

## $\beta$ -Agarase 16A, *Microbulbifer thermotolerans*

### MtAga16A (GH16-CBM6)

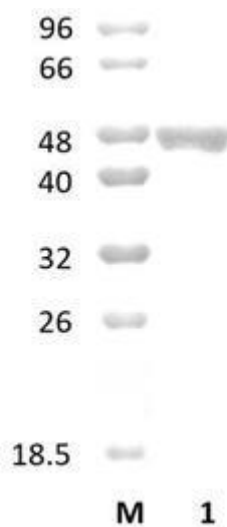
Catalogue number	Presentation
CZ07361	0.5 mg
CZ07362	3 x 0.5 mg

#### Description

$\beta$ -Agarase 16A (*MtAga16A*), assigned the E.C. number 3.2.1.81, is a derivative of *Microbulbifer thermotolerans*. It is an enzyme that participates in the hydrolysis of 1,4- $\beta$ -galactosidic linkages in agarose. The recombinant *MtAga16A*, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 16 (GH16-CBM6) 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 0.5 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 *MtAga16A* (GH16-CBM6) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *MtAga16A* (GH16-CBM6) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 48,14 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

*MtAga16A* (GH16-CBM6) hydrolyses agarose and agarose oligosaccharides more polymerized than hexamers.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 7.0-7.5 and at a temperature of 45-50°C. Maximal enzymatic activity is achieved at pH 7.5 and a consistent temperature of 50°C.

## Enzyme activity

The substrate specificity and kinetic properties of *MtAga16A* (GH16-CBM6) 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

Ohta *et al.* (2004) *Biosci Biotechnol Biochem.* 68(5):1073-81.

Ohta *et al.* (2004) *Appl Microbiol Biotechnol.* 66(3):266-75.

Hatada *et al.* (2011) *Mar Biotechnol.* 13(3):411-22.

Takagi *et al.* (2015) *Biosci Biotechnol Biochem.* 79(4):625-32.

## 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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