



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 171623 Report

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

Pham number 171623 has 37 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Krampus\_23, Anakin\_23, Potty\_23, Rachella\_23, Kate\_23, Neptune\_23, Poultruss\_22, Tedro\_23, AnnaSerena\_23, Cybele\_23, PhunaPhoke\_23, OverHedge\_23, CoolCookie\_27, Pharpay\_23, NarutoRun\_23, Gilda\_23
- Track 2 : JDawG\_22, Aesir\_22, Dauntless\_23, MortySmith\_21, Crestdrop\_23, Erudite\_22
- Track 3 : Karate\_22, Haunter\_23
- Track 4 : DannyDe\_22
- Track 5 : Hiddenleaf\_22, Chivey\_22, JingleBells\_22, Snakehole\_24, FreddieHg\_22
- Track 6 : TinyMiny\_24, Ajin\_24
- Track 7 : RikSengupta\_24, Sparcetus\_24
- Track 8 : Rie18\_23, Hager\_24
- Track 9 : Kors\_25

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

The start number called the most often in the published annotations is 2, it was called in 28 of the 30 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aesir\_22, Ajin\_24, Anakin\_23, AnnaSerena\_23, Chivey\_22, CoolCookie\_27, Crestdrop\_23, Cybele\_23, DannyDe\_22, Dauntless\_23, Erudite\_22, FreddieHg\_22, Gilda\_23, Hager\_24, Haunter\_23, Hiddenleaf\_22, JDawG\_22, JingleBells\_22, Karate\_22, Kate\_23, Krampus\_23, MortySmith\_21, NarutoRun\_23, Neptune\_23, OverHedge\_23, Pharpay\_23, PhunaPhoke\_23, Potty\_23, Poultruss\_22, Rachella\_23, Rie18\_23, Snakehole\_24, Tedro\_23, TinyMiny\_24,

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

- Kors\_25, RikSengupta\_24, Sparcetus\_24,

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

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

#### Start 1:

- Found in 5 of 37 ( 13.5% ) of genes in pham
- Manual Annotations of this start: 2 of 30
- Called 40.0% of time when present
- Phage (with cluster) where this start called: RikSengupta\_24 (EF), Sparcetus\_24 (EF),

#### Start 2:

- Found in 37 of 37 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 28 of 30
- Called 91.9% of time when present
- Phage (with cluster) where this start called: Aesir\_22 (EF), Ajin\_24 (EF), Anakin\_23 (EF), AnnaSerena\_23 (EF), Chivey\_22 (EF), CoolCookie\_27 (EF), Crestdrop\_23 (EF), Cybele\_23 (EF), DannyDe\_22 (EF), Dauntless\_23 (EF), Erudite\_22 (EF), FreddieHg\_22 (EF), Gilda\_23 (EF), Hager\_24 (EF), Haunter\_23 (EF), Hiddenleaf\_22 (EF), JDawG\_22 (EF), JingleBells\_22 (EF), Karate\_22 (EF), Kate\_23 (EF), Krampus\_23 (EF), MortySmith\_21 (EF), NarutoRun\_23 (EF), Neptune\_23 (EF), OverHedge\_23 (EF), Pharpay\_23 (EF), PhunaPhoke\_23 (EF), Potty\_23 (EF), Poultruss\_22 (EF), Rachella\_23 (EF), Rie18\_23 (EF), Snakehole\_24 (EF), Tedro\_23 (EF), TinyMiny\_24 (EF),

#### Start 3:

- Found in 5 of 37 ( 13.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Kors\_25 (EF),

### Summary by clusters:

There is one cluster represented in this pham: EF

Info for manual annotations of cluster EF:

- Start number 1 was manually annotated 2 times for cluster EF.
- Start number 2 was manually annotated 28 times for cluster EF.

### **Gene Information:**

Gene: Aesir\_22 Start: 12181, Stop: 12609, Start Num: 2

Candidate Starts for Aesir\_22:

(Start: 2 @12181 has 28 MA's), (7, 12286), (8, 12307), (9, 12319), (12, 12343), (16, 12463), (19, 12484),

Gene: Ajin\_24 Start: 12379, Stop: 12810, Start Num: 2

Candidate Starts for Ajin\_24:

(Start: 1 @12376 has 2 MA's), (Start: 2 @12379 has 28 MA's), (3, 12385), (4, 12394), (5, 12427), (7, 12487), (9, 12520), (10, 12535), (11, 12538), (13, 12580), (15, 12637), (17, 12667), (19, 12685), (21, 12718), (22, 12769), (23, 12784),

Gene: Anakin\_23 Start: 12391, Stop: 12819, Start Num: 2

Candidate Starts for Anakin\_23:

(Start: 2 @12391 has 28 MA's), (8, 12517), (10, 12544), (11, 12547), (12, 12553), (18, 12688), (20, 12724),

Gene: AnnaSerena\_23 Start: 12400, Stop: 12828, Start Num: 2

Candidate Starts for AnnaSerena\_23:

(Start: 2 @12400 has 28 MA's), (8, 12526), (10, 12553), (11, 12556), (12, 12562), (18, 12697), (20, 12733),

Gene: Chivey\_22 Start: 11593, Stop: 12021, Start Num: 2

Candidate Starts for Chivey\_22:

(Start: 2 @11593 has 28 MA's), (7, 11698), (8, 11719), (9, 11731), (11, 11749), (12, 11755), (14, 11812), (16, 11875), (19, 11896),

Gene: CoolCookie\_27 Start: 12398, Stop: 12826, Start Num: 2

Candidate Starts for CoolCookie\_27:

(Start: 2 @12398 has 28 MA's), (8, 12524), (10, 12551), (11, 12554), (12, 12560), (18, 12695), (20, 12731),

Gene: Crestdrop\_23 Start: 11467, Stop: 11895, Start Num: 2

Candidate Starts for Crestdrop\_23:

(Start: 2 @11467 has 28 MA's), (7, 11572), (8, 11593), (9, 11605), (12, 11629), (16, 11749), (19, 11770),

Gene: Cybele\_23 Start: 12368, Stop: 12796, Start Num: 2

Candidate Starts for Cybele\_23:

(Start: 2 @12368 has 28 MA's), (8, 12494), (10, 12521), (11, 12524), (12, 12530), (18, 12665), (20, 12701),

Gene: DannyDe\_22 Start: 11585, Stop: 12013, Start Num: 2

Candidate Starts for DannyDe\_22:

(Start: 2 @11585 has 28 MA's), (6, 11666), (7, 11690), (8, 11711), (9, 11723), (11, 11741), (12, 11747), (14, 11804), (16, 11867), (19, 11888),

Gene: Dauntless\_23 Start: 12110, Stop: 12538, Start Num: 2

Candidate Starts for Dauntless\_23:

(Start: 2 @12110 has 28 MA's), (7, 12215), (8, 12236), (9, 12248), (12, 12272), (16, 12392), (19, 12413),

Gene: Erudite\_22 Start: 12110, Stop: 12538, Start Num: 2

Candidate Starts for Erudite\_22:

(Start: 2 @12110 has 28 MA's), (7, 12215), (8, 12236), (9, 12248), (12, 12272), (16, 12392), (19, 12413),

Gene: FreddieHg\_22 Start: 11609, Stop: 12037, Start Num: 2

Candidate Starts for FreddieHg\_22:

(Start: 2 @11609 has 28 MA's), (7, 11714), (8, 11735), (9, 11747), (11, 11765), (12, 11771), (14, 11828), (16, 11891), (19, 11912),

Gene: Gilda\_23 Start: 12392, Stop: 12820, Start Num: 2

Candidate Starts for Gilda\_23:

(Start: 2 @12392 has 28 MA's), (8, 12518), (10, 12545), (11, 12548), (12, 12554), (18, 12689), (20, 12725),

Gene: Hager\_24 Start: 11963, Stop: 12391, Start Num: 2  
Candidate Starts for Hager\_24:  
(Start: 2 @11963 has 28 MA's), (8, 12089), (10, 12116), (11, 12119), (12, 12125), (18, 12260), (19, 12266), (20, 12296), (22, 12350),

Gene: Haunter\_23 Start: 11805, Stop: 12233, Start Num: 2  
Candidate Starts for Haunter\_23:  
(Start: 2 @11805 has 28 MA's), (8, 11931), (10, 11958), (11, 11961), (12, 11967), (18, 12102), (20, 12138), (22, 12192),

Gene: Hiddenleaf\_22 Start: 11593, Stop: 12021, Start Num: 2  
Candidate Starts for Hiddenleaf\_22:  
(Start: 2 @11593 has 28 MA's), (7, 11698), (8, 11719), (9, 11731), (11, 11749), (12, 11755), (14, 11812), (16, 11875), (19, 11896),

Gene: JDawG\_22 Start: 12175, Stop: 12603, Start Num: 2  
Candidate Starts for JDawG\_22:  
(Start: 2 @12175 has 28 MA's), (7, 12280), (8, 12301), (9, 12313), (12, 12337), (16, 12457), (19, 12478),

Gene: JingleBells\_22 Start: 11674, Stop: 12102, Start Num: 2  
Candidate Starts for JingleBells\_22:  
(Start: 2 @11674 has 28 MA's), (7, 11779), (8, 11800), (9, 11812), (11, 11830), (12, 11836), (14, 11893), (16, 11956), (19, 11977),

Gene: Karate\_22 Start: 11813, Stop: 12241, Start Num: 2  
Candidate Starts for Karate\_22:  
(Start: 2 @11813 has 28 MA's), (8, 11939), (10, 11966), (11, 11969), (12, 11975), (18, 12110), (20, 12146), (22, 12200),

Gene: Kate\_23 Start: 12400, Stop: 12828, Start Num: 2  
Candidate Starts for Kate\_23:  
(Start: 2 @12400 has 28 MA's), (8, 12526), (10, 12553), (11, 12556), (12, 12562), (18, 12697), (20, 12733),

Gene: Kors\_25 Start: 12431, Stop: 12856, Start Num: 3  
Candidate Starts for Kors\_25:  
(Start: 1 @12422 has 2 MA's), (Start: 2 @12425 has 28 MA's), (3, 12431), (4, 12440), (5, 12473), (7, 12533), (9, 12566), (10, 12581), (11, 12584), (13, 12626), (15, 12683), (17, 12713), (19, 12731), (21, 12764), (22, 12815), (23, 12830),

Gene: Krampus\_23 Start: 12398, Stop: 12826, Start Num: 2  
Candidate Starts for Krampus\_23:  
(Start: 2 @12398 has 28 MA's), (8, 12524), (10, 12551), (11, 12554), (12, 12560), (18, 12695), (20, 12731),

Gene: MortySmith\_21 Start: 11572, Stop: 12000, Start Num: 2  
Candidate Starts for MortySmith\_21:  
(Start: 2 @11572 has 28 MA's), (7, 11677), (8, 11698), (9, 11710), (12, 11734), (16, 11854), (19, 11875),

Gene: NarutoRun\_23 Start: 12391, Stop: 12819, Start Num: 2  
Candidate Starts for NarutoRun\_23:

(Start: 2 @12391 has 28 MA's), (8, 12517), (10, 12544), (11, 12547), (12, 12553), (18, 12688), (20, 12724),

Gene: Neptune\_23 Start: 12368, Stop: 12796, Start Num: 2

Candidate Starts for Neptune\_23:

(Start: 2 @12368 has 28 MA's), (8, 12494), (10, 12521), (11, 12524), (12, 12530), (18, 12665), (20, 12701),

Gene: OverHedge\_23 Start: 12365, Stop: 12793, Start Num: 2

Candidate Starts for OverHedge\_23:

(Start: 2 @12365 has 28 MA's), (8, 12491), (10, 12518), (11, 12521), (12, 12527), (18, 12662), (20, 12698),

Gene: Pharpay\_23 Start: 12413, Stop: 12841, Start Num: 2

Candidate Starts for Pharpay\_23:

(Start: 2 @12413 has 28 MA's), (8, 12539), (10, 12566), (11, 12569), (12, 12575), (18, 12710), (20, 12746),

Gene: PhunaPhoke\_23 Start: 12386, Stop: 12814, Start Num: 2

Candidate Starts for PhunaPhoke\_23:

(Start: 2 @12386 has 28 MA's), (8, 12512), (10, 12539), (11, 12542), (12, 12548), (18, 12683), (20, 12719),

Gene: Potty\_23 Start: 12391, Stop: 12819, Start Num: 2

Candidate Starts for Potty\_23:

(Start: 2 @12391 has 28 MA's), (8, 12517), (10, 12544), (11, 12547), (12, 12553), (18, 12688), (20, 12724),

Gene: Poultruss\_22 Start: 12164, Stop: 12592, Start Num: 2

Candidate Starts for Poultruss\_22:

(Start: 2 @12164 has 28 MA's), (8, 12290), (10, 12317), (11, 12320), (12, 12326), (18, 12461), (20, 12497),

Gene: Rachella\_23 Start: 12394, Stop: 12822, Start Num: 2

Candidate Starts for Rachella\_23:

(Start: 2 @12394 has 28 MA's), (8, 12520), (10, 12547), (11, 12550), (12, 12556), (18, 12691), (20, 12727),

Gene: Rie18\_23 Start: 11745, Stop: 12173, Start Num: 2

Candidate Starts for Rie18\_23:

(Start: 2 @11745 has 28 MA's), (8, 11871), (10, 11898), (11, 11901), (12, 11907), (18, 12042), (19, 12048), (20, 12078), (22, 12132),

Gene: RikSengupta\_24 Start: 12459, Stop: 12893, Start Num: 1

Candidate Starts for RikSengupta\_24:

(Start: 1 @12459 has 2 MA's), (Start: 2 @12462 has 28 MA's), (3, 12468), (4, 12477), (5, 12510), (7, 12570), (9, 12603), (10, 12618), (11, 12621), (13, 12663), (15, 12720), (17, 12750), (19, 12768), (21, 12801), (22, 12852), (23, 12867),

Gene: Snakehole\_24 Start: 11690, Stop: 12118, Start Num: 2

Candidate Starts for Snakehole\_24:

(Start: 2 @11690 has 28 MA's), (7, 11795), (8, 11816), (9, 11828), (11, 11846), (12, 11852), (14, 11909), (16, 11972), (19, 11993),

Gene: Sparcetus\_24 Start: 12338, Stop: 12772, Start Num: 1

Candidate Starts for Sparcetus\_24:

(Start: 1 @12338 has 2 MA's), (Start: 2 @12341 has 28 MA's), (3, 12347), (4, 12356), (5, 12389), (7, 12449), (9, 12482), (10, 12497), (11, 12500), (13, 12542), (15, 12599), (17, 12629), (19, 12647), (21, 12680), (22, 12731), (23, 12746),

Gene: Tedro\_23 Start: 11864, Stop: 12292, Start Num: 2

Candidate Starts for Tedro\_23:

(Start: 2 @11864 has 28 MA's), (8, 11990), (10, 12017), (11, 12020), (12, 12026), (18, 12161), (20, 12197),

Gene: TinyMiny\_24 Start: 12360, Stop: 12791, Start Num: 2

Candidate Starts for TinyMiny\_24:

(Start: 1 @12357 has 2 MA's), (Start: 2 @12360 has 28 MA's), (3, 12366), (4, 12375), (5, 12408), (7, 12468), (9, 12501), (10, 12516), (11, 12519), (13, 12561), (15, 12618), (17, 12648), (19, 12666), (21, 12699), (22, 12750), (23, 12765),