

Cellulase 5A, *Thermobifida fusca*

TfCel5A (CBM2-GH5)

Catalogue number	Presentation
CZ09061	0.5 mg
CZ09062	3 x 0.5 mg

Description

Cellulase 5A (*TfCel5A*), assigned the E.C. number 3.2.1.4, is a derivative of *Thermobifida fusca*. It is an endo-1,4- β -glucanase. The recombinant *TfCel5A*, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 5 (CBM2-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 CaCl₂, and 25% (v/v) glycerol, at a concentration of 0.5 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 *TfCel5A* (CBM2-GH5) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).

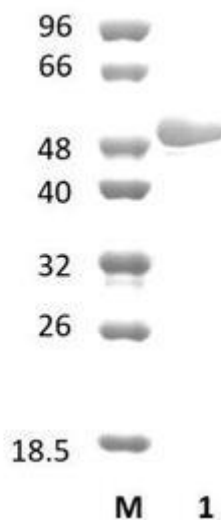


Figure 1. SDS-PAGE analysis of *TfCel5A* (CBM2-GH5) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 50,70 kDa. Lane M contains a Protein Marker for reference.

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

TfCel5A (CBM2-GH5) hydrolyses avicel, CMC, swollen cellulose and pNP-cellobiose.

Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 5.0-6.0 and at a temperature of 50°C. Maximal enzymatic activity is achieved at pH 5.5 and a consistent temperature of 50°C.

Enzyme activity

The substrate specificity and kinetic properties of *Tf*Cel5A (CBM2-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

Irwin *et al.* (1993) *Biotechnol Bioeng.* 42(8):1002-13.

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 $\geq 75\%$, 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