



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 163842 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163842 has 29 members, 2 are drafts.

Phages represented in each track:

- Track 1 : PSullivan\_71
- Track 2 : Alsfro\_82
- Track 3 : Museum\_75, Crispicious1\_70, PacerPaul\_80, Manatee\_73, Arcanine\_79, Bircsak\_76, Makemake\_78, Peterson\_74, SkiPole\_84, Turj99\_71, Magnito\_74, Switzer\_74, Norz\_71
- Track 4 : PhrostyMug\_77
- Track 5 : Applejack\_74, KBG\_73
- Track 6 : Bigfoot\_70
- Track 7 : Petruccio\_75, Gyzlar\_68, Maroc7\_77
- Track 8 : Smairt\_79
- Track 9 : HanShotFirst\_73
- Track 10 : Trouble\_75
- Track 11 : Kenmech\_77
- Track 12 : Abrogate\_720
- Track 13 : SarFire\_79, Thor\_79

### ***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 26 of the 27 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abrogate\_720, Alsfro\_82, Arcanine\_79, Bigfoot\_70, Bircsak\_76, Crispicious1\_70, Gyzlar\_68, HanShotFirst\_73, Kenmech\_77, Magnito\_74, Makemake\_78, Manatee\_73, Maroc7\_77, Museum\_75, Norz\_71, PacerPaul\_80, Peterson\_74, Petruccio\_75, PhrostyMug\_77, SarFire\_79, SkiPole\_84, Smairt\_79, Switzer\_74, Thor\_79, Trouble\_75, Turj99\_71,

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

- Applejack\_74, KBG\_73, PSullivan\_71,

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

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## Summary by start number:

### Start 3:

- Found in 29 of 29 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 26 of 27
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Abrogate\_720 (A1), Alsfro\_82 (A1), Arcanine\_79 (A1), Bigfoot\_70 (A1), Bircsak\_76 (A1), Crispicous1\_70 (A1), Gyzlar\_68 (A1), HanShotFirst\_73 (A1), Kenmech\_77 (A1), Magnito\_74 (A1), Makemake\_78 (A1), Manatee\_73 (A1), Maroc7\_77 (A1), Museum\_75 (A1), Norz\_71 (A1), PacerPaul\_80 (A1), Peterson\_74 (A1), Petruccio\_75 (A1), PhrostyMug\_77 (A1), SarFire\_79 (A1), SkiPole\_84 (A1), Smairt\_79 (A1), Switzer\_74 (A1), Thor\_79 (A1), Trouble\_75 (A1), Turj99\_71 (A1),

### Start 8:

- Found in 29 of 29 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 27
- Called 10.3% of time when present
- Phage (with cluster) where this start called: Applejack\_74 (A1), KBG\_73 (A1), PSullivan\_71 (A1),

## Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

- Start number 3 was manually annotated 26 times for cluster A1.
- Start number 8 was manually annotated 1 time for cluster A1.

## Gene Information:

Gene: Abrogate\_720 Start: 46995, Stop: 46309, Start Num: 3

Candidate Starts for Abrogate\_720:

(1, 47301), (2, 47205), (Start: 3 @46995 has 26 MA's), (5, 46962), (7, 46878), (Start: 8 @46821 has 1 MA's), (9, 46779), (10, 46728), (11, 46719), (12, 46671), (15, 46548), (16, 46506), (19, 46320),

Gene: Alsfro\_82 Start: 47015, Stop: 46329, Start Num: 3

Candidate Starts for Alsfro\_82:

(Start: 3 @47015 has 26 MA's), (5, 46982), (7, 46898), (Start: 8 @46841 has 1 MA's), (9, 46799), (10, 46748), (11, 46739), (12, 46691), (14, 46589), (15, 46568), (16, 46526), (19, 46340),

Gene: Applejack\_74 Start: 44460, Stop: 43924, Start Num: 8

Candidate Starts for Applejack\_74:

(Start: 3 @44634 has 26 MA's), (5, 44601), (7, 44517), (Start: 8 @44460 has 1 MA's), (9, 44418), (10, 44367), (11, 44358), (12, 44310), (15, 44187), (16, 44145), (17, 44067),

Gene: Arcanine\_79 Start: 48385, Stop: 47699, Start Num: 3

Candidate Starts for Arcanine\_79:

(Start: 3 @48385 has 26 MA's), (5, 48352), (7, 48268), (Start: 8 @48211 has 1 MA's), (9, 48169), (10, 48118), (11, 48109), (12, 48061), (15, 47938), (16, 47896), (19, 47710),

Gene: Bigfoot\_70 Start: 46517, Stop: 45807, Start Num: 3

Candidate Starts for Bigfoot\_70:

(Start: 3 @46517 has 26 MA's), (4, 46499), (5, 46484), (7, 46400), (Start: 8 @46343 has 1 MA's), (9, 46301), (10, 46250), (11, 46241), (12, 46193), (13, 46151), (15, 46070), (16, 46028), (17, 45950),

Gene: Bircsak\_76 Start: 49112, Stop: 48426, Start Num: 3

Candidate Starts for Bircsak\_76:

(Start: 3 @49112 has 26 MA's), (5, 49079), (7, 48995), (Start: 8 @48938 has 1 MA's), (9, 48896), (10, 48845), (11, 48836), (12, 48788), (15, 48665), (16, 48623), (19, 48437),

Gene: Crispicious1\_70 Start: 44651, Stop: 43965, Start Num: 3

Candidate Starts for Crispicious1\_70:

(Start: 3 @44651 has 26 MA's), (5, 44618), (7, 44534), (Start: 8 @44477 has 1 MA's), (9, 44435), (10, 44384), (11, 44375), (12, 44327), (15, 44204), (16, 44162), (19, 43976),

Gene: Gyzlar\_68 Start: 43426, Stop: 42740, Start Num: 3

Candidate Starts for Gyzlar\_68:

(Start: 3 @43426 has 26 MA's), (5, 43393), (7, 43309), (Start: 8 @43252 has 1 MA's), (9, 43210), (10, 43159), (11, 43150), (12, 43102), (13, 43060), (15, 42979), (16, 42937), (19, 42751),

Gene: HanShotFirst\_73 Start: 47020, Stop: 46334, Start Num: 3

Candidate Starts for HanShotFirst\_73:

(Start: 3 @47020 has 26 MA's), (4, 47002), (5, 46987), (7, 46903), (Start: 8 @46846 has 1 MA's), (9, 46804), (10, 46753), (11, 46744), (12, 46696), (15, 46573), (16, 46531), (19, 46345),

Gene: KBG\_73 Start: 47323, Stop: 46787, Start Num: 8

Candidate Starts for KBG\_73:

(Start: 3 @47497 has 26 MA's), (5, 47464), (7, 47380), (Start: 8 @47323 has 1 MA's), (9, 47281), (10, 47230), (11, 47221), (12, 47173), (15, 47050), (16, 47008), (17, 46930),

Gene: Kenmech\_77 Start: 47527, Stop: 46841, Start Num: 3

Candidate Starts for Kenmech\_77:

(Start: 3 @47527 has 26 MA's), (5, 47494), (7, 47410), (Start: 8 @47353 has 1 MA's), (9, 47311), (10, 47260), (11, 47251), (12, 47203), (15, 47080), (16, 47038), (18, 46894), (19, 46852),

Gene: Magnito\_74 Start: 45855, Stop: 45169, Start Num: 3

Candidate Starts for Magnito\_74:

(Start: 3 @45855 has 26 MA's), (5, 45822), (7, 45738), (Start: 8 @45681 has 1 MA's), (9, 45639), (10, 45588), (11, 45579), (12, 45531), (15, 45408), (16, 45366), (19, 45180),

Gene: Makemake\_78 Start: 47465, Stop: 46779, Start Num: 3

Candidate Starts for Makemake\_78:

(Start: 3 @47465 has 26 MA's), (5, 47432), (7, 47348), (Start: 8 @47291 has 1 MA's), (9, 47249), (10, 47198), (11, 47189), (12, 47141), (15, 47018), (16, 46976), (19, 46790),

Gene: Manatee\_73 Start: 45395, Stop: 44709, Start Num: 3

Candidate Starts for Manatee\_73:

(Start: 3 @45395 has 26 MA's), (5, 45362), (7, 45278), (Start: 8 @45221 has 1 MA's), (9, 45179), (10, 45128), (11, 45119), (12, 45071), (15, 44948), (16, 44906), (19, 44720),

Gene: Maroc7\_77 Start: 48458, Stop: 47772, Start Num: 3

Candidate Starts for Maroc7\_77:

(Start: 3 @48458 has 26 MA's), (5, 48425), (7, 48341), (Start: 8 @48284 has 1 MA's), (9, 48242), (10, 48191), (11, 48182), (12, 48134), (13, 48092), (15, 48011), (16, 47969), (19, 47783),

Gene: Museum\_75 Start: 47134, Stop: 46448, Start Num: 3

Candidate Starts for Museum\_75:

(Start: 3 @47134 has 26 MA's), (5, 47101), (7, 47017), (Start: 8 @46960 has 1 MA's), (9, 46918), (10, 46867), (11, 46858), (12, 46810), (15, 46687), (16, 46645), (19, 46459),

Gene: Norz\_71 Start: 47607, Stop: 46921, Start Num: 3

Candidate Starts for Norz\_71:

(Start: 3 @47607 has 26 MA's), (5, 47574), (7, 47490), (Start: 8 @47433 has 1 MA's), (9, 47391), (10, 47340), (11, 47331), (12, 47283), (15, 47160), (16, 47118), (19, 46932),

Gene: PSullivan\_71 Start: 45043, Stop: 44507, Start Num: 8

Candidate Starts for PSullivan\_71:

(Start: 3 @45217 has 26 MA's), (5, 45184), (7, 45100), (Start: 8 @45043 has 1 MA's), (9, 45001), (10, 44950), (11, 44941), (12, 44893), (14, 44791), (15, 44770), (16, 44728), (17, 44650),

Gene: PacerPaul\_80 Start: 48480, Stop: 47794, Start Num: 3

Candidate Starts for PacerPaul\_80:

(Start: 3 @48480 has 26 MA's), (5, 48447), (7, 48363), (Start: 8 @48306 has 1 MA's), (9, 48264), (10, 48213), (11, 48204), (12, 48156), (15, 48033), (16, 47991), (19, 47805),

Gene: Peterson\_74 Start: 47439, Stop: 46753, Start Num: 3

Candidate Starts for Peterson\_74:

(Start: 3 @47439 has 26 MA's), (5, 47406), (7, 47322), (Start: 8 @47265 has 1 MA's), (9, 47223), (10, 47172), (11, 47163), (12, 47115), (15, 46992), (16, 46950), (19, 46764),

Gene: Petruccio\_75 Start: 45700, Stop: 45014, Start Num: 3

Candidate Starts for Petruccio\_75:

(Start: 3 @45700 has 26 MA's), (5, 45667), (7, 45583), (Start: 8 @45526 has 1 MA's), (9, 45484), (10, 45433), (11, 45424), (12, 45376), (13, 45334), (15, 45253), (16, 45211), (19, 45025),

Gene: PhrostyMug\_77 Start: 48272, Stop: 47586, Start Num: 3

Candidate Starts for PhrostyMug\_77:

(2, 48494), (Start: 3 @48272 has 26 MA's), (5, 48239), (7, 48155), (Start: 8 @48098 has 1 MA's), (9, 48056), (10, 48005), (11, 47996), (12, 47948), (15, 47825), (16, 47783), (19, 47597),

Gene: SarFire\_79 Start: 48509, Stop: 47823, Start Num: 3

Candidate Starts for SarFire\_79:

(Start: 3 @48509 has 26 MA's), (4, 48491), (5, 48476), (Start: 8 @48335 has 1 MA's), (9, 48293), (10, 48242), (11, 48233), (12, 48185), (15, 48062), (16, 48020), (19, 47834),

Gene: SkiPole\_84 Start: 47837, Stop: 47151, Start Num: 3

Candidate Starts for SkiPole\_84:

(Start: 3 @47837 has 26 MA's), (5, 47804), (7, 47720), (Start: 8 @47663 has 1 MA's), (9, 47621), (10, 47570), (11, 47561), (12, 47513), (15, 47390), (16, 47348), (19, 47162),

Gene: Smairt\_79 Start: 49288, Stop: 48602, Start Num: 3

Candidate Starts for Smairt\_79:

(2, 49510), (Start: 3 @49288 has 26 MA's), (5, 49255), (7, 49171), (Start: 8 @49114 has 1 MA's), (9, 49072), (10, 49021), (11, 49012), (12, 48964), (15, 48841), (16, 48799), (19, 48613),

Gene: Switzer\_74 Start: 46808, Stop: 46122, Start Num: 3

Candidate Starts for Switzer\_74:

(Start: 3 @46808 has 26 MA's), (5, 46775), (7, 46691), (Start: 8 @46634 has 1 MA's), (9, 46592), (10, 46541), (11, 46532), (12, 46484), (15, 46361), (16, 46319), (19, 46133),

Gene: Thor\_79 Start: 47867, Stop: 47181, Start Num: 3

Candidate Starts for Thor\_79:

(Start: 3 @47867 has 26 MA's), (4, 47849), (5, 47834), (Start: 8 @47693 has 1 MA's), (9, 47651), (10, 47600), (11, 47591), (12, 47543), (15, 47420), (16, 47378), (19, 47192),

Gene: Trouble\_75 Start: 46975, Stop: 46289, Start Num: 3

Candidate Starts for Trouble\_75:

(Start: 3 @46975 has 26 MA's), (5, 46942), (6, 46879), (7, 46858), (Start: 8 @46801 has 1 MA's), (9, 46759), (10, 46708), (11, 46699), (12, 46651), (15, 46528), (16, 46486), (19, 46300),

Gene: Turj99\_71 Start: 46466, Stop: 45780, Start Num: 3

Candidate Starts for Turj99\_71:

(Start: 3 @46466 has 26 MA's), (5, 46433), (7, 46349), (Start: 8 @46292 has 1 MA's), (9, 46250), (10, 46199), (11, 46190), (12, 46142), (15, 46019), (16, 45977), (19, 45791),