



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 284323 Report

This analysis was run 02/23/26 on database version 636.

Pham number 284323 has 13 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi\_27
- Track 2 : MrMiyagi\_24
- Track 3 : Fowlmouth\_24
- Track 4 : Rope\_30, Candle\_30, Send513\_30
- Track 5 : Papyrus\_30
- Track 6 : Riparian\_30
- Track 7 : Nilo\_31
- Track 8 : Zenon\_31
- Track 9 : Weiss13\_30
- Track 10 : MontyDev\_30
- Track 11 : Yelo\_30

### ***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 10 of the 12 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Candle\_30, Fowlmouth\_24, MrMiyagi\_24, Nilo\_31, Papyrus\_30, Riparian\_30, Rope\_30, Send513\_30, Weiss13\_30, Yelo\_30, Zenon\_31,

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

- MontyDev\_30,

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

- Indlulamithi\_27,

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

Start 1:

- Found in 12 of 13 ( 92.3% ) of genes in pham
- Manual Annotations of this start: 10 of 12
- Called 91.7% of time when present

- Phage (with cluster) where this start called: Candle\_30 (R), Fowlmouth\_24 (AC), MrMiyagi\_24 (AC), Nilo\_31 (R), Papyrus\_30 (R), Riparian\_30 (R), Rope\_30 (R), Send513\_30 (R), Weiss13\_30 (R), Yelo\_30 (R), Zenon\_31 (R),

Start 2:

- Found in 1 of 13 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 1 of 12
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi\_27 (AC),

Start 4:

- Found in 10 of 13 ( 76.9% ) of genes in pham
- Manual Annotations of this start: 1 of 12
- Called 10.0% of time when present
- Phage (with cluster) where this start called: MontyDev\_30 (R),

### Summary by clusters:

There are 2 clusters represented in this pham: AC, R,

Info for manual annotations of cluster AC:

- Start number 1 was manually annotated 2 times for cluster AC.
- Start number 2 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster R:

- Start number 1 was manually annotated 8 times for cluster R.
- Start number 4 was manually annotated 1 time for cluster R.

### Gene Information:

Gene: Candle\_30 Start: 24637, Stop: 28131, Start Num: 1

Candidate Starts for Candle\_30:

(Start: 1 @24637 has 10 MA's), (3, 24649), (Start: 4 @24661 has 1 MA's), (7, 24844), (9, 24925), (13, 25024), (14, 25048), (15, 25066), (20, 25225), (21, 25258), (26, 25306), (30, 25345), (32, 25471), (33, 25480), (34, 25666), (38, 25867), (44, 26044), (48, 26143), (50, 26176), (53, 26221), (54, 26233), (56, 26275), (57, 26281), (58, 26284), (61, 26353), (62, 26431), (63, 26437), (67, 26482), (68, 26485), (73, 26569), (92, 26824), (93, 26863), (99, 27010), (100, 27016), (108, 27190), (110, 27223), (112, 27244), (114, 27253), (116, 27280), (124, 27523), (127, 27667), (131, 27865), (134, 27895), (135, 27952), (137, 27988), (138, 28015), (139, 28027),

Gene: Fowlmouth\_24 Start: 20553, Stop: 24044, Start Num: 1

Candidate Starts for Fowlmouth\_24:

(Start: 1 @20553 has 10 MA's), (8, 20778), (10, 20847), (11, 20880), (19, 21075), (22, 21171), (23, 21174), (24, 21180), (26, 21207), (29, 21225), (36, 21675), (37, 21696), (42, 21879), (43, 21882), (45, 21951), (46, 21957), (49, 22053), (50, 22077), (52, 22101), (56, 22176), (60, 22251), (63, 22338), (66, 22374), (69, 22425), (70, 22428), (75, 22488), (78, 22566), (81, 22599), (83, 22638), (89, 22710), (109, 23100), (113, 23136), (119, 23211), (122, 23334), (133, 23790), (140, 23973),

Gene: Indlulamithi\_27 Start: 22936, Stop: 26442, Start Num: 2

Candidate Starts for Indlulamithi\_27:

(Start: 2 @22936 has 1 MA's), (5, 23059), (6, 23110), (12, 23290), (16, 23401), (17, 23425), (18, 23434), (22, 23551), (23, 23554), (24, 23560), (25, 23572), (26, 23587), (27, 23596), (31, 23641), (35, 24019), (37, 24088), (38, 24154), (39, 24175), (40, 24181), (41, 24205), (47, 24430), (51, 24535), (55, 24619), (62, 24799), (64, 24808), (65, 24820), (68, 24853), (71, 24904), (74, 24940), (76, 25003), (78, 25045), (80, 25072), (84, 25126), (85, 25135), (88, 25180), (94, 25300), (95, 25330), (96, 25339), (97, 25342), (102, 25486), (104, 25522), (105, 25531), (106, 25558), (107, 25579), (111, 25639), (117, 25678), (118, 25702), (121, 25780), (128, 26194), (130, 26251), (132, 26293), (136, 26371),

Gene: MontyDev\_30 Start: 24302, Stop: 27778, Start Num: 4

Candidate Starts for MontyDev\_30:

(Start: 1 @24278 has 10 MA's), (3, 24290), (Start: 4 @24302 has 1 MA's), (7, 24485), (9, 24566), (13, 24665), (14, 24689), (15, 24707), (20, 24866), (21, 24899), (26, 24947), (30, 24986), (32, 25112), (33, 25121), (34, 25307), (38, 25508), (44, 25685), (48, 25784), (50, 25817), (53, 25862), (54, 25874), (56, 25916), (57, 25922), (58, 25925), (61, 25994), (62, 26072), (63, 26078), (67, 26123), (68, 26126), (73, 26210), (77, 26279), (79, 26324), (82, 26369), (87, 26414), (88, 26435), (89, 26453), (90, 26456), (91, 26462), (92, 26465), (98, 26603), (99, 26651), (100, 26657), (103, 26738), (108, 26831), (112, 26891), (114, 26900), (115, 26906), (116, 26927), (122, 27092), (123, 27158), (124, 27170), (125, 27188), (126, 27194), (128, 27428), (129, 27467), (131, 27512), (134, 27542), (137, 27635), (138, 27662),

Gene: MrMiyagi\_24 Start: 20573, Stop: 24064, Start Num: 1

Candidate Starts for MrMiyagi\_24:

(Start: 1 @20573 has 10 MA's), (8, 20798), (10, 20867), (11, 20900), (19, 21095), (22, 21191), (23, 21194), (24, 21200), (26, 21227), (29, 21245), (36, 21695), (37, 21716), (38, 21782), (43, 21902), (45, 21971), (46, 21977), (52, 22121), (54, 22154), (56, 22196), (60, 22271), (63, 22358), (69, 22445), (70, 22448), (72, 22460), (78, 22586), (81, 22619), (86, 22691), (89, 22730), (105, 23030), (109, 23120), (113, 23156), (133, 23810),

Gene: Nilo\_31 Start: 24634, Stop: 28134, Start Num: 1

Candidate Starts for Nilo\_31:

(Start: 1 @24634 has 10 MA's), (3, 24646), (Start: 4 @24658 has 1 MA's), (7, 24841), (9, 24922), (13, 25021), (14, 25045), (15, 25063), (20, 25222), (21, 25255), (26, 25303), (30, 25342), (32, 25468), (33, 25477), (34, 25663), (38, 25864), (44, 26041), (48, 26140), (50, 26173), (53, 26218), (54, 26230), (56, 26272), (59, 26284), (61, 26350), (63, 26434), (65, 26449), (67, 26479), (75, 26584), (77, 26635), (79, 26680), (82, 26725), (87, 26770), (88, 26791), (89, 26809), (90, 26812), (91, 26818), (92, 26821), (98, 26959), (99, 27007), (100, 27013), (103, 27094), (108, 27187), (112, 27247), (114, 27256), (115, 27262), (116, 27283), (122, 27448), (123, 27514), (124, 27526), (125, 27544), (126, 27550), (128, 27784), (129, 27823), (131, 27868), (134, 27898), (137, 27991), (138, 28018),

Gene: Papyrus\_30 Start: 24299, Stop: 27793, Start Num: 1

Candidate Starts for Papyrus\_30:

(Start: 1 @24299 has 10 MA's), (3, 24311), (Start: 4 @24323 has 1 MA's), (7, 24506), (9, 24587), (13, 24686), (14, 24710), (15, 24728), (20, 24887), (21, 24920), (26, 24968), (30, 25007), (32, 25133), (33, 25142), (34, 25328), (38, 25529), (44, 25706), (48, 25805), (50, 25838), (53, 25883), (58, 25946), (61, 26015), (62, 26093), (63, 26099), (67, 26144), (68, 26147), (73, 26231), (92, 26486), (93, 26525), (99, 26672), (100, 26678), (108, 26852), (110, 26885), (112, 26906), (114, 26915), (116, 26942), (124, 27185), (127, 27329), (131, 27527), (134, 27557), (135, 27614), (137, 27650), (138, 27677), (139, 27689),

Gene: Riparian\_30 Start: 24095, Stop: 27595, Start Num: 1

Candidate Starts for Riparian\_30:

(Start: 1 @24095 has 10 MA's), (3, 24107), (Start: 4 @24119 has 1 MA's), (7, 24302), (9, 24383), (13, 24482), (14, 24506), (15, 24524), (20, 24683), (21, 24716), (26, 24764), (30, 24803), (32, 24929), (33, 24938), (34, 25124), (38, 25325), (44, 25502), (48, 25601), (50, 25634), (53, 25679), (56, 25733), (59,

25745), (61, 25811), (63, 25895), (65, 25910), (67, 25940), (75, 26045), (77, 26096), (79, 26141), (82, 26186), (87, 26231), (88, 26252), (89, 26270), (90, 26273), (91, 26279), (92, 26282), (98, 26420), (99, 26468), (100, 26474), (101, 26534), (103, 26555), (108, 26648), (112, 26708), (114, 26717), (115, 26723), (116, 26744), (122, 26909), (123, 26975), (124, 26987), (125, 27005), (126, 27011), (128, 27245), (129, 27284), (131, 27329), (134, 27359), (137, 27452), (138, 27479),

Gene: Rope\_30 Start: 24281, Stop: 27775, Start Num: 1

Candidate Starts for Rope\_30:

(Start: 1 @24281 has 10 MA's), (3, 24293), (Start: 4 @24305 has 1 MA's), (7, 24488), (9, 24569), (13, 24668), (14, 24692), (15, 24710), (20, 24869), (21, 24902), (26, 24950), (30, 24989), (32, 25115), (33, 25124), (34, 25310), (38, 25511), (44, 25688), (48, 25787), (50, 25820), (53, 25865), (54, 25877), (56, 25919), (57, 25925), (58, 25928), (61, 25997), (62, 26075), (63, 26081), (67, 26126), (68, 26129), (73, 26213), (92, 26468), (93, 26507), (99, 26654), (100, 26660), (108, 26834), (110, 26867), (112, 26888), (114, 26897), (116, 26924), (124, 27167), (127, 27311), (131, 27509), (134, 27539), (135, 27596), (137, 27632), (138, 27659), (139, 27671),

Gene: Send513\_30 Start: 24637, Stop: 28131, Start Num: 1

Candidate Starts for Send513\_30:

(Start: 1 @24637 has 10 MA's), (3, 24649), (Start: 4 @24661 has 1 MA's), (7, 24844), (9, 24925), (13, 25024), (14, 25048), (15, 25066), (20, 25225), (21, 25258), (26, 25306), (30, 25345), (32, 25471), (33, 25480), (34, 25666), (38, 25867), (44, 26044), (48, 26143), (50, 26176), (53, 26221), (54, 26233), (56, 26275), (57, 26281), (58, 26284), (61, 26353), (62, 26431), (63, 26437), (67, 26482), (68, 26485), (73, 26569), (92, 26824), (93, 26863), (99, 27010), (100, 27016), (108, 27190), (110, 27223), (112, 27244), (114, 27253), (116, 27280), (124, 27523), (127, 27667), (131, 27865), (134, 27895), (135, 27952), (137, 27988), (138, 28015), (139, 28027),

Gene: Weiss13\_30 Start: 24327, Stop: 27827, Start Num: 1

Candidate Starts for Weiss13\_30:

(Start: 1 @24327 has 10 MA's), (3, 24339), (Start: 4 @24351 has 1 MA's), (7, 24534), (9, 24615), (13, 24714), (14, 24738), (15, 24756), (20, 24915), (21, 24948), (26, 24996), (28, 25011), (30, 25035), (32, 25161), (33, 25170), (34, 25356), (38, 25557), (44, 25734), (48, 25833), (50, 25866), (53, 25911), (54, 25923), (56, 25965), (59, 25977), (61, 26043), (63, 26127), (65, 26142), (67, 26172), (75, 26277), (77, 26328), (79, 26373), (82, 26418), (87, 26463), (88, 26484), (89, 26502), (90, 26505), (91, 26511), (92, 26514), (98, 26652), (99, 26700), (100, 26706), (101, 26766), (103, 26787), (108, 26880), (112, 26940), (114, 26949), (115, 26955), (116, 26976), (120, 27081), (122, 27141), (123, 27207), (124, 27219), (125, 27237), (126, 27243), (128, 27477), (129, 27516), (131, 27561), (134, 27591), (137, 27684), (138, 27711),

Gene: Yelo\_30 Start: 24620, Stop: 28120, Start Num: 1

Candidate Starts for Yelo\_30:

(Start: 1 @24620 has 10 MA's), (3, 24632), (Start: 4 @24644 has 1 MA's), (7, 24827), (9, 24908), (13, 25007), (14, 25031), (15, 25049), (20, 25208), (21, 25241), (26, 25289), (30, 25328), (32, 25454), (33, 25463), (34, 25649), (38, 25850), (44, 26027), (48, 26126), (50, 26159), (53, 26204), (56, 26258), (58, 26267), (59, 26270), (61, 26336), (63, 26420), (65, 26435), (67, 26465), (75, 26570), (77, 26621), (79, 26666), (82, 26711), (87, 26756), (88, 26777), (89, 26795), (90, 26798), (91, 26804), (92, 26807), (98, 26945), (99, 26993), (100, 26999), (101, 27059), (103, 27080), (108, 27173), (112, 27233), (114, 27242), (115, 27248), (116, 27269), (122, 27434), (123, 27500), (124, 27512), (125, 27530), (126, 27536), (128, 27770), (129, 27809), (131, 27854), (134, 27884), (137, 27977), (138, 28004),

Gene: Zenon\_31 Start: 24639, Stop: 28139, Start Num: 1

Candidate Starts for Zenon\_31:

(Start: 1 @24639 has 10 MA's), (3, 24651), (Start: 4 @24663 has 1 MA's), (7, 24846), (9, 24927), (13, 25026), (14, 25050), (15, 25068), (20, 25227), (21, 25260), (26, 25308), (30, 25347), (32, 25473), (33,

25482), (34, 25668), (38, 25869), (44, 26046), (48, 26145), (50, 26178), (53, 26223), (54, 26235), (56, 26277), (59, 26289), (61, 26355), (63, 26439), (65, 26454), (67, 26484), (75, 26589), (77, 26640), (79, 26685), (82, 26730), (87, 26775), (88, 26796), (89, 26814), (90, 26817), (91, 26823), (92, 26826), (98, 26964), (99, 27012), (100, 27018), (101, 27078), (103, 27099), (108, 27192), (112, 27252), (114, 27261), (115, 27267), (116, 27288), (122, 27453), (123, 27519), (124, 27531), (125, 27549), (126, 27555), (128, 27789), (129, 27828), (131, 27873), (134, 27903), (137, 27996), (138, 28023),