



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 171657 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171657 has 32 members, 7 are drafts.

Phages represented in each track:

- Track 1 : MaVan\_29
- Track 2 : Horseradish\_28, Yummy\_28, Troje\_27
- Track 3 : Axym\_27
- Track 4 : Nibbles\_29
- Track 5 : Sopespian\_27, Burnsey\_27
- Track 6 : Buttrmlkdreams\_27
- Track 7 : MScarn\_29
- Track 8 : Tolls\_29
- Track 9 : Survivors\_29
- Track 10 : Typhonomachy\_28
- Track 11 : Azira\_29
- Track 12 : Fribs8\_28
- Track 13 : Elliott\_27, PsychoKiller\_27
- Track 14 : SweatNTears\_29
- Track 15 : HippoPololi\_29
- Track 16 : Agatha\_27
- Track 17 : Quasar\_27
- Track 18 : GoldHunter\_28
- Track 19 : Cozz\_27
- Track 20 : Biskit\_28, SketchMex\_26
- Track 21 : Zareef\_31
- Track 22 : Dre3\_27, Gibbous\_27
- Track 23 : Nina\_28
- Track 24 : Cleo\_27
- Track 25 : MunkgeeRoachy\_28
- Track 26 : SteamedHams\_29

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

The start number called the most often in the published annotations is 7, it was called in 16 of the 25 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha\_27, Axym\_27, Biskit\_28, Burnsey\_27, Buttrmlkdreams\_27, Cozz\_27, Elliott\_27, GoldHunter\_28, Horseradish\_28, MScarn\_29, MunkgeeRoachy\_28, Nina\_28, PsychoKiller\_27, Quasar\_27, SketchMex\_26, Sopespian\_27, SteamedHams\_29, SweatNTears\_29, Tolls\_29, Troje\_27, Typhonomachy\_28, Yummy\_28,

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

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

- Azira\_29, Cleo\_27, Dre3\_27, Fribs8\_28, Gibbous\_27, HippoPololi\_29, MaVan\_29, Nibbles\_29, Survivors\_29, Zareef\_31,

### Summary by start number:

Start 5:

- Found in 5 of 32 ( 15.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Zareef\_31 (CT),

Start 6:

- Found in 10 of 32 ( 31.2% ) of genes in pham
- Manual Annotations of this start: 9 of 25
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Azira\_29 (CT), Cleo\_27 (CT), Dre3\_27 (CT), Fribs8\_28 (CT), Gibbous\_27 (CT), HippoPololi\_29 (CT), MaVan\_29 (CT), Nibbles\_29 (CT), Survivors\_29 (CT),

Start 7:

- Found in 22 of 32 ( 68.8% ) of genes in pham
- Manual Annotations of this start: 16 of 25
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agatha\_27 (CT), Axym\_27 (CT), Biskit\_28 (CT), Burnsey\_27 (CT), Buttrmlkdreams\_27 (CT), Cozz\_27 (CT), Elliott\_27 (CT), GoldHunter\_28 (CT), Horseradish\_28 (CT), MScarn\_29 (CT), MunkgeeRoachy\_28 (CT), Nina\_28 (CT), PsychoKiller\_27 (CT), Quasar\_27 (CT), SketchMex\_26 (CT), Sopespian\_27 (CT), SteamedHams\_29 (CT), SweatNTears\_29 (CT), Tolls\_29 (CT), Troje\_27 (CT), Typhonomachy\_28 (CT), Yummy\_28 (CT),

### Summary by clusters:

There is one cluster represented in this pham: CT

Info for manual annotations of cluster CT:

- Start number 6 was manually annotated 9 times for cluster CT.
- Start number 7 was manually annotated 16 times for cluster CT.

### Gene Information:

Gene: Agatha\_27 Start: 21963, Stop: 22928, Start Num: 7

Candidate Starts for Agatha\_27:

(3, 21864), (Start: 7 @21963 has 16 MA's), (13, 22044), (16, 22128), (17, 22182), (19, 22239), (20, 22248), (22, 22284), (31, 22482), (40, 22677), (52, 22797), (55, 22830), (58, 22914),

Gene: Axym\_27 Start: 21966, Stop: 22931, Start Num: 7

Candidate Starts for Axym\_27:

(3, 21867), (Start: 7 @21966 has 16 MA's), (13, 22047), (16, 22131), (17, 22185), (19, 22242), (21, 22272), (26, 22395), (30, 22443), (31, 22485), (55, 22833), (58, 22917),

Gene: Azira\_29 Start: 22942, Stop: 23892, Start Num: 6

Candidate Starts for Azira\_29:

(2, 22687), (5, 22906), (Start: 6 @22942 has 9 MA's), (12, 22999), (13, 23023), (16, 23107), (22, 23263), (26, 23371), (34, 23557), (50, 23764), (56, 23815), (58, 23878),

Gene: Biskit\_28 Start: 21620, Stop: 22570, Start Num: 7

Candidate Starts for Biskit\_28:

(Start: 7 @21620 has 16 MA's), (13, 21701), (17, 21839), (19, 21896), (24, 22004), (26, 22049), (52, 22454), (56, 22493), (58, 22556),

Gene: Burnsey\_27 Start: 21967, Stop: 22923, Start Num: 7

Candidate Starts for Burnsey\_27:

(3, 21868), (Start: 7 @21967 has 16 MA's), (13, 22048), (16, 22132), (17, 22186), (19, 22234), (26, 22387), (30, 22435), (31, 22477), (55, 22825), (58, 22909),

Gene: Buttrmlkdreams\_27 Start: 21602, Stop: 22552, Start Num: 7

Candidate Starts for Buttrmlkdreams\_27:

(Start: 7 @21602 has 16 MA's), (13, 21683), (17, 21821), (19, 21878), (24, 21986), (26, 22031), (31, 22121), (45, 22379), (51, 22427), (52, 22436), (56, 22475), (58, 22538),

Gene: Cleo\_27 Start: 22293, Stop: 23258, Start Num: 6

Candidate Starts for Cleo\_27:

(Start: 6 @22293 has 9 MA's), (14, 22440), (15, 22449), (16, 22458), (17, 22512), (19, 22569), (20, 22578), (33, 22896), (38, 22989), (47, 23100), (50, 23115), (51, 23118),

Gene: Cozz\_27 Start: 21967, Stop: 22932, Start Num: 7

Candidate Starts for Cozz\_27:

(3, 21868), (Start: 7 @21967 has 16 MA's), (13, 22048), (16, 22132), (17, 22186), (19, 22243), (20, 22252), (22, 22288), (31, 22486), (52, 22801), (55, 22834), (58, 22918),

Gene: Dre3\_27 Start: 22219, Stop: 23184, Start Num: 6

Candidate Starts for Dre3\_27:

(Start: 6 @22219 has 9 MA's), (14, 22366), (15, 22375), (16, 22384), (17, 22438), (19, 22495), (20, 22504), (38, 22915), (47, 23026), (50, 23041),

Gene: Elliott\_27 Start: 21966, Stop: 22931, Start Num: 7

Candidate Starts for Elliott\_27:

(3, 21867), (4, 21909), (Start: 7 @21966 has 16 MA's), (13, 22047), (16, 22131), (17, 22185), (19, 22242), (26, 22395), (30, 22443), (31, 22485), (55, 22833), (58, 22917),

Gene: Fribs8\_28 Start: 22797, Stop: 23762, Start Num: 6

Candidate Starts for Fribs8\_28:

(Start: 6 @22797 has 9 MA's), (12, 22854), (16, 22962), (22, 23118), (35, 23460), (40, 23511), (58, 23748),

Gene: Gibbous\_27 Start: 22219, Stop: 23184, Start Num: 6

Candidate Starts for Gibbous\_27:

(Start: 6 @22219 has 9 MA's), (14, 22366), (15, 22375), (16, 22384), (17, 22438), (19, 22495), (20, 22504), (38, 22915), (47, 23026), (50, 23041),

Gene: GoldHunter\_28 Start: 21967, Stop: 22932, Start Num: 7

Candidate Starts for GoldHunter\_28:

(3, 21868), (4, 21910), (Start: 7 @21967 has 16 MA's), (13, 22048), (16, 22132), (17, 22186), (19, 22243), (21, 22273), (26, 22396), (30, 22444), (40, 22681), (52, 22801), (53, 22813), (55, 22834), (58, 22918),

Gene: HippoPololi\_29 Start: 22868, Stop: 23833, Start Num: 6

Candidate Starts for HippoPololi\_29:

(Start: 6 @22868 has 9 MA's), (10, 22889), (15, 23024), (16, 23033), (17, 23087), (19, 23144), (20, 23153), (22, 23189), (32, 23429), (35, 23531), (38, 23564), (47, 23675), (51, 23693), (58, 23819),

Gene: Horseradish\_28 Start: 21441, Stop: 22406, Start Num: 7

Candidate Starts for Horseradish\_28:

(Start: 7 @21441 has 16 MA's), (13, 21522), (19, 21717), (24, 21825), (42, 22197), (47, 22248), (48, 22254), (50, 22263), (55, 22308), (58, 22392),

Gene: MScarn\_29 Start: 21605, Stop: 22555, Start Num: 7

Candidate Starts for MScarn\_29:

(Start: 7 @21605 has 16 MA's), (11, 21656), (17, 21824), (19, 21881), (24, 21989), (26, 22034), (45, 22382), (51, 22430), (52, 22439), (56, 22478), (58, 22541),

Gene: MaVan\_29 Start: 22975, Stop: 23925, Start Num: 6

Candidate Starts for MaVan\_29:

(1, 22513), (2, 22720), (5, 22939), (Start: 6 @22975 has 9 MA's), (12, 23032), (13, 23056), (16, 23140), (22, 23296), (26, 23404), (34, 23590), (50, 23797), (56, 23848), (58, 23911),

Gene: MunkgeeRoachy\_28 Start: 22044, Stop: 23009, Start Num: 7

Candidate Starts for MunkgeeRoachy\_28:

(3, 21945), (Start: 7 @22044 has 16 MA's), (13, 22125), (16, 22209), (17, 22263), (19, 22320), (26, 22473), (29, 22512), (30, 22521), (52, 22878), (53, 22890), (55, 22911), (58, 22995),

Gene: Nibbles\_29 Start: 22974, Stop: 23924, Start Num: 6

Candidate Starts for Nibbles\_29:

(2, 22719), (5, 22938), (Start: 6 @22974 has 9 MA's), (12, 23031), (13, 23055), (16, 23139), (22, 23295), (26, 23403), (34, 23589), (50, 23796), (56, 23847), (58, 23910),

Gene: Nina\_28 Start: 23006, Stop: 23971, Start Num: 7

Candidate Starts for Nina\_28:

(3, 22907), (4, 22949), (Start: 7 @23006 has 16 MA's), (13, 23087), (16, 23171), (17, 23225), (19, 23282), (26, 23435), (30, 23483), (31, 23525), (52, 23840), (55, 23873), (58, 23957),

Gene: PsychoKiller\_27 Start: 21966, Stop: 22931, Start Num: 7

Candidate Starts for PsychoKiller\_27:

(3, 21867), (4, 21909), (Start: 7 @21966 has 16 MA's), (13, 22047), (16, 22131), (17, 22185), (19, 22242), (26, 22395), (30, 22443), (31, 22485), (55, 22833), (58, 22917),

Gene: Quasar\_27 Start: 22575, Stop: 23540, Start Num: 7

Candidate Starts for Quasar\_27:

(Start: 7 @22575 has 16 MA's), (13, 22656), (16, 22740), (17, 22794), (19, 22851), (26, 23004), (30, 23052), (31, 23094), (52, 23409), (55, 23442), (58, 23526),

Gene: SketchMex\_26 Start: 21620, Stop: 22570, Start Num: 7

Candidate Starts for SketchMex\_26:

(Start: 7 @21620 has 16 MA's), (13, 21701), (17, 21839), (19, 21896), (24, 22004), (26, 22049), (52, 22454), (56, 22493), (58, 22556),

Gene: Sopespian\_27 Start: 21967, Stop: 22932, Start Num: 7

Candidate Starts for Sopespian\_27:

(3, 21868), (Start: 7 @21967 has 16 MA's), (13, 22048), (16, 22132), (17, 22186), (19, 22243), (26, 22396), (30, 22444), (31, 22486), (55, 22834), (58, 22918),

Gene: SteamedHams\_29 Start: 21624, Stop: 22667, Start Num: 7

Candidate Starts for SteamedHams\_29:

(Start: 7 @21624 has 16 MA's), (8, 21633), (13, 21705), (14, 21771), (17, 21843), (23, 21990), (25, 22017), (26, 22056), (27, 22062), (28, 22092), (36, 22317), (37, 22320), (39, 22335), (41, 22365), (43, 22395), (44, 22410), (49, 22467), (54, 22515), (56, 22524), (57, 22572), (61, 22656),

Gene: Survivors\_29 Start: 22791, Stop: 23741, Start Num: 6

Candidate Starts for Survivors\_29:

(2, 22536), (5, 22755), (Start: 6 @22791 has 9 MA's), (9, 22809), (12, 22848), (13, 22872), (16, 22956), (22, 23112), (26, 23220), (34, 23406), (50, 23613), (56, 23664), (58, 23727),

Gene: SweatNTears\_29 Start: 21888, Stop: 22838, Start Num: 7

Candidate Starts for SweatNTears\_29:

(Start: 7 @21888 has 16 MA's), (13, 21969), (17, 22107), (19, 22164), (24, 22272), (26, 22317), (31, 22407), (45, 22665), (52, 22722), (56, 22761), (58, 22824),

Gene: Tolls\_29 Start: 21618, Stop: 23021, Start Num: 7

Candidate Starts for Tolls\_29:

(Start: 7 @21618 has 16 MA's), (8, 21627), (13, 21699), (14, 21765), (17, 21837), (23, 21984), (25, 22011), (26, 22050), (27, 22056), (28, 22086), (36, 22311), (37, 22314), (39, 22329), (41, 22359), (43, 22389), (44, 22404), (46, 22446), (49, 22461), (54, 22509), (56, 22518), (59, 22596), (60, 22608), (62, 22674), (63, 22716), (64, 22818), (65, 22836), (66, 22857), (67, 22890), (68, 22914), (69, 22920), (70, 22968), (71, 22971), (72, 23016),

Gene: Troje\_27 Start: 21602, Stop: 22567, Start Num: 7

Candidate Starts for Troje\_27:

(Start: 7 @21602 has 16 MA's), (13, 21683), (19, 21878), (24, 21986), (42, 22358), (47, 22409), (48, 22415), (50, 22424), (55, 22469), (58, 22553),

Gene: Typhonomachy\_28 Start: 21999, Stop: 22964, Start Num: 7

Candidate Starts for Typhonomachy\_28:

(3, 21900), (Start: 7 @21999 has 16 MA's), (13, 22080), (16, 22164), (17, 22218), (18, 22233), (19, 22275), (26, 22428), (30, 22476), (31, 22518), (52, 22833), (55, 22866), (58, 22950),

Gene: Yummy\_28 Start: 21555, Stop: 22520, Start Num: 7

Candidate Starts for Yummy\_28:

(Start: 7 @21555 has 16 MA's), (13, 21636), (19, 21831), (24, 21939), (42, 22311), (47, 22362), (48, 22368), (50, 22377), (55, 22422), (58, 22506),

Gene: Zareef\_31 Start: 22907, Stop: 23893, Start Num: 5

Candidate Starts for Zareef\_31:

(2, 22688), (5, 22907), (Start: 6 @22943 has 9 MA's), (12, 23000), (13, 23024), (16, 23108), (22, 23264), (26, 23372), (34, 23558), (50, 23765), (56, 23816), (58, 23879),