 42356, Start Num: 24

Candidate Starts for CaptainKirk2\_70:

(14, 42129), (15, 42135), (16, 42153), (Start: 23 @42201 has 60 MA's), (Start: 24 @42213 has 1 MA's), (26, 42222),

Gene: Carcharodon\_63 Start: 39343, Stop: 39504, Start Num: 23

Candidate Starts for Carcharodon\_63:

(10, 39214), (11, 39223), (Start: 23 @39343 has 60 MA's), (28, 39394), (33, 39487),

Gene: CarolAnn\_70 Start: 48215, Stop: 48370, Start Num: 23

Candidate Starts for CarolAnn\_70:

(Start: 23 @48215 has 60 MA's), (Start: 24 @48227 has 1 MA's), (26, 48236),

Gene: Charlie\_60 Start: 38669, Stop: 38830, Start Num: 23

Candidate Starts for Charlie\_60:

(10, 38540), (11, 38549), (Start: 23 @38669 has 60 MA's), (28, 38720), (33, 38813),

Gene: Chewbacca\_66 Start: 39238, Stop: 39399, Start Num: 23

Candidate Starts for Chewbacca\_66:

(10, 39109), (11, 39118), (Start: 23 @39238 has 60 MA's), (28, 39289), (33, 39382),

Gene: Delian\_73 Start: 42199, Stop: 42354, Start Num: 23

Candidate Starts for Delian\_73:

(14, 42127), (15, 42133), (16, 42151), (Start: 23 @42199 has 60 MA's), (Start: 24 @42211 has 1 MA's), (26, 42220),

Gene: Dori\_79 Start: 57323, Stop: 57493, Start Num: 23

Candidate Starts for Dori\_79:

(5, 57050), (6, 57062), (11, 57185), (19, 57302), (20, 57308), (Start: 23 @57323 has 60 MA's), (28, 57374), (29, 57389),

Gene: Duplicity\_61 Start: 38600, Stop: 38761, Start Num: 23

Candidate Starts for Duplicity\_61:

(10, 38471), (11, 38480), (Start: 23 @38600 has 60 MA's), (28, 38651), (33, 38744),

Gene: Fairfaxidum\_72 Start: 44764, Stop: 44922, Start Num: 23

Candidate Starts for Fairfaxidum\_72:

(Start: 23 @44764 has 60 MA's), (Start: 24 @44776 has 1 MA's), (26, 44785),

Gene: Fenry\_68 Start: 44226, Stop: 44384, Start Num: 23

Candidate Starts for Fenry\_68:

(Start: 23 @44226 has 60 MA's), (Start: 24 @44238 has 1 MA's), (26, 44247),

Gene: Fulbright\_61 Start: 38037, Stop: 38198, Start Num: 23

Candidate Starts for Fulbright\_61:

(10, 37908), (11, 37917), (Start: 23 @38037 has 60 MA's), (28, 38088), (33, 38181),

Gene: Gambino\_76 Start: 46615, Stop: 46773, Start Num: 23

Candidate Starts for Gambino\_76:

(2, 46321), (4, 46345), (9, 46417), (13, 46519), (Start: 23 @46615 has 60 MA's), (Start: 24 @46627 has 1 MA's),

Gene: Gex\_64 Start: 39359, Stop: 39520, Start Num: 23

Candidate Starts for Gex\_64:

(10, 39230), (11, 39239), (Start: 23 @39359 has 60 MA's), (28, 39410), (33, 39503),

Gene: Guacamole\_68 Start: 43616, Stop: 43774, Start Num: 23

Candidate Starts for Guacamole\_68:

(2, 43316), (3, 43328), (4, 43340), (9, 43412), (Start: 23 @43616 has 60 MA's), (Start: 24 @43628 has 1 MA's),

Gene: Hitter\_69 Start: 42159, Stop: 42317, Start Num: 23

Candidate Starts for Hitter\_69:

(Start: 23 @42159 has 60 MA's), (Start: 24 @42171 has 1 MA's), (26, 42180),

Gene: Jalammah\_72 Start: 45129, Stop: 45290, Start Num: 23

Candidate Starts for Jalammah\_72:

(Start: 23 @45129 has 60 MA's), (Start: 24 @45141 has 1 MA's), (26, 45150),

Gene: JasperJr\_68 Start: 43616, Stop: 43774, Start Num: 23

Candidate Starts for JasperJr\_68:

(2, 43316), (3, 43328), (4, 43340), (9, 43412), (Start: 23 @43616 has 60 MA's), (Start: 24 @43628 has 1 MA's),

Gene: JuJu\_78 Start: 48352, Stop: 48516, Start Num: 23

Candidate Starts for JuJu\_78:

(2, 48052), (4, 48076), (8, 48139), (9, 48148), (Start: 23 @48352 has 60 MA's), (25, 48373),

Gene: KappaFarmDelta\_69 Start: 43192, Stop: 43353, Start Num: 23

Candidate Starts for KappaFarmDelta\_69:

(22, 43189), (Start: 23 @43192 has 60 MA's), (25, 43207),

Gene: Lysidious\_71 Start: 44855, Stop: 45016, Start Num: 23

Candidate Starts for Lysidious\_71:

(Start: 23 @44855 has 60 MA's), (Start: 24 @44867 has 1 MA's), (26, 44876), (30, 44945),

Gene: Magsby\_62 Start: 39305, Stop: 39466, Start Num: 23

Candidate Starts for Magsby\_62:

(10, 39176), (11, 39185), (Start: 23 @39305 has 60 MA's), (28, 39356), (33, 39449),

Gene: Malachai\_68 Start: 45480, Stop: 45644, Start Num: 23

Candidate Starts for Malachai\_68:

(1, 44973), (18, 45447), (Start: 23 @45480 has 60 MA's), (26, 45507), (27, 45516),

Gene: Mask\_82 Start: 58615, Stop: 58812, Start Num: 23

Candidate Starts for Mask\_82:

(5, 58342), (11, 58477), (19, 58594), (20, 58600), (Start: 23 @58615 has 60 MA's), (28, 58666), (34, 58762),

Gene: Melba\_69 Start: 42570, Stop: 42728, Start Num: 23

Candidate Starts for Melba\_69:

(Start: 23 @42570 has 60 MA's), (Start: 24 @42582 has 1 MA's), (31, 42714),

Gene: Mellie\_66 Start: 42417, Stop: 42575, Start Num: 23

Candidate Starts for Mellie\_66:

(Start: 23 @42417 has 60 MA's), (Start: 24 @42429 has 1 MA's), (26, 42438),

Gene: Melville\_68 Start: 38914, Stop: 39075, Start Num: 23

Candidate Starts for Melville\_68:

(10, 38785), (11, 38794), (Start: 23 @38914 has 60 MA's), (28, 38965), (33, 39058),

Gene: MintFen\_70 Start: 42815, Stop: 42970, Start Num: 23

Candidate Starts for MintFen\_70:

(14, 42743), (15, 42749), (16, 42767), (Start: 23 @42815 has 60 MA's), (Start: 24 @42827 has 1 MA's), (26, 42836),

Gene: MissRona\_74 Start: 46616, Stop: 46774, Start Num: 23

Candidate Starts for MissRona\_74:

(2, 46322), (4, 46346), (9, 46418), (13, 46520), (Start: 23 @46616 has 60 MA's), (Start: 24 @46628 has 1 MA's),

Gene: Murp\_67 Start: 45821, Stop: 45982, Start Num: 23

Candidate Starts for Murp\_67:

(22, 45818), (Start: 23 @45821 has 60 MA's), (25, 45836), (26, 45845), (32, 45968),

Gene: Obliviate\_68 Start: 42724, Stop: 42882, Start Num: 23

Candidate Starts for Obliviate\_68:

(14, 42652), (15, 42658), (16, 42676), (Start: 23 @42724 has 60 MA's), (Start: 24 @42736 has 1 MA's),

Gene: PCoral7\_69 Start: 43537, Stop: 43695, Start Num: 23

Candidate Starts for PCoral7\_69:

(Start: 23 @43537 has 60 MA's), (Start: 24 @43549 has 1 MA's), (26, 43558), (27, 43567),

Gene: Parmesanjohn\_63 Start: 39363, Stop: 39524, Start Num: 23

Candidate Starts for Parmesanjohn\_63:

(10, 39234), (11, 39243), (Start: 23 @39363 has 60 MA's), (28, 39414), (33, 39507),

Gene: Petra\_73 Start: 44768, Stop: 44935, Start Num: 23

Candidate Starts for Petra\_73:

(2, 44474), (4, 44498), (8, 44561), (9, 44570), (Start: 23 @44768 has 60 MA's), (25, 44789),

Gene: Philonius\_63 Start: 39528, Stop: 39689, Start Num: 23

Candidate Starts for Philonius\_63:

(10, 39399), (11, 39408), (Start: 23 @39528 has 60 MA's), (28, 39579), (33, 39672),

Gene: Phloss\_61 Start: 38770, Stop: 38931, Start Num: 23

Candidate Starts for Phloss\_61:

(10, 38641), (11, 38650), (Start: 23 @38770 has 60 MA's), (28, 38821), (33, 38914),

Gene: PhrostedPhlake\_75 Start: 45016, Stop: 45183, Start Num: 23

Candidate Starts for PhrostedPhlake\_75:

(Start: 23 @45016 has 60 MA's), (25, 45037),

Gene: Pipp\_73 Start: 44772, Stop: 44930, Start Num: 23

Candidate Starts for Pipp\_73:

(14, 44700), (15, 44706), (16, 44724), (Start: 23 @44772 has 60 MA's), (Start: 24 @44784 has 1 MA's),

Gene: Pipsqueaks\_64 Start: 39341, Stop: 39502, Start Num: 23

Candidate Starts for Pipsqueaks\_64:

(10, 39212), (11, 39221), (Start: 23 @39341 has 60 MA's), (28, 39392), (33, 39485),

Gene: PrincePatrick\_70 Start: 42596, Stop: 42754, Start Num: 23

Candidate Starts for PrincePatrick\_70:

(Start: 23 @42596 has 60 MA's), (Start: 24 @42608 has 1 MA's), (26, 42617), (27, 42626),

Gene: Samba\_69 Start: 45554, Stop: 45712, Start Num: 23

Candidate Starts for Samba\_69:

(Start: 23 @45554 has 60 MA's), (Start: 24 @45566 has 1 MA's), (26, 45575),

Gene: Schnauzer\_64 Start: 39363, Stop: 39524, Start Num: 23

Candidate Starts for Schnauzer\_64:

(10, 39234), (11, 39243), (Start: 23 @39363 has 60 MA's), (28, 39414), (33, 39507),

Gene: Scitech\_58 Start: 38766, Stop: 38927, Start Num: 23

Candidate Starts for Scitech\_58:

(10, 38637), (11, 38646), (Start: 23 @38766 has 60 MA's), (28, 38817), (33, 38910),

Gene: Sejanus\_83 Start: 57471, Stop: 57641, Start Num: 23

Candidate Starts for Sejanus\_83:

(5, 57198), (11, 57333), (19, 57450), (20, 57456), (Start: 23 @57471 has 60 MA's), (28, 57522), (29, 57537),

Gene: Silvafighter\_65 Start: 38906, Stop: 39067, Start Num: 23

Candidate Starts for Silvafighter\_65:

(10, 38777), (11, 38786), (Start: 23 @38906 has 60 MA's), (28, 38957), (33, 39050),

Gene: Silvy\_59 Start: 39996, Stop: 40157, Start Num: 23

Candidate Starts for Silvy\_59:

(10, 39867), (11, 39876), (Start: 23 @39996 has 60 MA's), (28, 40047), (33, 40140),

Gene: SkinnyPete\_60 Start: 39110, Stop: 39271, Start Num: 23

Candidate Starts for SkinnyPete\_60:

(10, 38981), (11, 38990), (Start: 23 @39110 has 60 MA's), (28, 39161), (33, 39254),



Gene: Smurph\_63 Start: 39363, Stop: 39524, Start Num: 23

Candidate Starts for Smurph\_63:

(10, 39234), (11, 39243), (Start: 23 @39363 has 60 MA's), (28, 39414), (33, 39507),

Gene: Tapioca\_61 Start: 39880, Stop: 40041, Start Num: 23

Candidate Starts for Tapioca\_61:

(10, 39751), (11, 39760), (Start: 23 @39880 has 60 MA's), (28, 39931), (33, 40024),

Gene: Toast\_69 Start: 43537, Stop: 43695, Start Num: 23

Candidate Starts for Toast\_69:

(Start: 23 @43537 has 60 MA's), (Start: 24 @43549 has 1 MA's), (26, 43558), (27, 43567),

Gene: UmaThurman\_69 Start: 43900, Stop: 44064, Start Num: 23

Candidate Starts for UmaThurman\_69:

(18, 43867), (Start: 23 @43900 has 60 MA's),

Gene: Utz\_61 Start: 43181, Stop: 43348, Start Num: 21

Candidate Starts for Utz\_61:

(Start: 21 @43181 has 2 MA's), (Start: 24 @43205 has 1 MA's), (26, 43214),

Gene: Walrus\_67 Start: 43261, Stop: 43425, Start Num: 23

Candidate Starts for Walrus\_67:

(Start: 23 @43261 has 60 MA's), (25, 43276),

Gene: William\_72 Start: 44944, Stop: 45102, Start Num: 23

Candidate Starts for William\_72:

(Start: 23 @44944 has 60 MA's), (Start: 24 @44956 has 1 MA's), (26, 44965), (27, 44974),

Gene: Wisp\_68 Start: 43598, Stop: 43756, Start Num: 23

Candidate Starts for Wisp\_68:

(18, 43565), (Start: 23 @43598 has 60 MA's), (Start: 24 @43610 has 1 MA's), (32, 43742),

Gene: Wocket\_67 Start: 43577, Stop: 43747, Start Num: 21

Candidate Starts for Wocket\_67:

(Start: 21 @43577 has 2 MA's), (Start: 24 @43601 has 1 MA's),

Gene: Xerxes\_63 Start: 39360, Stop: 39521, Start Num: 23

Candidate Starts for Xerxes\_63:

(10, 39231), (11, 39240), (Start: 23 @39360 has 60 MA's), (28, 39411), (33, 39504),

Gene: Zarbodnamra\_72 Start: 43709, Stop: 43876, Start Num: 23

Candidate Starts for Zarbodnamra\_72:

(4, 43439), (9, 43511), (12, 43580), (Start: 23 @43709 has 60 MA's), (25, 43730),

Gene: ZiggyZoo\_70 Start: 45187, Stop: 45345, Start Num: 23

Candidate Starts for ZiggyZoo\_70:

(7, 44971), (17, 45142), (Start: 23 @45187 has 60 MA's), (Start: 24 @45199 has 1 MA's),