

## Xylanase 10B, *Clostridium thermocellum*

### CtXyn10B (CBM22-GH10-CBM22)

Catalogue number	Presentation
CZ00221	2 mg
CZ00222	3 x 2 mg

#### Description

Xylanase 10B (CtXyn10B), assigned the E.C. number 3.2.1.8, is a derivative of *Clostridium thermocellum*. It is an endo-1,4- $\beta$ -xylanase. The recombinant CtXyn10B, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 10 (CBM22-GH10-CBM22) 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 2 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 CtXyn10B (CBM22-GH10-CBM22) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of CtXyn10B (CBM22-GH10-CBM22) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 77,93 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

CtXyn10B (CBM22-GH10-CBM22) hydrolyses a variety of xylan molecules, such as oat spelt xylan and arabinoxylan.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 5.0-7.5 and at a temperature of 75°C. Maximal enzymatic activity is achieved at pH 6.8 and a consistent temperature of 75°C.

### Specific activity

CtXyn10B (CBM22-GH10-CBM22) specific activity is 650 U/mg, using wheat arabinoxylan as substrate.

### Enzyme activity

Substrate specificity and kinetic properties of CtXyn10B (CBM22-GH10-CBM22) 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

Fontes *et al.* (1995) Biochem. J. 307, 151-158.

### 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).

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