

## $\alpha$ -Mannosidase 92B, *Bacteroides thetaiotaomicron* *BtMns92B* (GH92-GH92)

### Catalogue number:

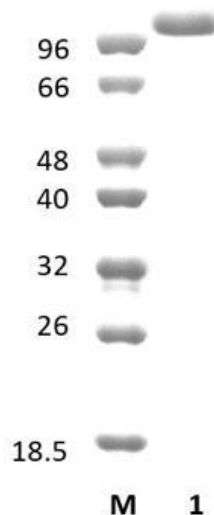
CZ09501, 0,5 mg  
CZ09502, 3 × 0,5 mg

### Description

*BtMns92B* (GH92-GH92), BT2948, E.C. number 3.2.1.24, is an enzyme that participates in the hydrolysis of terminal, non-reducing  $\alpha$ -D-mannose residues in  $\alpha$ -D-mannosides from *Bacteroides thetaiotaomicron*. Recombinant *BtMns92B* (GH92-GH92), purified from *Escherichia coli*, is a modular family 92 Glycoside Hydrolase (GH92) with two GH92 catalytic module repeats ([www.cazy.org](http://www.cazy.org)). The enzyme is provided in 35 mM NaHepes buffer, pH 7.5, 750 mM NaCl, 200 mM imidazol, 3.5 mM CaCl<sub>2</sub> and 25% (v/v) glycerol, at a 0,5 mg/mL concentration. Bulk quantities of this product are available on request.

### Electrophoretic Purity

*BtMns92B* (GH92-GH92) purity was determined by sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *BtMns92B* (GH92-GH92) (Lane 1). Electrophoresis was performed using a 14% polyacrylamide gel. The Mw of the enzyme is 101.3 kDa. Lane M contains NZYTech Low Molecular Weight (LMW) Protein Marker (MB082).

### Storage temperature

This enzyme should be stored at -20 °C.

### Substrate specificity

*BtMns92B* (GH92-GH92) hydrolyses 4-nitrophenyl  $\alpha$ -D-mannopyranoside (4NP-Man).

### Temperature and pH optima

The pH optimum for enzymatic activity is 7 while temperature optimum is 37 °C.

### Enzyme activity

Substrate specificity and kinetic properties of *BtMns92B* (GH92-GH92) are described in the reference provided below. Follow the instructions described in the paper for the implementation of enzyme assays and to obtain values of specific activity. To measure catalytic activity of GHs, quantify reducing sugars released from polysaccharides through the method described by Miller (1959; Anal. Chem. 31, 426-428).

### Reference

Zhu *et al.* Nat Chem Biol. 2010 Feb.6(2):125-32.

### Quality control assay

Protein purity is  $\geq 90\%$  as judged by SDS-PAGE followed by BlueSafe staining (MB15201).

### Certificate of Analysis

Test	Criteria	Result
Protein purity	Purity in line with the stated value	Meets specification

Approved by:



Patrícia Ponte  
Senior Manager, Quality Systems

*For research use only*

