

## $\beta$ -Glucosidase 1A, *Thermotoga maritima*

### *TmBgl1A* (GH1)

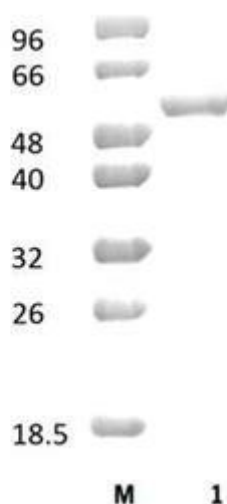
Catalogue number	Presentation
CZ02111	0.25 mg
CZ02112	3 x 0.25 mg

#### Description

$\beta$ -Glucosidase 1A (*TmBgl1A*), assigned the E.C. number 3.2.1.21, is a derivative of *Thermotoga maritima*. It is a 1,4- $\beta$ -glucosidase. The recombinant *TmBgl1A*, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 1 (GH1) 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 0.25 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 *TmBgl1A* (GH1) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *TmBgl1A* (GH1) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 53,62 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

*TmBgl1A* (GH1) hydrolyses  $\beta$ -glucosides, particular cellobiose.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH of 6.5 and at a temperature range of 45-50°C. Maximal enzymatic activity is achieved at pH 6.5 and a consistent temperature of 45°C.

## Enzyme activity

The substrate specificity and kinetic properties of *TmBgl1A* (GH1) 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

Liebl *et al.* (1994) *Mol Gen Genet.* 242(1):111-5.

## 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  $\geq 90\%$ , 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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