



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 85958 Report

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

Pham number 85958 has 43 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Wanda\_63, NihilNomen\_56, Hannaconda\_53, Ejimix\_57, Phoebus\_56, Bagrid\_56, Minerva\_63, Kalah2\_53, Constella\_47, BAKA\_61, EricMillard\_57, HokkenD\_50, Bombitas\_54, Beem\_57, KashFlow\_50, Dove\_54, Odette\_55, Dallas\_56, Halley\_57, Hughesyang\_55, JuicyJay\_56, ThreeRngTarjay\_55, Redno2\_54, Klein\_57, Schatzie\_52, Zelink\_55
- Track 2 : DmpstrDiver\_56
- Track 3 : Ariel\_54, Gonephishing\_57, Squint\_54, MiaZeal\_54, Lucky2013\_55, Superphikiman\_55, Omega\_59, Porcelain\_53, LittleE\_57, Courthouse\_54
- Track 4 : Pound\_57
- Track 5 : Thibault\_49, Yeet\_55, Duke13\_60, Optimus\_62
- Track 6 : Bobby\_56

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

The start number called the most often in the published annotations is 1, it was called in 38 of the 39 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel\_54, BAKA\_61, Bagrid\_56, Beem\_57, Bobby\_56, Bombitas\_54, Constella\_47, Courthouse\_54, Dallas\_56, DmpstrDiver\_56, Dove\_54, Duke13\_60, Ejimix\_57, EricMillard\_57, Gonephishing\_57, Halley\_57, Hannaconda\_53, HokkenD\_50, Hughesyang\_55, JuicyJay\_56, Kalah2\_53, KashFlow\_50, Klein\_57, LittleE\_57, Lucky2013\_55, MiaZeal\_54, Minerva\_63, NihilNomen\_56, Odette\_55, Omega\_59, Optimus\_62, Phoebus\_56, Porcelain\_53, Redno2\_54, Schatzie\_52, Squint\_54, Superphikiman\_55, Thibault\_49, ThreeRngTarjay\_55, Wanda\_63, Yeet\_55, Zelink\_55,

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

- Pound\_57,

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

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

#### Start 1:

- Found in 43 of 43 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 38 of 39
- Called 97.7% of time when present
- Phage (with cluster) where this start called: Ariel\_54 (J), BAKA\_61 (J), Bagrid\_56 (J), Beem\_57 (J), Bobby\_56 (J), Bombitas\_54 (J), Constella\_47 (J), Courthouse\_54 (J), Dallas\_56 (J), DmpstrDiver\_56 (J), Dove\_54 (J), Duke13\_60 (J), Ejimix\_57 (J), EricMillard\_57 (J), Gonephishing\_57 (J), Halley\_57 (J), Hannaconda\_53 (J), HokkenD\_50 (J), Hughesyang\_55 (J), JuicyJay\_56 (J), Kalah2\_53 (J), KashFlow\_50 (J), Klein\_57 (J), LittleE\_57 (J), Lucky2013\_55 (J), MiaZeal\_54 (J), Minerva\_63 (J), NihilNomen\_56 (J), Odette\_55 (J), Omega\_59 (J), Optimus\_62 (J), Phoebus\_56 (J), Porcelain\_53 (J), Redno2\_54 (J), Schatzie\_52 (J), Squint\_54 (J), Superphikiman\_55 (J), Thibault\_49 (J), ThreeRngTarjay\_55 (J), Wanda\_63 (J), Yeet\_55 (J), Zelink\_55 (J),

#### Start 3:

- Found in 37 of 43 ( 86.0% ) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Pound\_57 (J),

### Summary by clusters:

There is one cluster represented in this pham: J

Info for manual annotations of cluster J:

- Start number 1 was manually annotated 38 times for cluster J.
- Start number 3 was manually annotated 1 time for cluster J.

### Gene Information:

Gene: Ariel\_54 Start: 41817, Stop: 41395, Start Num: 1

Candidate Starts for Ariel\_54:

(Start: 1 @41817 has 38 MA's), (2, 41772), (Start: 3 @41724 has 1 MA's), (5, 41646), (8, 41541), (9, 41529), (12, 41415), (14, 41406),

Gene: BAKA\_61 Start: 45940, Stop: 45524, Start Num: 1

Candidate Starts for BAKA\_61:

(Start: 1 @45940 has 38 MA's), (2, 45895), (Start: 3 @45847 has 1 MA's), (4, 45802), (6, 45682), (7, 45670), (8, 45667), (10, 45619), (11, 45556), (13, 45541), (14, 45535), (15, 45532),

Gene: Bagrid\_56 Start: 45273, Stop: 44857, Start Num: 1

Candidate Starts for Bagrid\_56:

(Start: 1 @45273 has 38 MA's), (2, 45228), (Start: 3 @45180 has 1 MA's), (4, 45135), (6, 45015), (7, 45003), (8, 45000), (10, 44952), (11, 44889), (13, 44874), (14, 44868), (15, 44865),

Gene: Beem\_57 Start: 45839, Stop: 45423, Start Num: 1

Candidate Starts for Beem\_57:

(Start: 1 @45839 has 38 MA's), (2, 45794), (Start: 3 @45746 has 1 MA's), (4, 45701), (6, 45581), (7, 45569), (8, 45566), (10, 45518), (11, 45455), (13, 45440), (14, 45434), (15, 45431),

Gene: Bobby\_56 Start: 44784, Stop: 44368, Start Num: 1

Candidate Starts for Bobby\_56:

(Start: 1 @44784 has 38 MA's), (2, 44739), (4, 44646), (6, 44526), (7, 44514), (8, 44511), (10, 44463), (11, 44400), (14, 44379),

Gene: Bombitas\_54 Start: 45434, Stop: 45018, Start Num: 1

Candidate Starts for Bombitas\_54:

(Start: 1 @45434 has 38 MA's), (2, 45389), (Start: 3 @45341 has 1 MA's), (4, 45296), (6, 45176), (7, 45164), (8, 45161), (10, 45113), (11, 45050), (13, 45035), (14, 45029), (15, 45026),

Gene: Constella\_47 Start: 41875, Stop: 41459, Start Num: 1

Candidate Starts for Constella\_47:

(Start: 1 @41875 has 38 MA's), (2, 41830), (Start: 3 @41782 has 1 MA's), (4, 41737), (6, 41617), (7, 41605), (8, 41602), (10, 41554), (11, 41491), (13, 41476), (14, 41470), (15, 41467),

Gene: Courthouse\_54 Start: 42221, Stop: 41799, Start Num: 1

Candidate Starts for Courthouse\_54:

(Start: 1 @42221 has 38 MA's), (2, 42176), (Start: 3 @42128 has 1 MA's), (5, 42050), (8, 41945), (9, 41933), (12, 41819), (14, 41810),

Gene: Dallas\_56 Start: 44760, Stop: 44344, Start Num: 1

Candidate Starts for Dallas\_56:

(Start: 1 @44760 has 38 MA's), (2, 44715), (Start: 3 @44667 has 1 MA's), (4, 44622), (6, 44502), (7, 44490), (8, 44487), (10, 44439), (11, 44376), (13, 44361), (14, 44355), (15, 44352),

Gene: DmpstrDiver\_56 Start: 45187, Stop: 44771, Start Num: 1

Candidate Starts for DmpstrDiver\_56:

(Start: 1 @45187 has 38 MA's), (2, 45142), (4, 45049), (6, 44929), (7, 44917), (8, 44914), (10, 44866), (11, 44803), (13, 44788), (14, 44782), (15, 44779),

Gene: Dove\_54 Start: 44799, Stop: 44383, Start Num: 1

Candidate Starts for Dove\_54:

(Start: 1 @44799 has 38 MA's), (2, 44754), (Start: 3 @44706 has 1 MA's), (4, 44661), (6, 44541), (7, 44529), (8, 44526), (10, 44478), (11, 44415), (13, 44400), (14, 44394), (15, 44391),

Gene: Duke13\_60 Start: 45706, Stop: 45290, Start Num: 1

Candidate Starts for Duke13\_60:

(Start: 1 @45706 has 38 MA's), (2, 45661), (4, 45568), (6, 45448), (7, 45436), (8, 45433), (10, 45385), (11, 45322), (13, 45307), (14, 45301), (15, 45298),

Gene: Ejimix\_57 Start: 46624, Stop: 46208, Start Num: 1

Candidate Starts for Ejimix\_57:

(Start: 1 @46624 has 38 MA's), (2, 46579), (Start: 3 @46531 has 1 MA's), (4, 46486), (6, 46366), (7, 46354), (8, 46351), (10, 46303), (11, 46240), (13, 46225), (14, 46219), (15, 46216),

Gene: EricMillard\_57 Start: 46125, Stop: 45709, Start Num: 1

Candidate Starts for EricMillard\_57:

(Start: 1 @46125 has 38 MA's), (2, 46080), (Start: 3 @46032 has 1 MA's), (4, 45987), (6, 45867), (7, 45855), (8, 45852), (10, 45804), (11, 45741), (13, 45726), (14, 45720), (15, 45717),

Gene: Gonephishing\_57 Start: 43499, Stop: 43077, Start Num: 1

Candidate Starts for Gonephishing\_57:

(Start: 1 @43499 has 38 MA's), (2, 43454), (Start: 3 @43406 has 1 MA's), (5, 43328), (8, 43223), (9, 43211), (12, 43097), (14, 43088),

Gene: Halley\_57 Start: 45838, Stop: 45422, Start Num: 1

Candidate Starts for Halley\_57:

(Start: 1 @45838 has 38 MA's), (2, 45793), (Start: 3 @45745 has 1 MA's), (4, 45700), (6, 45580), (7, 45568), (8, 45565), (10, 45517), (11, 45454), (13, 45439), (14, 45433), (15, 45430),

Gene: Hannaconda\_53 Start: 40327, Stop: 39911, Start Num: 1

Candidate Starts for Hannaconda\_53:

(Start: 1 @40327 has 38 MA's), (2, 40282), (Start: 3 @40234 has 1 MA's), (4, 40189), (6, 40069), (7, 40057), (8, 40054), (10, 40006), (11, 39943), (13, 39928), (14, 39922), (15, 39919),

Gene: HokkenD\_50 Start: 44107, Stop: 43691, Start Num: 1

Candidate Starts for HokkenD\_50:

(Start: 1 @44107 has 38 MA's), (2, 44062), (Start: 3 @44014 has 1 MA's), (4, 43969), (6, 43849), (7, 43837), (8, 43834), (10, 43786), (11, 43723), (13, 43708), (14, 43702), (15, 43699),

Gene: Hughesyang\_55 Start: 45767, Stop: 45351, Start Num: 1

Candidate Starts for Hughesyang\_55:

(Start: 1 @45767 has 38 MA's), (2, 45722), (Start: 3 @45674 has 1 MA's), (4, 45629), (6, 45509), (7, 45497), (8, 45494), (10, 45446), (11, 45383), (13, 45368), (14, 45362), (15, 45359),

Gene: JuicyJay\_56 Start: 46973, Stop: 46557, Start Num: 1

Candidate Starts for JuicyJay\_56:

(Start: 1 @46973 has 38 MA's), (2, 46928), (Start: 3 @46880 has 1 MA's), (4, 46835), (6, 46715), (7, 46703), (8, 46700), (10, 46652), (11, 46589), (13, 46574), (14, 46568), (15, 46565),

Gene: Kalah2\_53 Start: 45382, Stop: 44966, Start Num: 1

Candidate Starts for Kalah2\_53:

(Start: 1 @45382 has 38 MA's), (2, 45337), (Start: 3 @45289 has 1 MA's), (4, 45244), (6, 45124), (7, 45112), (8, 45109), (10, 45061), (11, 44998), (13, 44983), (14, 44977), (15, 44974),

Gene: KashFlow\_50 Start: 39948, Stop: 39532, Start Num: 1

Candidate Starts for KashFlow\_50:

(Start: 1 @39948 has 38 MA's), (2, 39903), (Start: 3 @39855 has 1 MA's), (4, 39810), (6, 39690), (7, 39678), (8, 39675), (10, 39627), (11, 39564), (13, 39549), (14, 39543), (15, 39540),

Gene: Klein\_57 Start: 45405, Stop: 44989, Start Num: 1

Candidate Starts for Klein\_57:

(Start: 1 @45405 has 38 MA's), (2, 45360), (Start: 3 @45312 has 1 MA's), (4, 45267), (6, 45147), (7, 45135), (8, 45132), (10, 45084), (11, 45021), (13, 45006), (14, 45000), (15, 44997),

Gene: LittleE\_57 Start: 44828, Stop: 44406, Start Num: 1

Candidate Starts for LittleE\_57:

(Start: 1 @44828 has 38 MA's), (2, 44783), (Start: 3 @44735 has 1 MA's), (5, 44657), (8, 44552), (9, 44540), (12, 44426), (14, 44417),

Gene: Lucky2013\_55 Start: 42357, Stop: 41935, Start Num: 1

Candidate Starts for Lucky2013\_55:

(Start: 1 @42357 has 38 MA's), (2, 42312), (Start: 3 @42264 has 1 MA's), (5, 42186), (8, 42081), (9, 42069), (12, 41955), (14, 41946),

Gene: MiaZeal\_54 Start: 42032, Stop: 41610, Start Num: 1

Candidate Starts for MiaZeal\_54:

(Start: 1 @42032 has 38 MA's), (2, 41987), (Start: 3 @41939 has 1 MA's), (5, 41861), (8, 41756), (9, 41744), (12, 41630), (14, 41621),

Gene: Minerva\_63 Start: 47255, Stop: 46839, Start Num: 1

Candidate Starts for Minerva\_63:

(Start: 1 @47255 has 38 MA's), (2, 47210), (Start: 3 @47162 has 1 MA's), (4, 47117), (6, 46997), (7, 46985), (8, 46982), (10, 46934), (11, 46871), (13, 46856), (14, 46850), (15, 46847),

Gene: NihilNomen\_56 Start: 45925, Stop: 45509, Start Num: 1

Candidate Starts for NihilNomen\_56:

(Start: 1 @45925 has 38 MA's), (2, 45880), (Start: 3 @45832 has 1 MA's), (4, 45787), (6, 45667), (7, 45655), (8, 45652), (10, 45604), (11, 45541), (13, 45526), (14, 45520), (15, 45517),

Gene: Odette\_55 Start: 44968, Stop: 44552, Start Num: 1

Candidate Starts for Odette\_55:

(Start: 1 @44968 has 38 MA's), (2, 44923), (Start: 3 @44875 has 1 MA's), (4, 44830), (6, 44710), (7, 44698), (8, 44695), (10, 44647), (11, 44584), (13, 44569), (14, 44563), (15, 44560),

Gene: Omega\_59 Start: 46501, Stop: 46079, Start Num: 1

Candidate Starts for Omega\_59:

(Start: 1 @46501 has 38 MA's), (2, 46456), (Start: 3 @46408 has 1 MA's), (5, 46330), (8, 46225), (9, 46213), (12, 46099), (14, 46090),

Gene: Optimus\_62 Start: 46840, Stop: 46424, Start Num: 1

Candidate Starts for Optimus\_62:

(Start: 1 @46840 has 38 MA's), (2, 46795), (4, 46702), (6, 46582), (7, 46570), (8, 46567), (10, 46519), (11, 46456), (13, 46441), (14, 46435), (15, 46432),

Gene: Phoebus\_56 Start: 46126, Stop: 45710, Start Num: 1

Candidate Starts for Phoebus\_56:

(Start: 1 @46126 has 38 MA's), (2, 46081), (Start: 3 @46033 has 1 MA's), (4, 45988), (6, 45868), (7, 45856), (8, 45853), (10, 45805), (11, 45742), (13, 45727), (14, 45721), (15, 45718),

Gene: Porcelain\_53 Start: 42032, Stop: 41610, Start Num: 1

Candidate Starts for Porcelain\_53:

(Start: 1 @42032 has 38 MA's), (2, 41987), (Start: 3 @41939 has 1 MA's), (5, 41861), (8, 41756), (9, 41744), (12, 41630), (14, 41621),

Gene: Pound\_57 Start: 47165, Stop: 46842, Start Num: 3

Candidate Starts for Pound\_57:

(Start: 1 @47258 has 38 MA's), (2, 47213), (Start: 3 @47165 has 1 MA's), (6, 47000), (7, 46988), (8, 46985), (10, 46937), (11, 46874), (13, 46859), (14, 46853), (15, 46850),

Gene: Redno2\_54 Start: 42721, Stop: 42305, Start Num: 1

Candidate Starts for Redno2\_54:

(Start: 1 @42721 has 38 MA's), (2, 42676), (Start: 3 @42628 has 1 MA's), (4, 42583), (6, 42463), (7, 42451), (8, 42448), (10, 42400), (11, 42337), (13, 42322), (14, 42316), (15, 42313),

Gene: Schatzie\_52 Start: 44716, Stop: 44300, Start Num: 1

Candidate Starts for Schatzie\_52:

(Start: 1 @44716 has 38 MA's), (2, 44671), (Start: 3 @44623 has 1 MA's), (4, 44578), (6, 44458), (7, 44446), (8, 44443), (10, 44395), (11, 44332), (13, 44317), (14, 44311), (15, 44308),

Gene: Squint\_54 Start: 42151, Stop: 41729, Start Num: 1

Candidate Starts for Squint\_54:

(Start: 1 @42151 has 38 MA's), (2, 42106), (Start: 3 @42058 has 1 MA's), (5, 41980), (8, 41875), (9, 41863), (12, 41749), (14, 41740),

Gene: Superphikiman\_55 Start: 42223, Stop: 41801, Start Num: 1

Candidate Starts for Superphikiman\_55:

(Start: 1 @42223 has 38 MA's), (2, 42178), (Start: 3 @42130 has 1 MA's), (5, 42052), (8, 41947), (9, 41935), (12, 41821), (14, 41812),

Gene: Thibault\_49 Start: 43034, Stop: 42618, Start Num: 1

Candidate Starts for Thibault\_49:

(Start: 1 @43034 has 38 MA's), (2, 42989), (4, 42896), (6, 42776), (7, 42764), (8, 42761), (10, 42713), (11, 42650), (13, 42635), (14, 42629), (15, 42626),

Gene: ThreeRngTarjay\_55 Start: 46002, Stop: 45586, Start Num: 1

Candidate Starts for ThreeRngTarjay\_55:

(Start: 1 @46002 has 38 MA's), (2, 45957), (Start: 3 @45909 has 1 MA's), (4, 45864), (6, 45744), (7, 45732), (8, 45729), (10, 45681), (11, 45618), (13, 45603), (14, 45597), (15, 45594),

Gene: Wanda\_63 Start: 45714, Stop: 45298, Start Num: 1

Candidate Starts for Wanda\_63:

(Start: 1 @45714 has 38 MA's), (2, 45669), (Start: 3 @45621 has 1 MA's), (4, 45576), (6, 45456), (7, 45444), (8, 45441), (10, 45393), (11, 45330), (13, 45315), (14, 45309), (15, 45306),

Gene: Yeet\_55 Start: 45134, Stop: 44718, Start Num: 1

Candidate Starts for Yeet\_55:

(Start: 1 @45134 has 38 MA's), (2, 45089), (4, 44996), (6, 44876), (7, 44864), (8, 44861), (10, 44813), (11, 44750), (13, 44735), (14, 44729), (15, 44726),

Gene: Zelink\_55 Start: 46315, Stop: 45899, Start Num: 1

Candidate Starts for Zelink\_55:

(Start: 1 @46315 has 38 MA's), (2, 46270), (Start: 3 @46222 has 1 MA's), (4, 46177), (6, 46057), (7, 46045), (8, 46042), (10, 45994), (11, 45931), (13, 45916), (14, 45910), (15, 45907),