

## $\beta$ -Mannosidase 5A, *Cellvibrio mixtus*

### *CmMns5A* (GH5)

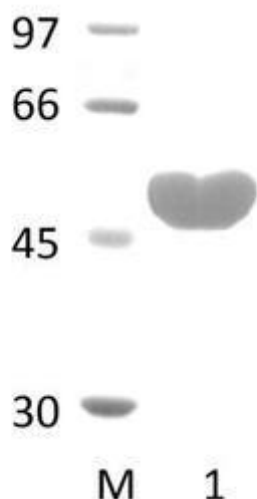
Catalogue number	Presentation
CZ00271	3 mg
CZ00272	3 x 3 mg

#### Description

$\beta$ -Mannosidase 5A (*CmMns5A*), assigned the E.C. number 3.2.1.25, is a derivative of *Cellvibrio mixtus*. It is an exo-1,4- $\beta$ -mannosidase that removes mannose residues from the non-reducing ends of oligosaccharides. The recombinant *CmMns5A*, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 5 (GH5) 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 3 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 *CmMns5A* (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 *CmMns5A* (GH5) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 50,17 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

*CmMns5A* (GH5) hydrolyses mannose from the non-reducing end of mannoooligosaccharides and polysaccharides.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 6.5-7.5 and at a temperature of 37°C. Maximal enzymatic activity is achieved at pH 7 and a consistent temperature of 37°C.

### Specific activity

*CmMns5A* (GH5) specific activity is 40 U/mg, using p-nitrophenyl- $\beta$ -mannopyranoside as substrate.

### Enzyme activity

Substrate specificity and kinetic properties of *CmMns5A* (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

Dias *et al.* (2004) J. Biol. Chem. 279, 25517-25526.

Vincent *et al.* (2004) ChemBioChem 5, 1596-1599.

### 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.