



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 85872 Report

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

Pham number 85872 has 45 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Corofin\_79, Akoma\_79, Baloo\_78, Rita1961\_80, Briakila\_79, Abinghost\_79, Bernardo\_80, Casbah\_79, Philly\_78, RomaT\_79, HarveySr\_78, Daisy\_78, Kamiyu\_79, Obutu\_81, Audrey\_79, Morty007\_78, Kronus\_79, Athena\_81, Phlyer\_79, Nozo\_79, Yahalom\_77, MmasiCarm\_80, Gadget\_80, Phayeta\_82, SynergyX\_79, Neos5\_79, Heathcliff\_79, Gervas\_80, Yinz\_79, Chandler\_79, Deenasa\_79
- Track 2 : Ben11\_79, Jackstina\_74, Halfpint\_79, Tydolla\_75, Marley1013\_80, LestyG\_77, SlippinJimmy\_82, ChaChing\_79, Phaedrus\_74, Compostia\_78, RagingRooster\_78
- Track 3 : GlenHope\_80
- Track 4 : Pipefish\_81
- Track 5 : Mortcellus\_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 32 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost\_79, Akoma\_79, Athena\_81, Audrey\_79, Baloo\_78, Bernardo\_80, Briakila\_79, Casbah\_79, Chandler\_79, Corofin\_79, Daisy\_78, Deenasa\_79, Gadget\_80, Gervas\_80, HarveySr\_78, Heathcliff\_79, Kamiyu\_79, Kronus\_79, MmasiCarm\_80, Mortcellus\_79, Morty007\_78, Neos5\_79, Nozo\_79, Obutu\_81, Phayeta\_82, Philly\_78, Phlyer\_79, Rita1961\_80, RomaT\_79, SynergyX\_79, Yahalom\_77, Yinz\_79,

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

- Ben11\_79, ChaChing\_79, Compostia\_78, GlenHope\_80, Halfpint\_79, Jackstina\_74, LestyG\_77, Marley1013\_80, Phaedrus\_74, Pipefish\_81, RagingRooster\_78, SlippinJimmy\_82, Tydolla\_75,

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

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## Summary by start number:

### Start 2:

- Found in 44 of 45 ( 97.8% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 2.3% of time when present
- Phage (with cluster) where this start called: Pipefish\_81 (B3),

### Start 3:

- Found in 45 of 45 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 32 of 42
- Called 71.1% of time when present
- Phage (with cluster) where this start called: Abinghost\_79 (B3), Akoma\_79 (B3), Athena\_81 (B3), Audrey\_79 (B3), Baloo\_78 (B3), Bernardo\_80 (B3), Briakila\_79 (B3), Casbah\_79 (B3), Chandler\_79 (B3), Corofin\_79 (B3), Daisy\_78 (B3), Deenasa\_79 (B3), Gadget\_80 (B3), Gervas\_80 (B3), HarveySr\_78 (B3), Heathcliff\_79 (B3), Kamiyu\_79 (B3), Kronus\_79 (B3), MmasiCarm\_80 (B3), Mortcellus\_79 (B3), Morty007\_78 (B3), Neos5\_79 (B3), Nozo\_79 (B3), Obutu\_81 (B3), Phayeta\_82 (B3), Philly\_78 (B3), Phlyer\_79 (B3), Rita1961\_80 (B3), RomaT\_79 (B3), SynergyX\_79 (B3), Yahalom\_77 (B3), Yinz\_79 (B3),

### Start 4:

- Found in 45 of 45 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 2.2% of time when present
- Phage (with cluster) where this start called: GlenHope\_80 (B3),

### Start 5:

- Found in 45 of 45 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 8 of 42
- Called 24.4% of time when present
- Phage (with cluster) where this start called: Ben11\_79 (B3), ChaChing\_79 (B3), Compostia\_78 (B3), Halfpint\_79 (B3), Jackstina\_74 (B3), LestyG\_77 (B3), Marley1013\_80 (B3), Phaedrus\_74 (B3), RagingRooster\_78 (B3), SlippinJimmy\_82 (B3), Tydolla\_75 (B3),

## Summary by clusters:

There is one cluster represented in this pham: B3

### Info for manual annotations of cluster B3:

- Start number 2 was manually annotated 1 time for cluster B3.
- Start number 3 was manually annotated 32 times for cluster B3.
- Start number 4 was manually annotated 1 time for cluster B3.
- Start number 5 was manually annotated 8 times for cluster B3.

## Gene Information:

Gene: Abinghost\_79 Start: 60909, Stop: 60628, Start Num: 3

Candidate Starts for Abinghost\_79:

(1, 60948), (Start: 2 @60912 has 1 MA's), (Start: 3 @60909 has 32 MA's), (Start: 4 @60891 has 1 MA's), (Start: 5 @60840 has 8 MA's), (6, 60798), (7, 60741), (8, 60726),

Gene: Akoma\_79 Start: 60949, Stop: 60668, Start Num: 3

Candidate Starts for Akoma\_79:

(1, 60988), (Start: 2 @60952 has 1 MA's), (Start: 3 @60949 has 32 MA's), (Start: 4 @60931 has 1 MA's), (Start: 5 @60880 has 8 MA's), (6, 60838), (7, 60781), (8, 60766),

Gene: Athena\_81 Start: 61684, Stop: 61403, Start Num: 3

Candidate Starts for Athena\_81:

(1, 61723), (Start: 2 @61687 has 1 MA's), (Start: 3 @61684 has 32 MA's), (Start: 4 @61666 has 1 MA's), (Start: 5 @61615 has 8 MA's), (6, 61573), (7, 61516), (8, 61501),

Gene: Audrey\_79 Start: 60938, Stop: 60657, Start Num: 3

Candidate Starts for Audrey\_79:

(1, 60977), (Start: 2 @60941 has 1 MA's), (Start: 3 @60938 has 32 MA's), (Start: 4 @60920 has 1 MA's), (Start: 5 @60869 has 8 MA's), (6, 60827), (7, 60770), (8, 60755),

Gene: Baloo\_78 Start: 60790, Stop: 60509, Start Num: 3

Candidate Starts for Baloo\_78:

(1, 60829), (Start: 2 @60793 has 1 MA's), (Start: 3 @60790 has 32 MA's), (Start: 4 @60772 has 1 MA's), (Start: 5 @60721 has 8 MA's), (6, 60679), (7, 60622), (8, 60607),

Gene: Ben11\_79 Start: 61096, Stop: 60884, Start Num: 5

Candidate Starts for Ben11\_79:

(1, 61204), (Start: 2 @61168 has 1 MA's), (Start: 3 @61165 has 32 MA's), (Start: 4 @61147 has 1 MA's), (Start: 5 @61096 has 8 MA's), (6, 61054), (7, 60997), (8, 60982),

Gene: Bernardo\_80 Start: 61128, Stop: 60847, Start Num: 3

Candidate Starts for Bernardo\_80:

(1, 61167), (Start: 2 @61131 has 1 MA's), (Start: 3 @61128 has 32 MA's), (Start: 4 @61110 has 1 MA's), (Start: 5 @61059 has 8 MA's), (6, 61017), (7, 60960), (8, 60945),

Gene: Briakila\_79 Start: 61136, Stop: 60855, Start Num: 3

Candidate Starts for Briakila\_79:

(1, 61175), (Start: 2 @61139 has 1 MA's), (Start: 3 @61136 has 32 MA's), (Start: 4 @61118 has 1 MA's), (Start: 5 @61067 has 8 MA's), (6, 61025), (7, 60968), (8, 60953),

Gene: Casbah\_79 Start: 61249, Stop: 60968, Start Num: 3

Candidate Starts for Casbah\_79:

(1, 61288), (Start: 2 @61252 has 1 MA's), (Start: 3 @61249 has 32 MA's), (Start: 4 @61231 has 1 MA's), (Start: 5 @61180 has 8 MA's), (6, 61138), (7, 61081), (8, 61066),

Gene: ChaChing\_79 Start: 60885, Stop: 60673, Start Num: 5

Candidate Starts for ChaChing\_79:

(1, 60993), (Start: 2 @60957 has 1 MA's), (Start: 3 @60954 has 32 MA's), (Start: 4 @60936 has 1 MA's), (Start: 5 @60885 has 8 MA's), (6, 60843), (7, 60786), (8, 60771),

Gene: Chandler\_79 Start: 61725, Stop: 61444, Start Num: 3

Candidate Starts for Chandler\_79:

(1, 61764), (Start: 2 @61728 has 1 MA's), (Start: 3 @61725 has 32 MA's), (Start: 4 @61707 has 1 MA's), (Start: 5 @61656 has 8 MA's), (6, 61614), (7, 61557), (8, 61542),

Gene: Compostia\_78 Start: 61325, Stop: 61113, Start Num: 5

Candidate Starts for Compostia\_78:

(1, 61433), (Start: 2 @61397 has 1 MA's), (Start: 3 @61394 has 32 MA's), (Start: 4 @61376 has 1 MA's), (Start: 5 @61325 has 8 MA's), (6, 61283), (7, 61226), (8, 61211),

Gene: Corofin\_79 Start: 60960, Stop: 60679, Start Num: 3

Candidate Starts for Corofin\_79:

(1, 60999), (Start: 2 @60963 has 1 MA's), (Start: 3 @60960 has 32 MA's), (Start: 4 @60942 has 1 MA's), (Start: 5 @60891 has 8 MA's), (6, 60849), (7, 60792), (8, 60777),

Gene: Daisy\_78 Start: 60511, Stop: 60230, Start Num: 3

Candidate Starts for Daisy\_78:

(1, 60550), (Start: 2 @60514 has 1 MA's), (Start: 3 @60511 has 32 MA's), (Start: 4 @60493 has 1 MA's), (Start: 5 @60442 has 8 MA's), (6, 60400), (7, 60343), (8, 60328),

Gene: Deenasa\_79 Start: 61860, Stop: 61579, Start Num: 3

Candidate Starts for Deenasa\_79:

(1, 61899), (Start: 2 @61863 has 1 MA's), (Start: 3 @61860 has 32 MA's), (Start: 4 @61842 has 1 MA's), (Start: 5 @61791 has 8 MA's), (6, 61749), (7, 61692), (8, 61677),

Gene: Gadjet\_80 Start: 61311, Stop: 61030, Start Num: 3

Candidate Starts for Gadjet\_80:

(1, 61350), (Start: 2 @61314 has 1 MA's), (Start: 3 @61311 has 32 MA's), (Start: 4 @61293 has 1 MA's), (Start: 5 @61242 has 8 MA's), (6, 61200), (7, 61143), (8, 61128),

Gene: Gervas\_80 Start: 61405, Stop: 61124, Start Num: 3

Candidate Starts for Gervas\_80:

(1, 61444), (Start: 2 @61408 has 1 MA's), (Start: 3 @61405 has 32 MA's), (Start: 4 @61387 has 1 MA's), (Start: 5 @61336 has 8 MA's), (6, 61294), (7, 61237), (8, 61222),

Gene: GlenHope\_80 Start: 60966, Stop: 60703, Start Num: 4

Candidate Starts for GlenHope\_80:

(1, 61023), (Start: 2 @60987 has 1 MA's), (Start: 3 @60984 has 32 MA's), (Start: 4 @60966 has 1 MA's), (Start: 5 @60915 has 8 MA's), (6, 60873), (7, 60816), (8, 60801),

Gene: Halfpint\_79 Start: 60657, Stop: 60445, Start Num: 5

Candidate Starts for Halfpint\_79:

(1, 60765), (Start: 2 @60729 has 1 MA's), (Start: 3 @60726 has 32 MA's), (Start: 4 @60708 has 1 MA's), (Start: 5 @60657 has 8 MA's), (6, 60615), (7, 60558), (8, 60543),

Gene: HarveySr\_78 Start: 60495, Stop: 60214, Start Num: 3

Candidate Starts for HarveySr\_78:

(1, 60534), (Start: 2 @60498 has 1 MA's), (Start: 3 @60495 has 32 MA's), (Start: 4 @60477 has 1 MA's), (Start: 5 @60426 has 8 MA's), (6, 60384), (7, 60327), (8, 60312),

Gene: Heathcliff\_79 Start: 60905, Stop: 60624, Start Num: 3

Candidate Starts for Heathcliff\_79:

(1, 60944), (Start: 2 @60908 has 1 MA's), (Start: 3 @60905 has 32 MA's), (Start: 4 @60887 has 1 MA's), (Start: 5 @60836 has 8 MA's), (6, 60794), (7, 60737), (8, 60722),

Gene: Jackstina\_74 Start: 60750, Stop: 60538, Start Num: 5

Candidate Starts for Jackstina\_74:

(1, 60858), (Start: 2 @60822 has 1 MA's), (Start: 3 @60819 has 32 MA's), (Start: 4 @60801 has 1 MA's), (Start: 5 @60750 has 8 MA's), (6, 60708), (7, 60651), (8, 60636),

Gene: Kamiyu\_79 Start: 60908, Stop: 60627, Start Num: 3

Candidate Starts for Kamiyu\_79:

(1, 60947), (Start: 2 @60911 has 1 MA's), (Start: 3 @60908 has 32 MA's), (Start: 4 @60890 has 1 MA's), (Start: 5 @60839 has 8 MA's), (6, 60797), (7, 60740), (8, 60725),

Gene: Kronus\_79 Start: 61992, Stop: 61711, Start Num: 3

Candidate Starts for Kronus\_79:

(1, 62031), (Start: 2 @61995 has 1 MA's), (Start: 3 @61992 has 32 MA's), (Start: 4 @61974 has 1 MA's), (Start: 5 @61923 has 8 MA's), (6, 61881), (7, 61824), (8, 61809),

Gene: LestyG\_77 Start: 60409, Stop: 60197, Start Num: 5

Candidate Starts for LestyG\_77:

(1, 60517), (Start: 2 @60481 has 1 MA's), (Start: 3 @60478 has 32 MA's), (Start: 4 @60460 has 1 MA's), (Start: 5 @60409 has 8 MA's), (6, 60367), (7, 60310), (8, 60295),

Gene: Marley1013\_80 Start: 61775, Stop: 61563, Start Num: 5

Candidate Starts for Marley1013\_80:

(1, 61883), (Start: 2 @61847 has 1 MA's), (Start: 3 @61844 has 32 MA's), (Start: 4 @61826 has 1 MA's), (Start: 5 @61775 has 8 MA's), (6, 61733), (7, 61676), (8, 61661),

Gene: MmasiCarm\_80 Start: 61347, Stop: 61066, Start Num: 3

Candidate Starts for MmasiCarm\_80:

(1, 61386), (Start: 2 @61350 has 1 MA's), (Start: 3 @61347 has 32 MA's), (Start: 4 @61329 has 1 MA's), (Start: 5 @61278 has 8 MA's), (6, 61236), (7, 61179), (8, 61164),

Gene: Mortcellus\_79 Start: 62063, Stop: 61782, Start Num: 3

Candidate Starts for Mortcellus\_79:

(Start: 3 @62063 has 32 MA's), (Start: 4 @62045 has 1 MA's), (Start: 5 @61994 has 8 MA's), (6, 61952), (7, 61895), (8, 61880),

Gene: Morty007\_78 Start: 61844, Stop: 61563, Start Num: 3

Candidate Starts for Morty007\_78:

(1, 61883), (Start: 2 @61847 has 1 MA's), (Start: 3 @61844 has 32 MA's), (Start: 4 @61826 has 1 MA's), (Start: 5 @61775 has 8 MA's), (6, 61733), (7, 61676), (8, 61661),

Gene: Neos5\_79 Start: 61306, Stop: 61025, Start Num: 3

Candidate Starts for Neos5\_79:

(1, 61345), (Start: 2 @61309 has 1 MA's), (Start: 3 @61306 has 32 MA's), (Start: 4 @61288 has 1 MA's), (Start: 5 @61237 has 8 MA's), (6, 61195), (7, 61138), (8, 61123),

Gene: Nozo\_79 Start: 61715, Stop: 61434, Start Num: 3

Candidate Starts for Nozo\_79:

(1, 61754), (Start: 2 @61718 has 1 MA's), (Start: 3 @61715 has 32 MA's), (Start: 4 @61697 has 1 MA's), (Start: 5 @61646 has 8 MA's), (6, 61604), (7, 61547), (8, 61532),

Gene: Obutu\_81 Start: 61518, Stop: 61237, Start Num: 3

Candidate Starts for Obutu\_81:

(1, 61557), (Start: 2 @61521 has 1 MA's), (Start: 3 @61518 has 32 MA's), (Start: 4 @61500 has 1 MA's), (Start: 5 @61449 has 8 MA's), (6, 61407), (7, 61350), (8, 61335),

Gene: Phaedrus\_74 Start: 60297, Stop: 60085, Start Num: 5

Candidate Starts for Phaedrus\_74:

(1, 60405), (Start: 2 @60369 has 1 MA's), (Start: 3 @60366 has 32 MA's), (Start: 4 @60348 has 1 MA's), (Start: 5 @60297 has 8 MA's), (6, 60255), (7, 60198), (8, 60183),

Gene: Phayeta\_82 Start: 61435, Stop: 61154, Start Num: 3

Candidate Starts for Phayeta\_82:

(1, 61474), (Start: 2 @61438 has 1 MA's), (Start: 3 @61435 has 32 MA's), (Start: 4 @61417 has 1 MA's), (Start: 5 @61366 has 8 MA's), (6, 61324), (7, 61267), (8, 61252),

Gene: Philly\_78 Start: 60798, Stop: 60517, Start Num: 3

Candidate Starts for Philly\_78:

(1, 60837), (Start: 2 @60801 has 1 MA's), (Start: 3 @60798 has 32 MA's), (Start: 4 @60780 has 1 MA's), (Start: 5 @60729 has 8 MA's), (6, 60687), (7, 60630), (8, 60615),

Gene: Phlyer\_79 Start: 61661, Stop: 61380, Start Num: 3

Candidate Starts for Phlyer\_79:

(1, 61700), (Start: 2 @61664 has 1 MA's), (Start: 3 @61661 has 32 MA's), (Start: 4 @61643 has 1 MA's), (Start: 5 @61592 has 8 MA's), (6, 61550), (7, 61493), (8, 61478),

Gene: Pipefish\_81 Start: 62060, Stop: 61776, Start Num: 2

Candidate Starts for Pipefish\_81:

(1, 62096), (Start: 2 @62060 has 1 MA's), (Start: 3 @62057 has 32 MA's), (Start: 4 @62039 has 1 MA's), (Start: 5 @61988 has 8 MA's), (6, 61946), (7, 61889), (8, 61874),

Gene: RagingRooster\_78 Start: 60572, Stop: 60360, Start Num: 5

Candidate Starts for RagingRooster\_78:

(1, 60680), (Start: 2 @60644 has 1 MA's), (Start: 3 @60641 has 32 MA's), (Start: 4 @60623 has 1 MA's), (Start: 5 @60572 has 8 MA's), (6, 60530), (7, 60473), (8, 60458),

Gene: Rita1961\_80 Start: 61295, Stop: 61014, Start Num: 3

Candidate Starts for Rita1961\_80:

(1, 61334), (Start: 2 @61298 has 1 MA's), (Start: 3 @61295 has 32 MA's), (Start: 4 @61277 has 1 MA's), (Start: 5 @61226 has 8 MA's), (6, 61184), (7, 61127), (8, 61112),

Gene: RomaT\_79 Start: 61515, Stop: 61234, Start Num: 3

Candidate Starts for RomaT\_79:

(1, 61554), (Start: 2 @61518 has 1 MA's), (Start: 3 @61515 has 32 MA's), (Start: 4 @61497 has 1 MA's), (Start: 5 @61446 has 8 MA's), (6, 61404), (7, 61347), (8, 61332),

Gene: SlippinJimmy\_82 Start: 62256, Stop: 62044, Start Num: 5

Candidate Starts for SlippinJimmy\_82:

(1, 62364), (Start: 2 @62328 has 1 MA's), (Start: 3 @62325 has 32 MA's), (Start: 4 @62307 has 1 MA's), (Start: 5 @62256 has 8 MA's), (6, 62214), (7, 62157), (8, 62142),

Gene: SynergyX\_79 Start: 60952, Stop: 60671, Start Num: 3

Candidate Starts for SynergyX\_79:

(1, 60991), (Start: 2 @60955 has 1 MA's), (Start: 3 @60952 has 32 MA's), (Start: 4 @60934 has 1 MA's), (Start: 5 @60883 has 8 MA's), (6, 60841), (7, 60784), (8, 60769),

Gene: Tydolla\_75 Start: 60862, Stop: 60650, Start Num: 5

Candidate Starts for Tydolla\_75:

(1, 60970), (Start: 2 @60934 has 1 MA's), (Start: 3 @60931 has 32 MA's), (Start: 4 @60913 has 1 MA's), (Start: 5 @60862 has 8 MA's), (6, 60820), (7, 60763), (8, 60748),

Gene: Yahalom\_77 Start: 60758, Stop: 60477, Start Num: 3

Candidate Starts for Yahalom\_77:

(1, 60797), (Start: 2 @60761 has 1 MA's), (Start: 3 @60758 has 32 MA's), (Start: 4 @60740 has 1 MA's), (Start: 5 @60689 has 8 MA's), (6, 60647), (7, 60590), (8, 60575),

Gene: Yinz\_79 Start: 60823, Stop: 60542, Start Num: 3

Candidate Starts for Yinz\_79:

(1, 60862), (Start: 2 @60826 has 1 MA's), (Start: 3 @60823 has 32 MA's), (Start: 4 @60805 has 1 MA's), (Start: 5 @60754 has 8 MA's), (6, 60712), (7, 60655), (8, 60640),