

## **Supplementary information**

### **Carrier immobilization and auto-exposition favoring reuse of silyletherase SilE-R from *Brassica* sp. with high activity and enantiospecificity**

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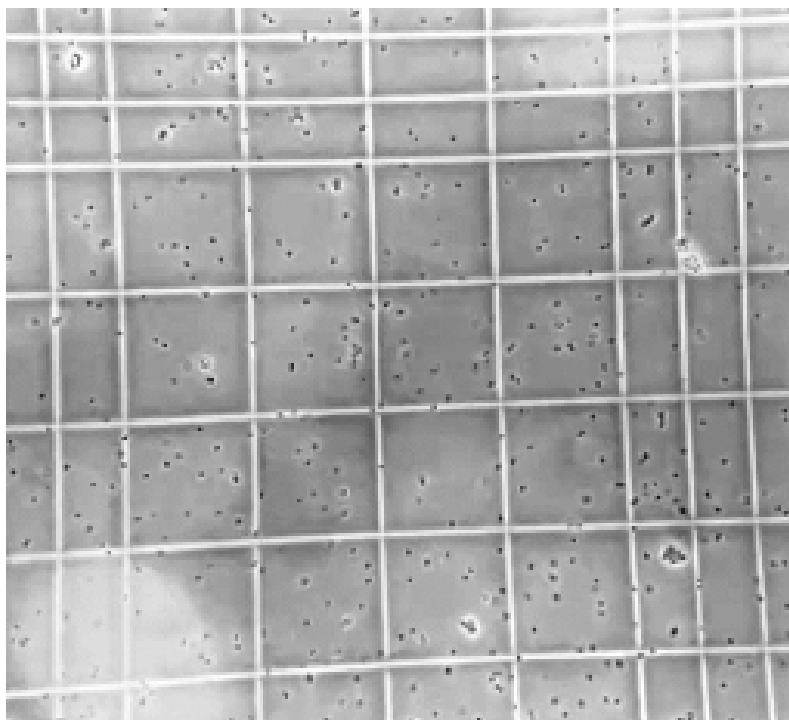


**Fig S1** Photograph of a Thoma cell counting chamber with endospore solution (10 g L<sup>-1</sup>, diluted 1:20).

### Theoretical estimation of spore weight

The average weight of a single spore  $W_{sp}$  was estimated from literature data according to equation S1, where  $\rho_{sp}$ : average spore density [g cm<sup>-3</sup>];  $V_{sp}$ : average spore volume [cm<sup>-3</sup>];  $d_{sp}$ : average spore diameter [ $\mu$ m].

$$(S1) W_{sp} = \rho_{sp} \cdot V_{sp} = \rho_{sp} \cdot \frac{4}{3} \cdot \pi \cdot \left( \frac{d_{sp}}{2} \cdot 10^{-4} \right)^3$$

The estimated weight was 0.7 pg per spore.

### Determination of the Enantiomeric Ratio (*E*-Value) for the product

The Enantiomeric Ratio *E* was determined according to equation S2, with *c*: conversion and *ee<sub>P</sub>*: enantiomeric excess of product (P).

$$(S2) E = \frac{\ln(1-c(1+ee_P))}{\ln(1-c(1-ee_P))}$$

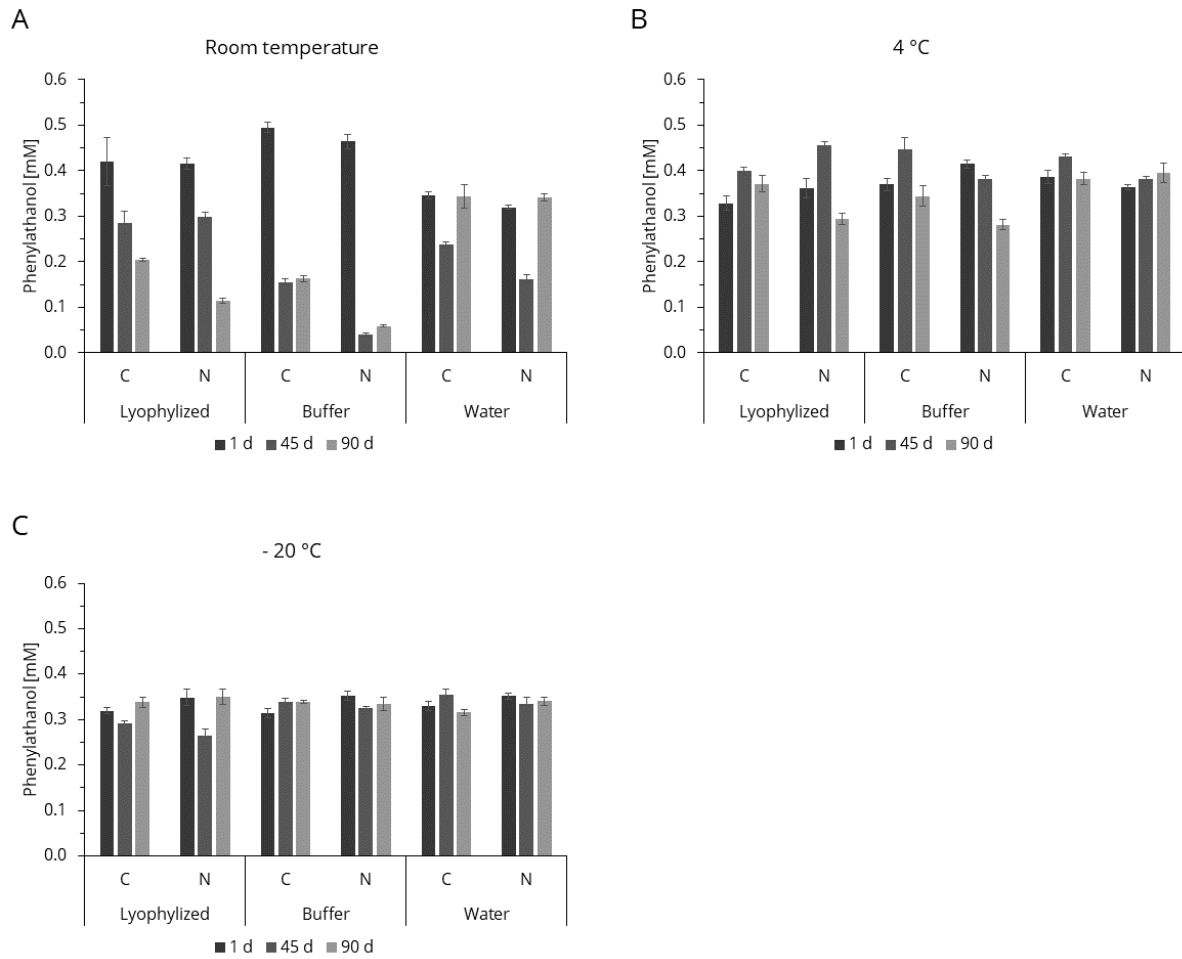


**Fig S2** Hydrolytic activity of C- and N-terminally fused SilE-R on Sporobeads with respect to TMS-PhE hydrolysis after storage at different temperatures either dry, in water or in buffer. Spores were stored for 1, 45 and 90 days. Shown are the mean values and standard deviation of the total PhE concentration (A) measured for SilE-R on spores stored at RT in different states. (B) measured for SilE-R on spores stored at 4 °C in various states (C) measured for SilE-R on spores stored at -20 °C in various states. Assay: 4 h duration, 250  $\mu$ L with 4.6 mmol TMS-PhE  $L^{-1}$ , 50 mmol Tris/HCl  $L^{-1}$  (pH 8), 0.5 mg spores.