

CZ0008 UG EN V2302

# Cellulase 5A, Cellvibrio mixtus

# CmCel5A (GH5)

Catalogue number Presentation

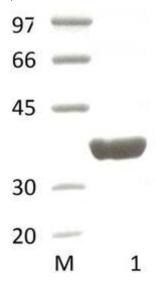
CZ00081 2 mg CZ00082 3 x 2 mg

#### **Description**

Cellulase 5A (CmCel5A), assigned the E.C. number 3.2.1.4, is a derivative of  $Cellvibrio\ mixtus$ . It is an endo-1,4- $\beta$ -glucanase. The recombinant CmCel5A, purified from  $Escherichia\ coli$ , is a single-domain Glycoside Hydrolase family 5 (GH5) enzyme (see more details at 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 *CmC*el5A (GH5) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1**. SDS-PAGE analysis of *Cm*Cel5A (GH5) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 40,48 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**

CmCel5A (GH5) hydrolyses soluble cellulose (carboxymethylcellulose, hydroxyethylcellulose, etc) and 1,3-1,4-β-glucans.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 7.0-8.5 and at a temperature of 50°C. Maximal enzymatic activity is achieved at pH 7.5 and a consistent temperature of 50°C.

## **Specific activity**

*Cm*Cel5A (GH5) specific activity is 1100 U/mg, using barley  $\beta$ -glucan as substrate.

#### **Enzyme activity**

Substrate specificity and kinetic properties of *Cm*Cel5A (GH5) 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. (1997) Appl. Microbiol. Biotec. 48, 473-479.

#### **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.