

## $\alpha$ -N-Acetylgalactosaminidase 109A, *Elizabethkingia meningoseptica*

### *EmNga109A* (GH109)

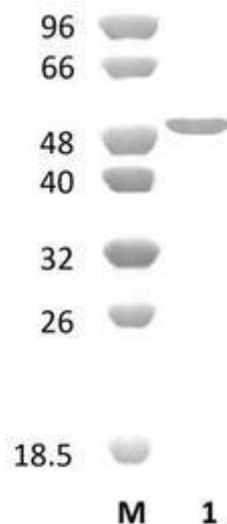
Catalogue number	Presentation
CZ08211	0.25 mg
CZ08212	3 x 0.25 mg

#### Description

$\alpha$ -N-Acetylgalactosaminidase 109A (*EmNga109A*), assigned the E.C. number 3.2.1.49, is a derivative of *Elizabethkingia meningoseptica*. It is an enzyme that participates in the cleavage of non-reducing 1,3- $\alpha$ -N-acetylgalactosamine residues from human blood group A and AB mucin glycoproteins. The recombinant *EmNga109A*, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 109 (GH109) 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 *EmNga109A* (GH109) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *EmNga109A* (GH109) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 52,30 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

*EmNga109A* (GH109) hydrolyses blood group A and AB mucin glycoproteins and 4-nitrophenyl-2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl (GalNAc $\alpha$ -pNP), 4-nitrophenyl- $\alpha$ -D-galactoside (Gal $\alpha$ -pNP), 4-nitrophenyl- $\beta$ -D-galactoside (Gal $\beta$ -pNP) and 4-nitrophenyl- $\beta$ -N-acetylgalactosamine (GalNAc $\beta$ -pNP).

## Temperature and pH optima

The pH optimum for enzymatic activity is 6.8 while temperature optimum is 26 °C.

## Enzyme activity

The substrate specificity and kinetic properties of *EmNga109A* (GH109) 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

Liu *et al.* (2007) *Nat Biotechnol.* 25(4):454-64.

## 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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