



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 194199 Report

This analysis was run 11/02/24 on database version 579.

Pham number 194199 has 35 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Phlyer\_44, Nozo\_44, Heathcliff\_44, MmasiCarm\_44, Neos5\_44, Obutu\_44, GlenHope\_45, Pipefish\_46, Yinz\_44, Mortcellus\_43, ChaChing\_44, SynergyX\_44, RagingRooster\_44, Compostia\_45, Briakila\_45, Corofin\_44, Baloo\_44, Kronus\_43, OrangeOswald\_44, LestyG\_44, Athena\_45, Gervas\_44, Abinghost\_44, Daisy\_44, Gadget\_45, Philly\_43, Yahalom\_44, Devonte\_44, Deenasa\_44, RomaT\_44, Kamiyu\_44, Rita1961\_44, Marley1013\_44
- Track 2 : Bernardo\_45
- Track 3 : HarveySr\_44

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

The start number called the most often in the published annotations is 4, it was called in 34 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost\_44, Athena\_45, Baloo\_44, Briakila\_45, ChaChing\_44, Compostia\_45, Corofin\_44, Daisy\_44, Deenasa\_44, Devonte\_44, Gadget\_45, Gervas\_44, GlenHope\_45, HarveySr\_44, Heathcliff\_44, Kamiyu\_44, Kronus\_43, LestyG\_44, Marley1013\_44, MmasiCarm\_44, Mortcellus\_43, Neos5\_44, Nozo\_44, Obutu\_44, OrangeOswald\_44, Philly\_43, Phlyer\_44, Pipefish\_46, RagingRooster\_44, Rita1961\_44, RomaT\_44, SynergyX\_44, Yahalom\_44, Yinz\_44,

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

- Bernardo\_45,

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

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### **Summary by start number:**

Start 1:

- Found in 35 of 35 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 2.9% of time when present

- Phage (with cluster) where this start called: Bernardo\_45 (B3),

Start 4:

- Found in 35 of 35 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 34 of 35
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Abinghost\_44 (B3), Athena\_45 (B3), Baloo\_44 (B3), Briakila\_45 (B3), ChaChing\_44 (B3), Compostia\_45 (B3), Corofin\_44 (B3), Daisy\_44 (B3), Deenasa\_44 (B3), Devonte\_44 (B3), Gadget\_45 (B3), Gervas\_44 (B3), GlenHope\_45 (B3), HarveySr\_44 (B3), Heathcliff\_44 (B3), Kamiyu\_44 (B3), Kronus\_43 (B3), LestyG\_44 (B3), Marley1013\_44 (B3), MmasiCarm\_44 (B3), Mortcellus\_43 (B3), Neos5\_44 (B3), Nozo\_44 (B3), Obutu\_44 (B3), OrangeOswald\_44 (B3), Philly\_43 (B3), Phlyer\_44 (B3), Pipefish\_46 (B3), RagingRooster\_44 (B3), Rita1961\_44 (B3), RomaT\_44 (B3), SynergyX\_44 (B3), Yahalom\_44 (B3), Yinz\_44 (B3),

### Summary by clusters:

There is one cluster represented in this pham: B3

Info for manual annotations of cluster B3:

- Start number 1 was manually annotated 1 time for cluster B3.
- Start number 4 was manually annotated 34 times for cluster B3.

### Gene Information:

Gene: Abinghost\_44 Start: 39509, Stop: 39024, Start Num: 4

Candidate Starts for Abinghost\_44:

(Start: 1 @39680 has 1 MA's), (2, 39578), (3, 39524), (Start: 4 @39509 has 34 MA's), (5, 39461), (6, 39371), (7, 39326), (8, 39320), (9, 39314), (10, 39263), (11, 39176), (12, 39152), (13, 39104),

Gene: Athena\_45 Start: 40260, Stop: 39775, Start Num: 4

Candidate Starts for Athena\_45:

(Start: 1 @40431 has 1 MA's), (2, 40329), (3, 40275), (Start: 4 @40260 has 34 MA's), (5, 40212), (6, 40122), (7, 40077), (8, 40071), (9, 40065), (10, 40014), (11, 39927), (12, 39903), (13, 39855),

Gene: Baloo\_44 Start: 39512, Stop: 39027, Start Num: 4

Candidate Starts for Baloo\_44:

(Start: 1 @39683 has 1 MA's), (2, 39581), (3, 39527), (Start: 4 @39512 has 34 MA's), (5, 39464), (6, 39374), (7, 39329), (8, 39323), (9, 39317), (10, 39266), (11, 39179), (12, 39155), (13, 39107),

Gene: Bernardo\_45 Start: 40228, Stop: 39572, Start Num: 1

Candidate Starts for Bernardo\_45:

(Start: 1 @40228 has 1 MA's), (2, 40126), (3, 40072), (Start: 4 @40057 has 34 MA's), (5, 40009), (6, 39919), (7, 39874), (8, 39868), (9, 39862), (10, 39811), (11, 39724), (12, 39700), (13, 39652),

Gene: Briakila\_45 Start: 40279, Stop: 39794, Start Num: 4

Candidate Starts for Briakila\_45:

(Start: 1 @40450 has 1 MA's), (2, 40348), (3, 40294), (Start: 4 @40279 has 34 MA's), (5, 40231), (6, 40141), (7, 40096), (8, 40090), (9, 40084), (10, 40033), (11, 39946), (12, 39922), (13, 39874),

Gene: ChaChing\_44 Start: 39524, Stop: 39039, Start Num: 4

Candidate Starts for ChaChing\_44:

(Start: 1 @39695 has 1 MA's), (2, 39593), (3, 39539), (Start: 4 @39524 has 34 MA's), (5, 39476), (6, 39386), (7, 39341), (8, 39335), (9, 39329), (10, 39278), (11, 39191), (12, 39167), (13, 39119),

Gene: Compostia\_45 Start: 39940, Stop: 39455, Start Num: 4

Candidate Starts for Compostia\_45:

(Start: 1 @40111 has 1 MA's), (2, 40009), (3, 39955), (Start: 4 @39940 has 34 MA's), (5, 39892), (6, 39802), (7, 39757), (8, 39751), (9, 39745), (10, 39694), (11, 39607), (12, 39583), (13, 39535),

Gene: Corofin\_44 Start: 39535, Stop: 39050, Start Num: 4

Candidate Starts for Corofin\_44:

(Start: 1 @39706 has 1 MA's), (2, 39604), (3, 39550), (Start: 4 @39535 has 34 MA's), (5, 39487), (6, 39397), (7, 39352), (8, 39346), (9, 39340), (10, 39289), (11, 39202), (12, 39178), (13, 39130),

Gene: Daisy\_44 Start: 39536, Stop: 39051, Start Num: 4

Candidate Starts for Daisy\_44:

(Start: 1 @39707 has 1 MA's), (2, 39605), (3, 39551), (Start: 4 @39536 has 34 MA's), (5, 39488), (6, 39398), (7, 39353), (8, 39347), (9, 39341), (10, 39290), (11, 39203), (12, 39179), (13, 39131),

Gene: Deenasa\_44 Start: 40271, Stop: 39786, Start Num: 4

Candidate Starts for Deenasa\_44:

(Start: 1 @40442 has 1 MA's), (2, 40340), (3, 40286), (Start: 4 @40271 has 34 MA's), (5, 40223), (6, 40133), (7, 40088), (8, 40082), (9, 40076), (10, 40025), (11, 39938), (12, 39914), (13, 39866),

Gene: Devonte\_44 Start: 39500, Stop: 39015, Start Num: 4

Candidate Starts for Devonte\_44:

(Start: 1 @39671 has 1 MA's), (2, 39569), (3, 39515), (Start: 4 @39500 has 34 MA's), (5, 39452), (6, 39362), (7, 39317), (8, 39311), (9, 39305), (10, 39254), (11, 39167), (12, 39143), (13, 39095),

Gene: Gadget\_45 Start: 39523, Stop: 39038, Start Num: 4

Candidate Starts for Gadget\_45:

(Start: 1 @39694 has 1 MA's), (2, 39592), (3, 39538), (Start: 4 @39523 has 34 MA's), (5, 39475), (6, 39385), (7, 39340), (8, 39334), (9, 39328), (10, 39277), (11, 39190), (12, 39166), (13, 39118),

Gene: Gervas\_44 Start: 39490, Stop: 39005, Start Num: 4

Candidate Starts for Gervas\_44:

(Start: 1 @39661 has 1 MA's), (2, 39559), (3, 39505), (Start: 4 @39490 has 34 MA's), (5, 39442), (6, 39352), (7, 39307), (8, 39301), (9, 39295), (10, 39244), (11, 39157), (12, 39133), (13, 39085),

Gene: GlenHope\_45 Start: 39503, Stop: 39018, Start Num: 4

Candidate Starts for GlenHope\_45:

(Start: 1 @39674 has 1 MA's), (2, 39572), (3, 39518), (Start: 4 @39503 has 34 MA's), (5, 39455), (6, 39365), (7, 39320), (8, 39314), (9, 39308), (10, 39257), (11, 39170), (12, 39146), (13, 39098),

Gene: HarveySr\_44 Start: 39496, Stop: 39011, Start Num: 4

Candidate Starts for HarveySr\_44:

(Start: 1 @39667 has 1 MA's), (2, 39565), (3, 39511), (Start: 4 @39496 has 34 MA's), (5, 39448), (6, 39358), (7, 39313), (8, 39307), (9, 39301), (10, 39250), (11, 39163), (12, 39139), (13, 39091),

Gene: Heathcliff\_44 Start: 39474, Stop: 38989, Start Num: 4

Candidate Starts for Heathcliff\_44:

(Start: 1 @39645 has 1 MA's), (2, 39543), (3, 39489), (Start: 4 @39474 has 34 MA's), (5, 39426), (6, 39336), (7, 39291), (8, 39285), (9, 39279), (10, 39228), (11, 39141), (12, 39117), (13, 39069),

Gene: Kamiyu\_44 Start: 39482, Stop: 38997, Start Num: 4

Candidate Starts for Kamiyu\_44:

(Start: 1 @39653 has 1 MA's), (2, 39551), (3, 39497), (Start: 4 @39482 has 34 MA's), (5, 39434), (6, 39344), (7, 39299), (8, 39293), (9, 39287), (10, 39236), (11, 39149), (12, 39125), (13, 39077),

Gene: Kronus\_43 Start: 40092, Stop: 39607, Start Num: 4

Candidate Starts for Kronus\_43:

(Start: 1 @40263 has 1 MA's), (2, 40161), (3, 40107), (Start: 4 @40092 has 34 MA's), (5, 40044), (6, 39954), (7, 39909), (8, 39903), (9, 39897), (10, 39846), (11, 39759), (12, 39735), (13, 39687),

Gene: LestyG\_44 Start: 39513, Stop: 39028, Start Num: 4

Candidate Starts for LestyG\_44:

(Start: 1 @39684 has 1 MA's), (2, 39582), (3, 39528), (Start: 4 @39513 has 34 MA's), (5, 39465), (6, 39375), (7, 39330), (8, 39324), (9, 39318), (10, 39267), (11, 39180), (12, 39156), (13, 39108),

Gene: Marley1013\_44 Start: 40291, Stop: 39806, Start Num: 4

Candidate Starts for Marley1013\_44:

(Start: 1 @40462 has 1 MA's), (2, 40360), (3, 40306), (Start: 4 @40291 has 34 MA's), (5, 40243), (6, 40153), (7, 40108), (8, 40102), (9, 40096), (10, 40045), (11, 39958), (12, 39934), (13, 39886),

Gene: MmasiCarm\_44 Start: 39495, Stop: 39010, Start Num: 4

Candidate Starts for MmasiCarm\_44:

(Start: 1 @39666 has 1 MA's), (2, 39564), (3, 39510), (Start: 4 @39495 has 34 MA's), (5, 39447), (6, 39357), (7, 39312), (8, 39306), (9, 39300), (10, 39249), (11, 39162), (12, 39138), (13, 39090),

Gene: Mortcellus\_43 Start: 40147, Stop: 39662, Start Num: 4

Candidate Starts for Mortcellus\_43:

(Start: 1 @40318 has 1 MA's), (2, 40216), (3, 40162), (Start: 4 @40147 has 34 MA's), (5, 40099), (6, 40009), (7, 39964), (8, 39958), (9, 39952), (10, 39901), (11, 39814), (12, 39790), (13, 39742),

Gene: Neos5\_44 Start: 40306, Stop: 39821, Start Num: 4

Candidate Starts for Neos5\_44:

(Start: 1 @40477 has 1 MA's), (2, 40375), (3, 40321), (Start: 4 @40306 has 34 MA's), (5, 40258), (6, 40168), (7, 40123), (8, 40117), (9, 40111), (10, 40060), (11, 39973), (12, 39949), (13, 39901),

Gene: Nozo\_44 Start: 40271, Stop: 39786, Start Num: 4

Candidate Starts for Nozo\_44:

(Start: 1 @40442 has 1 MA's), (2, 40340), (3, 40286), (Start: 4 @40271 has 34 MA's), (5, 40223), (6, 40133), (7, 40088), (8, 40082), (9, 40076), (10, 40025), (11, 39938), (12, 39914), (13, 39866),

Gene: Obutu\_44 Start: 39495, Stop: 39010, Start Num: 4

Candidate Starts for Obutu\_44:

(Start: 1 @39666 has 1 MA's), (2, 39564), (3, 39510), (Start: 4 @39495 has 34 MA's), (5, 39447), (6, 39357), (7, 39312), (8, 39306), (9, 39300), (10, 39249), (11, 39162), (12, 39138), (13, 39090),

Gene: OrangeOswald\_44 Start: 39512, Stop: 39027, Start Num: 4

Candidate Starts for OrangeOswald\_44:

(Start: 1 @39683 has 1 MA's), (2, 39581), (3, 39527), (Start: 4 @39512 has 34 MA's), (5, 39464), (6, 39374), (7, 39329), (8, 39323), (9, 39317), (10, 39266), (11, 39179), (12, 39155), (13, 39107),

Gene: Philly\_43 Start: 39363, Stop: 38878, Start Num: 4

Candidate Starts for Philly\_43:

(Start: 1 @39534 has 1 MA's), (2, 39432), (3, 39378), (Start: 4 @39363 has 34 MA's), (5, 39315), (6, 39225), (7, 39180), (8, 39174), (9, 39168), (10, 39117), (11, 39030), (12, 39006), (13, 38958),

Gene: Phlyer\_44 Start: 40251, Stop: 39766, Start Num: 4

Candidate Starts for Phlyer\_44:

(Start: 1 @40422 has 1 MA's), (2, 40320), (3, 40266), (Start: 4 @40251 has 34 MA's), (5, 40203), (6, 40113), (7, 40068), (8, 40062), (9, 40056), (10, 40005), (11, 39918), (12, 39894), (13, 39846),

Gene: Pipefish\_46 Start: 40904, Stop: 40419, Start Num: 4

Candidate Starts for Pipefish\_46:

(Start: 1 @41075 has 1 MA's), (2, 40973), (3, 40919), (Start: 4 @40904 has 34 MA's), (5, 40856), (6, 40766), (7, 40721), (8, 40715), (9, 40709), (10, 40658), (11, 40571), (12, 40547), (13, 40499),

Gene: RagingRooster\_44 Start: 39513, Stop: 39028, Start Num: 4

Candidate Starts for RagingRooster\_44:

(Start: 1 @39684 has 1 MA's), (2, 39582), (3, 39528), (Start: 4 @39513 has 34 MA's), (5, 39465), (6, 39375), (7, 39330), (8, 39324), (9, 39318), (10, 39267), (11, 39180), (12, 39156), (13, 39108),

Gene: Rita1961\_44 Start: 39496, Stop: 39011, Start Num: 4

Candidate Starts for Rita1961\_44:

(Start: 1 @39667 has 1 MA's), (2, 39565), (3, 39511), (Start: 4 @39496 has 34 MA's), (5, 39448), (6, 39358), (7, 39313), (8, 39307), (9, 39301), (10, 39250), (11, 39163), (12, 39139), (13, 39091),

Gene: RomaT\_44 Start: 40286, Stop: 39801, Start Num: 4

Candidate Starts for RomaT\_44:

(Start: 1 @40457 has 1 MA's), (2, 40355), (3, 40301), (Start: 4 @40286 has 34 MA's), (5, 40238), (6, 40148), (7, 40103), (8, 40097), (9, 40091), (10, 40040), (11, 39953), (12, 39929), (13, 39881),

Gene: SynergyX\_44 Start: 39513, Stop: 39028, Start Num: 4

Candidate Starts for SynergyX\_44:

(Start: 1 @39684 has 1 MA's), (2, 39582), (3, 39528), (Start: 4 @39513 has 34 MA's), (5, 39465), (6, 39375), (7, 39330), (8, 39324), (9, 39318), (10, 39267), (11, 39180), (12, 39156), (13, 39108),

Gene: Yahalom\_44 Start: 39523, Stop: 39038, Start Num: 4

Candidate Starts for Yahalom\_44:

(Start: 1 @39694 has 1 MA's), (2, 39592), (3, 39538), (Start: 4 @39523 has 34 MA's), (5, 39475), (6, 39385), (7, 39340), (8, 39334), (9, 39328), (10, 39277), (11, 39190), (12, 39166), (13, 39118),

Gene: Yinz\_44 Start: 39549, Stop: 39064, Start Num: 4

Candidate Starts for Yinz\_44:

(Start: 1 @39720 has 1 MA's), (2, 39618), (3, 39564), (Start: 4 @39549 has 34 MA's), (5, 39501), (6, 39411), (7, 39366), (8, 39360), (9, 39354), (10, 39303), (11, 39216), (12, 39192), (13, 39144),