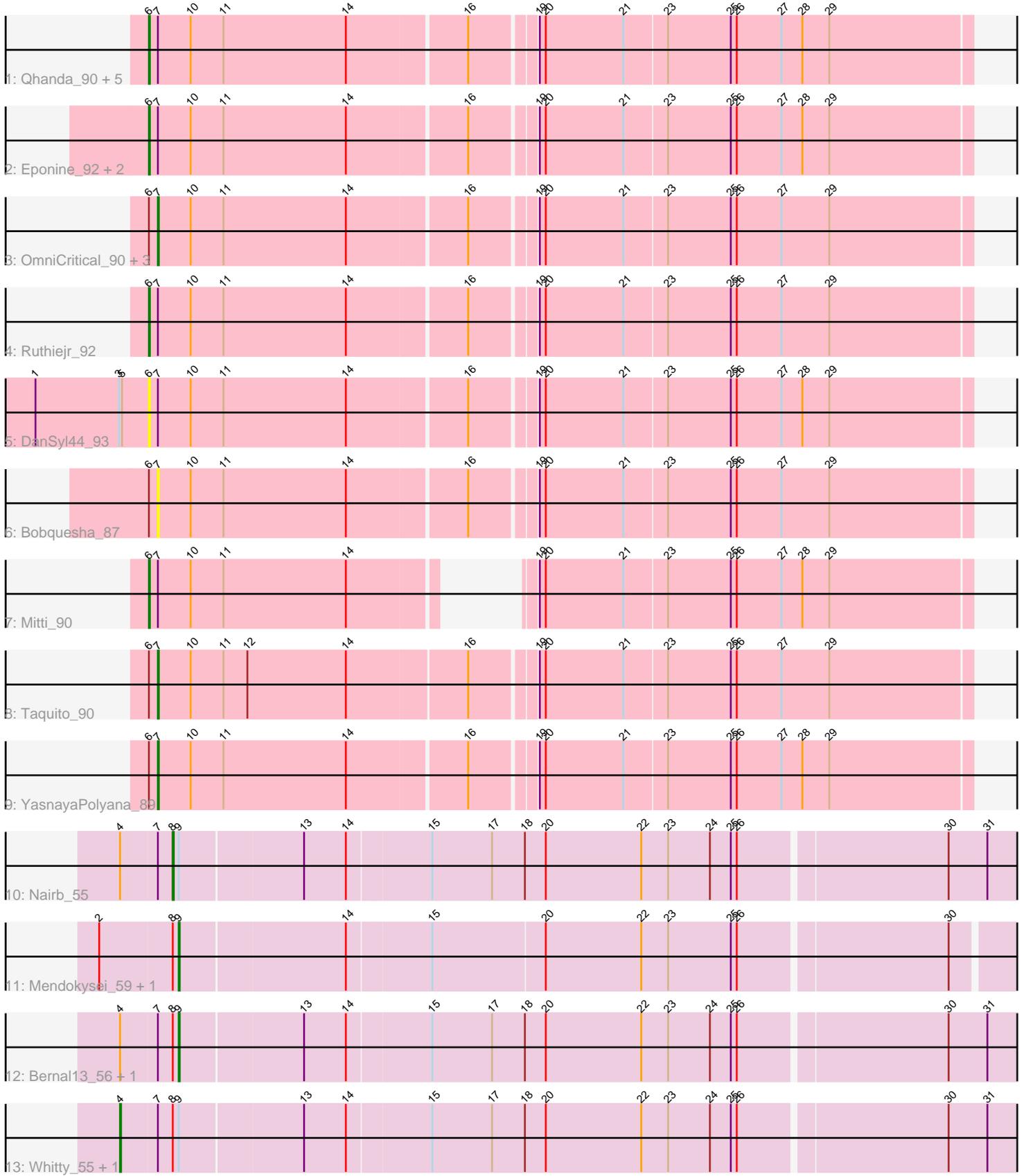


Pham 291457



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 291457 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291457 has 26 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Qhanda\_90, Chancellor\_90, SamScheppers\_89, Slarp\_88, Cheetobro\_88, Lebo14\_89
- Track 2 : Eponine\_92, Fionnbharth\_90, Wintermute\_90
- Track 3 : OmniCritical\_90, Y10\_86, JF1\_90, Y2\_86
- Track 4 : Ruthiejr\_92
- Track 5 : DanSyl44\_93
- Track 6 : Bobquesha\_87
- Track 7 : Mitti\_90
- Track 8 : Taquito\_90
- Track 9 : YasnayaPolyana\_89
- Track 10 : Nairb\_55
- Track 11 : Mendokysei\_59, Nette\_63
- Track 12 : Bernal13\_56, Ibrahim\_56
- Track 13 : Whitty\_55, RonRayGun\_56

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

The start number called the most often in the published annotations is 6, it was called in 10 of the 22 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Chancellor\_90, Cheetobro\_88, DanSyl44\_93, Eponine\_92, Fionnbharth\_90, Lebo14\_89, Mitti\_90, Qhanda\_90, Ruthiejr\_92, SamScheppers\_89, Slarp\_88, Wintermute\_90,

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

- Bobquesha\_87, JF1\_90, OmniCritical\_90, Taquito\_90, Y10\_86, Y2\_86, YasnayaPolyana\_89,

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

- Bernal13\_56, Ibrahim\_56, Mendokysei\_59, Nairb\_55, Nette\_63, RonRayGun\_56, Whitty\_55,

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

Start 4:

- Found in 5 of 26 ( 19.2% ) of genes in pham
- Manual Annotations of this start: 2 of 22
- Called 40.0% of time when present
- Phage (with cluster) where this start called: RonRayGun\_56 (T), Whitty\_55 (T),

Start 6:

- Found in 19 of 26 ( 73.1% ) of genes in pham
- Manual Annotations of this start: 10 of 22
- Called 63.2% of time when present
- Phage (with cluster) where this start called: Chancellor\_90 (K4), Cheetobro\_88 (K4), DanSyl44\_93 (K4), Eponine\_92 (K4), Fionnbharth\_90 (K4), Lebo14\_89 (K4), Mitti\_90 (K4), Qhanda\_90 (K4), Ruthiejr\_92 (K4), SamScheppers\_89 (K4), Slarp\_88 (K4), Wintermute\_90 (K4),

Start 7:

- Found in 24 of 26 ( 92.3% ) of genes in pham
- Manual Annotations of this start: 6 of 22
- Called 29.2% of time when present
- Phage (with cluster) where this start called: Bobquesha\_87 (K4), JF1\_90 (K4), OmniCritical\_90 (K4), Taquito\_90 (K4), Y10\_86 (K4), Y2\_86 (K4), YasnayaPolyana\_89 (K4),

Start 8:

- Found in 7 of 26 ( 26.9% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Nairb\_55 (T),

Start 9:

- Found in 7 of 26 ( 26.9% ) of genes in pham
- Manual Annotations of this start: 3 of 22
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Bernal13\_56 (T), Ibrahim\_56 (T), Mendokysej\_59 (T), Nette\_63 (T),

**Summary by clusters:**

There are 2 clusters represented in this pham: T, K4,

Info for manual annotations of cluster K4:

- Start number 6 was manually annotated 10 times for cluster K4.
- Start number 7 was manually annotated 6 times for cluster K4.

Info for manual annotations of cluster T:

- Start number 4 was manually annotated 2 times for cluster T.
- Start number 8 was manually annotated 1 time for cluster T.
- Start number 9 was manually annotated 3 times for cluster T.

**Gene Information:**

Gene: Bernal13\_56 Start: 40310, Stop: 39471, Start Num: 9

Candidate Starts for Bernal13\_56:

(Start: 4 @40367 has 2 MA's), (Start: 7 @40331 has 6 MA's), (Start: 8 @40316 has 1 MA's), (Start: 9 @40310 has 3 MA's), (13, 40190), (14, 40148), (15, 40067), (17, 40007), (18, 39974), (20, 39953), (22, 39857), (23, 39830), (24, 39788), (25, 39767), (26, 39761), (30, 39560), (31, 39521),

Gene: Bobquesha\_87 Start: 51466, Stop: 52257, Start Num: 7

Candidate Starts for Bobquesha\_87:

(Start: 6 @51457 has 10 MA's), (Start: 7 @51466 has 6 MA's), (10, 51499), (11, 51532), (14, 51655), (16, 51769), (19, 51829), (20, 51835), (21, 51913), (23, 51955), (25, 52018), (26, 52024), (27, 52069), (29, 52117),

Gene: Chancellor\_90 Start: 54032, Stop: 54832, Start Num: 6

Candidate Starts for Chancellor\_90:

(Start: 6 @54032 has 10 MA's), (Start: 7 @54041 has 6 MA's), (10, 54074), (11, 54107), (14, 54230), (16, 54344), (19, 54404), (20, 54410), (21, 54488), (23, 54530), (25, 54593), (26, 54599), (27, 54644), (28, 54665), (29, 54692),

Gene: Cheetobro\_88 Start: 53586, Stop: 54386, Start Num: 6

Candidate Starts for Cheetobro\_88:

(Start: 6 @53586 has 10 MA's), (Start: 7 @53595 has 6 MA's), (10, 53628), (11, 53661), (14, 53784), (16, 53898), (19, 53958), (20, 53964), (21, 54042), (23, 54084), (25, 54147), (26, 54153), (27, 54198), (28, 54219), (29, 54246),

Gene: DanSyl44\_93 Start: 55418, Stop: 56218, Start Num: 6

Candidate Starts for DanSyl44\_93:

(1, 55304), (3, 55388), (5, 55391), (Start: 6 @55418 has 10 MA's), (Start: 7 @55427 has 6 MA's), (10, 55460), (11, 55493), (14, 55616), (16, 55730), (19, 55790), (20, 55796), (21, 55874), (23, 55916), (25, 55979), (26, 55985), (27, 56030), (28, 56051), (29, 56078),

Gene: Eponine\_92 Start: 55012, Stop: 55812, Start Num: 6

Candidate Starts for Eponine\_92:

(Start: 6 @55012 has 10 MA's), (Start: 7 @55021 has 6 MA's), (10, 55054), (11, 55087), (14, 55210), (16, 55324), (19, 55384), (20, 55390), (21, 55468), (23, 55510), (25, 55573), (26, 55579), (27, 55624), (28, 55645), (29, 55672),

Gene: Fionnbharth\_90 Start: 54410, Stop: 55210, Start Num: 6

Candidate Starts for Fionnbharth\_90:

(Start: 6 @54410 has 10 MA's), (Start: 7 @54419 has 6 MA's), (10, 54452), (11, 54485), (14, 54608), (16, 54722), (19, 54782), (20, 54788), (21, 54866), (23, 54908), (25, 54971), (26, 54977), (27, 55022), (28, 55043), (29, 55070),

Gene: Ibrahim\_56 Start: 40514, Stop: 39675, Start Num: 9

Candidate Starts for Ibrahim\_56:

(Start: 4 @40571 has 2 MA's), (Start: 7 @40535 has 6 MA's), (Start: 8 @40520 has 1 MA's), (Start: 9 @40514 has 3 MA's), (13, 40394), (14, 40352), (15, 40271), (17, 40211), (18, 40178), (20, 40157), (22, 40061), (23, 40034), (24, 39992), (25, 39971), (26, 39965), (30, 39764), (31, 39725),

Gene: JF1\_90 Start: 54343, Stop: 55134, Start Num: 7

Candidate Starts for JF1\_90:

(Start: 6 @54334 has 10 MA's), (Start: 7 @54343 has 6 MA's), (10, 54376), (11, 54409), (14, 54532), (16, 54646), (19, 54706), (20, 54712), (21, 54790), (23, 54832), (25, 54895), (26, 54901), (27, 54946), (29, 54994),

Gene: Lebo14\_89 Start: 54564, Stop: 55364, Start Num: 6

Candidate Starts for Lebo14\_89:

(Start: 6 @54564 has 10 MA's), (Start: 7 @54573 has 6 MA's), (10, 54606), (11, 54639), (14, 54762), (16, 54876), (19, 54936), (20, 54942), (21, 55020), (23, 55062), (25, 55125), (26, 55131), (27, 55176), (28, 55197), (29, 55224),

Gene: Mendokysei\_59 Start: 41092, Stop: 40265, Start Num: 9

Candidate Starts for Mendokysei\_59:

(2, 41170), (Start: 8 @41098 has 1 MA's), (Start: 9 @41092 has 3 MA's), (14, 40930), (15, 40849), (20, 40738), (22, 40642), (23, 40615), (25, 40552), (26, 40546), (30, 40345),

Gene: Mitti\_90 Start: 54306, Stop: 55028, Start Num: 6

Candidate Starts for Mitti\_90:

(Start: 6 @54306 has 10 MA's), (Start: 7 @54315 has 6 MA's), (10, 54348), (11, 54381), (14, 54504), (19, 54600), (20, 54606), (21, 54684), (23, 54726), (25, 54789), (26, 54795), (27, 54840), (28, 54861), (29, 54888),

Gene: Nairb\_55 Start: 40316, Stop: 39471, Start Num: 8

Candidate Starts for Nairb\_55:

(Start: 4 @40367 has 2 MA's), (Start: 7 @40331 has 6 MA's), (Start: 8 @40316 has 1 MA's), (Start: 9 @40310 has 3 MA's), (13, 40190), (14, 40148), (15, 40067), (17, 40007), (18, 39974), (20, 39953), (22, 39857), (23, 39830), (24, 39788), (25, 39767), (26, 39761), (30, 39560), (31, 39521),

Gene: Nette\_63 Start: 41101, Stop: 40274, Start Num: 9

Candidate Starts for Nette\_63:

(2, 41179), (Start: 8 @41107 has 1 MA's), (Start: 9 @41101 has 3 MA's), (14, 40939), (15, 40858), (20, 40747), (22, 40651), (23, 40624), (25, 40561), (26, 40555), (30, 40354),

Gene: OmniCritical\_90 Start: 54317, Stop: 55108, Start Num: 7

Candidate Starts for OmniCritical\_90:

(Start: 6 @54308 has 10 MA's), (Start: 7 @54317 has 6 MA's), (10, 54350), (11, 54383), (14, 54506), (16, 54620), (19, 54680), (20, 54686), (21, 54764), (23, 54806), (25, 54869), (26, 54875), (27, 54920), (29, 54968),

Gene: Qhanda\_90 Start: 53586, Stop: 54386, Start Num: 6

Candidate Starts for Qhanda\_90:

(Start: 6 @53586 has 10 MA's), (Start: 7 @53595 has 6 MA's), (10, 53628), (11, 53661), (14, 53784), (16, 53898), (19, 53958), (20, 53964), (21, 54042), (23, 54084), (25, 54147), (26, 54153), (27, 54198), (28, 54219), (29, 54246),

Gene: RonRayGun\_56 Start: 40571, Stop: 39675, Start Num: 4

Candidate Starts for RonRayGun\_56:

(Start: 4 @40571 has 2 MA's), (Start: 7 @40535 has 6 MA's), (Start: 8 @40520 has 1 MA's), (Start: 9 @40514 has 3 MA's), (13, 40394), (14, 40352), (15, 40271), (17, 40211), (18, 40178), (20, 40157), (22, 40061), (23, 40034), (24, 39992), (25, 39971), (26, 39965), (30, 39764), (31, 39725),

Gene: Ruthiejr\_92 Start: 54201, Stop: 55001, Start Num: 6

Candidate Starts for Ruthiejr\_92:

(Start: 6 @54201 has 10 MA's), (Start: 7 @54210 has 6 MA's), (10, 54243), (11, 54276), (14, 54399), (16, 54513), (19, 54573), (20, 54579), (21, 54657), (23, 54699), (25, 54762), (26, 54768), (27, 54813), (29, 54861),

Gene: SamScheppers\_89 Start: 54686, Stop: 55486, Start Num: 6

Candidate Starts for SamScheppers\_89:

(Start: 6 @54686 has 10 MA's), (Start: 7 @54695 has 6 MA's), (10, 54728), (11, 54761), (14, 54884), (16, 54998), (19, 55058), (20, 55064), (21, 55142), (23, 55184), (25, 55247), (26, 55253), (27, 55298), (28, 55319), (29, 55346),

Gene: Slarp\_88 Start: 53589, Stop: 54389, Start Num: 6

Candidate Starts for Slarp\_88:

(Start: 6 @53589 has 10 MA's), (Start: 7 @53598 has 6 MA's), (10, 53631), (11, 53664), (14, 53787), (16, 53901), (19, 53961), (20, 53967), (21, 54045), (23, 54087), (25, 54150), (26, 54156), (27, 54201), (28, 54222), (29, 54249),

Gene: Taquito\_90 Start: 54661, Stop: 55455, Start Num: 7

Candidate Starts for Taquito\_90:

(Start: 6 @54652 has 10 MA's), (Start: 7 @54661 has 6 MA's), (10, 54694), (11, 54727), (12, 54751), (14, 54850), (16, 54967), (19, 55027), (20, 55033), (21, 55111), (23, 55153), (25, 55216), (26, 55222), (27, 55267), (29, 55315),

Gene: Whitty\_55 Start: 40368, Stop: 39472, Start Num: 4

Candidate Starts for Whitty\_55:

(Start: 4 @40368 has 2 MA's), (Start: 7 @40332 has 6 MA's), (Start: 8 @40317 has 1 MA's), (Start: 9 @40311 has 3 MA's), (13, 40191), (14, 40149), (15, 40068), (17, 40008), (18, 39975), (20, 39954), (22, 39858), (23, 39831), (24, 39789), (25, 39768), (26, 39762), (30, 39561), (31, 39522),

Gene: Wintermute\_90 Start: 54390, Stop: 55190, Start Num: 6

Candidate Starts for Wintermute\_90:

(Start: 6 @54390 has 10 MA's), (Start: 7 @54399 has 6 MA's), (10, 54432), (11, 54465), (14, 54588), (16, 54702), (19, 54762), (20, 54768), (21, 54846), (23, 54888), (25, 54951), (26, 54957), (27, 55002), (28, 55023), (29, 55050),

Gene: Y10\_86 Start: 54343, Stop: 55134, Start Num: 7

Candidate Starts for Y10\_86:

(Start: 6 @54334 has 10 MA's), (Start: 7 @54343 has 6 MA's), (10, 54376), (11, 54409), (14, 54532), (16, 54646), (19, 54706), (20, 54712), (21, 54790), (23, 54832), (25, 54895), (26, 54901), (27, 54946), (29, 54994),

Gene: Y2\_86 Start: 54343, Stop: 55134, Start Num: 7

Candidate Starts for Y2\_86:

(Start: 6 @54334 has 10 MA's), (Start: 7 @54343 has 6 MA's), (10, 54376), (11, 54409), (14, 54532), (16, 54646), (19, 54706), (20, 54712), (21, 54790), (23, 54832), (25, 54895), (26, 54901), (27, 54946), (29, 54994),

Gene: YasnayaPolyana\_89 Start: 54323, Stop: 55114, Start Num: 7

Candidate Starts for YasnayaPolyana\_89:

(Start: 6 @54314 has 10 MA's), (Start: 7 @54323 has 6 MA's), (10, 54356), (11, 54389), (14, 54512), (16, 54626), (19, 54686), (20, 54692), (21, 54770), (23, 54812), (25, 54875), (26, 54881), (27, 54926), (28, 54947), (29, 54974),