**Journal: AMB Express**

**Supplementary materials**

Deficiency of biodegradable plastic-degrading enzyme production in a gene-deletion mutant of phyllosphere yeast, *Pseudozyma antarctica* defective in mannosylerythritol lipid biosynthesis

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**Figure S1:**



**Figure S1.** PCR analysis of the parental strain GB-4(0) and strain Pa*EMT1*. The primer sets used in PCR amplification to assess Pa*EMT1* deletion (A). Agarose gel electrophoresis of amplified DNA fragments to confirm gene disruption. The gene fragments were amplified using PaEMT1\_inner\_F1 (Primer A) and PaEMT1\_inner\_R1 (Primer B), or PaEMT1\_up\_F2 (Primer C) and NATfragment\_R1 (Primer D) (B).

**Figure S2:**

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**Figure S2.** Schematic diagram of the procedure used to obtain cell-free extract.

**Figure S3:**



**Figure S3.** PaE production by strain Pa*EMT1* in *m*-3×FMM medium supplemented with 8 % xylose and various concentrations of TritonX-100. Cell growth (white) and PaE activity (gray) (A) and SDS-PAGE and western blot analyses of culture supernatant (B). CMC, critical micelle concentration; M, marker; P, purified PaE. The amount of each culture supernatant loaded in the gel was 10 μl for CBB staining and western blotting. The results of the cell growth and PaE activity assays are shown as the average of three different experiments. *Error bars* show standard deviations.

**Figure S4:**



**Figure S4.** TLC analysis of culture supernatants used for the PaE activity assay. Culture supernatants (A) and precipitates including cells (B).