

## Malto-oligosyltrehalose trehalohydrolase 13A, *Nostoc punctiforme*

### *Np*Trz13A (CBM48-GH13)

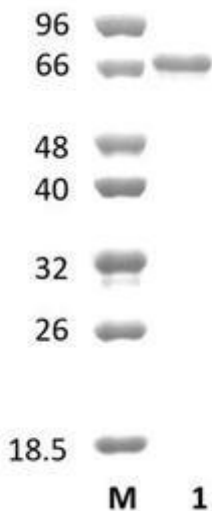
Catalogue number	Presentation
CZ08711	0.5 mg
CZ08712	3 x 0.5 mg

#### Description

Malto-oligosyltrehalose trehalohydrolase 13A (*Np*Trz13A), assigned the E.C. number 3.2.1.141, is a derivative of *Nostoc punctiforme*. It is an enzyme that participates in the hydrolysis of 1,4- $\alpha$ -D-glucosidic linkage in 4- $\alpha$ -D-(1,4- $\alpha$ -D-glucanosyl)(n) trehalose to yield trehalose and 1,4- $\alpha$ -D-glucan. The recombinant *Np*Trz13A, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 13 (CBM48-GH13) 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 0.5 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 *Np*Trz13A (CBM48-GH13) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *Np*Trz13A (CBM48-GH13) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 72,27 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

*Np*Trz13A (CBM48-GH13) hydrolyses maltohexaose and soluble starch.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 7.0-7.5 and at a temperature of 25°C. Maximal enzymatic activity is achieved at pH 7 and a consistent temperature of 25°C.

## Enzyme activity

The substrate specificity and kinetic properties of *Np*Trz13A (CBM48-GH13) 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

Yoshida and Sakamoto. (2009) *J Gen Appl Microbiol.* 55(2):135-45.

## 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  $\geq 90\%$ , 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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