

Cellulase 5C, *Clostridium cellulolyticum*

CcCel5C (GH5-doc-doc)

Catalogue number	Presentation
CZ08431	1 mg
CZ08432	3 x 1 mg

Description

Cellulase 5C (CcCel5C), assigned the E.C. number 3.2.1.4, is a derivative of *Clostridium cellulolyticum*. It is an endo-1,4- β -glucanase. The recombinant CcCel5C, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 5 (GH5-doc-doc) 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 CaCl₂, 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 CcCel5C (GH5-doc-doc) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).

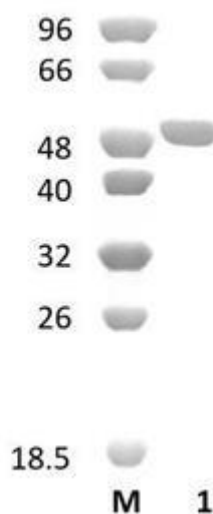


Figure 1. SDS-PAGE analysis of CcCel5C (GH5-doc-doc) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 51,33 kDa. Lane M contains a Protein Marker for reference.

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

CcCel5C (GH5-doc-doc) hydrolyses CMC, lichenan, barley glucon, xylan and swollen Avicel.

Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 5.5-7.2 and at a temperature of 37-51°C. Maximal enzymatic activity is achieved at pH 6 and a consistent temperature of 50°C.

Enzyme activity

The substrate specificity and kinetic properties of CcCel5C (GH5-doc-doc) 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

Fierobe *et al.* (1991) J Bacteriol. 173(24): 7956–7962.

Belaich *et al.* (1992) J Bacteriol. 174(14):4677-82.

Pineiro *et al.* (2008) J Biol Chem. 283(26):18422-30.

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 $\geq 90\%$, 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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