CZ0420_UG_EN_V2302

Reducing-end cellobiohydrolase 48A, *Clostridium stercorarium*

*Cs*Cbh48A (GH48)

Catalogue number	Presentation
CZ04201	1 mg
CZ04202	3 x 1 mg

Description

Reducing-end cellobiohydrolase 48A (*Cs*Cbh48A), assigned the E.C. number 3.2.1.176, is a derivative of *Clostridium stercorarium*. It is an exo-1,4-β-glucanse that acts by releasin cellobiose from the reducing ends of the cellulose chains. The recombinant *Cs*Cbh48A, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 48 (GH48) 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 $CaCl_2$, 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 *Cs*Cbh48A (GH48) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).

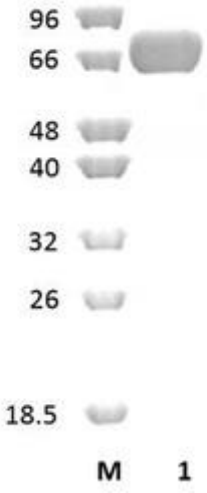

Figure 1. SDS-PAGE analysis of *Cs*Cbh48A (GH48) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 73,57 kDa. Lane M contains a Protein Marker for reference.

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

*Cs*Cbh48A (GH48) hydrolyses avicel and crystalline forms of cellulose.

Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 5.0-6.0 and at a temperature of 70-75°C. Maximal enzymatic activity is achieved at pH 5 and a consistent temperature of 75°C.

Enzyme activity

The substrate specificity and kinetic properties of *Cs*Cbh48A (GH48) 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

Bronnenmeier *et al.* (1991) Eur J Biochem. 200(2):379-385.

Bronnenmeier *et al.* (1997) Microbiology. 143 (Pt 3):891-8.

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).