

## Arabinoxylanase 5A, *Clostridium thermocellum*

### CtXyn5A (GH5-CBM6-CBM13-FN-CBM62)

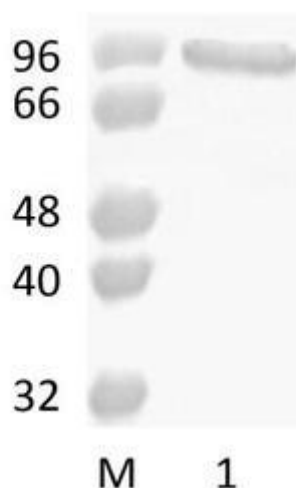
Catalogue number	Presentation
CZ00611	1 mg
CZ00612	3 x 1 mg

#### Description

Arabinoxylanase 5A (CtXyn5A), assigned the E.C. number 3.2.1.-, is a derivative of *Clostridium thermocellum*. It is an arabinoxylanase specific endo-1,4- $\beta$ -xylanase. The recombinant CtXyn5A, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 5 (GH5-CBM6-CBM13-FN-CBM62) 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 1 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 CtXyn5A (GH5-CBM6-CBM13-FN-CBM62) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of CtXyn5A (GH5-CBM6-CBM13-FN-CBM62) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 93,45 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

CtXyn5A (GH5-CBM6-CBM13-FN-CBM62) hydrolyses arabinoxylans.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 5.0-8.0 and at a temperature of 60°C. Maximal enzymatic activity is achieved at pH 7 and a consistent temperature of 60°C.

## Enzyme activity

The substrate specificity and kinetic properties of CtXyn5A (GH5-CBM6-CBM13-FN-CBM62) 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

Correia *et al.* (2011) The Journal of Biological Chemistry, 286, 22510-22520.

Labourel *et al.* (2016) J Biol Chem. 291(42):22149-22159.

Brás *et al.* (2011) Acta Crystallogr Sect F Struct Biol Cryst Commun. 67(Pt 7):833-836.

## 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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