

## $\alpha$ -Trehalose phosphorylase 65A, *Thermoanaerobacter brockii*

### TbTre65A (GH65)

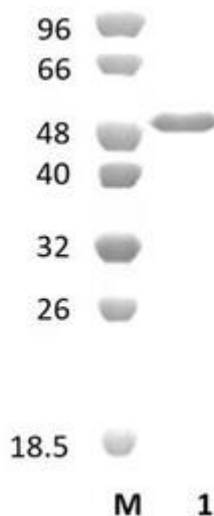
Catalogue number	Presentation
CZ09901	0.25 mg
CZ09902	3 x 0.25 mg

#### Description

$\alpha$ -Trehalose phosphorylase 65A (TbTre65A), assigned the E.C. number 2.4.1.64, is a derivative of *Thermoanaerobacter brockii*. It is an  $\alpha,\alpha$ -trehalose phosphorylase. The recombinant TbTre65A, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 65 (GH65) enzyme (see more details at [www.cazy.org](http://www.cazy.org)). The protein is supplied in a solution containing 35 mM NaHepes buffer (pH 7.5), 750 mM NaCl, 200 mM Imidazole, 3.5 mM CaCl<sub>2</sub>, and 25% (v/v) glycerol, at a concentration of 0.25 mg/mL. Bulk quantities of this product can be made available upon request. To place an order, simply visit our website. We offer fast and secure shipping worldwide.

#### Electrophoretic Purity

The molecular integrity and purity of TbTre65A (GH65) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of TbTre65A (GH65) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 45,47 kDa. Lane M contains a Protein Marker for reference.

#### Storage temperature

The protein should be stored at -30°C to -15°C in a constant temperature freezer. The protein will remain stable till the expiry date if stored as specified.

#### Substrate specificity

TbTre65A (GH65) hydrolyses  $\alpha,\alpha$ -trehalose.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 7.0-7.5 and at a temperature of 70°C. Maximal enzymatic activity is achieved at pH 7.5 and a consistent temperature of 70°C.

## Enzyme activity

The substrate specificity and kinetic properties of *TbTre65A* (GH65) are detailed in the referenced publication provided below. To perform enzyme assays and determine specific activity values, adhere to the methodology outlined in the cited paper(s).

## Reference

Chaen *et al.* (1999) *Journal of Applied Glycoscience*. 46: 399-405.

Hoorebeke *et al.* (2010) *Acta Crystallogr Sect F Struct Biol Cryst Commun*. 66(Pt 4): 442–447.

## Customer Support

Our dedicated customer support team is always ready to assist you with any questions or technical issues you may have. Reach us via email at [info@nzytech.com](mailto:info@nzytech.com).

## Quality control assay

Protein purity is determined to be  $\geq 75\%$ , as assessed by SDS-PAGE and subsequent BlueSafe staining (MB15201).

For life science research only. Not for use in diagnostic procedures.

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