

## Cellulase 5B, *Thermobifida fusca*

### TfCel5B (GH5-CBM3)

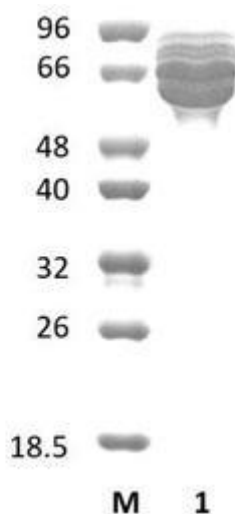
| Catalogue number | Presentation |
|------------------|--------------|
| CZ09071          | 1 mg         |
| CZ09072          | 3 x 1 mg     |

#### Description

Cellulase 5B (*TfCel5B*), assigned the E.C. number 3.2.1.4, is a derivative of *Thermobifida fusca*. It is an endo-1,4- $\beta$ -glucanase. The recombinant *TfCel5B*, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 5 (GH5-CBM3) 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 *TfCel5B* (GH5-CBM3) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *TfCel5B* (GH5-CBM3) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 66,07 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

*TfCel5B* (GH5-CBM3) hydrolyses CMC, avicel and cellulose.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 7.0-8.5 and at a temperature of 70°C. Maximal enzymatic activity is achieved at pH 8.2 and a consistent temperature of 70°C.

## Enzyme activity

The substrate specificity and kinetic properties of *Tf*Cel5B (GH5-CBM3) 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

Posta *et al.* (2004) J Basic Microbiol. 44(5):383-99.

## 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  $\geq 50\%$ , as assessed by SDS-PAGE and subsequent BlueSafe staining (MB15201).

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

---

**NZYtech Lda.** Estrada do Paço do Lumiar, Campus do Lumiar - Edifício E, R/C, 1649-038 Lisboa, Portugal Tel.:+351.213643514 Fax:  
+351.217151168 [www.nzytech.com](http://www.nzytech.com)