

CZ0022\_UG\_EN\_V2302

# Xylanase 10B, Clostridium thermocellum

# CtXyn10B (CBM22-GH10-CBM22)

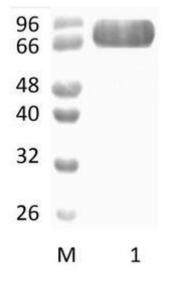
Catalogue number	Presentation
CZ00221	2 mg
CZ00222	3 x 2 mg

# Description

Xylanase 10B (*Ct*Xyn10B), assigned the E.C. number 3.2.1.8, is a derivative of *Clostridium thermocellum*. It is an endo-1,4-β-xylanase. The recombinant *Ct*Xyn10B, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 10 (CBM22-GH10-CBM22) enzyme (see more details at <u>www.cazy.org</u>). 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 *Ct*Xyn10B (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 *Ct*Xyn10B (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 *Ct*Xyn10B (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.

# **Quality control assay**

Protein purity is determined to be ≥90%, as assessed by SDS-PAGE and subsequent BlueSafe staining (MB15201).

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