

## $\alpha$ -Mannosidase 125A, *Streptococcus pneumoniae* SpMns125A (GH125)

### Catalogue number:

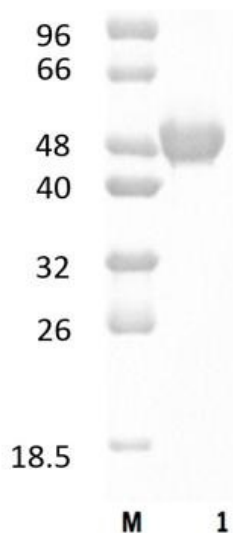
CZ02391, 1 mg  
CZ02392, 3 × 1 mg

### Description

SpMns125A (GH125), TM0433, E.C. number 3.2.1.-, is an exo-1,6- $\alpha$ -mannosidase from *Streptococcus pneumoniae*. Recombinant SpMns125A (GH125), purified from *Escherichia coli*, is a single domain family 125 Glycoside Hydrolase (GH125) ([www.cazy.org](http://www.cazy.org)). The enzyme is provided in 35 mM NaHepes buffer, pH 7.5, 750 mM NaCl, 200 mM imidazol, 3.5 mM CaCl<sub>2</sub> and 25% (v/v) glycerol, at a 1 mg/mL concentration. Bulk quantities of this product are available on request.

### Electrophoretic Purity

SpMns125A (GH125) purity was determined by sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of SpMns125A (GH125) (Lane 1). Electrophoresis was performed using a 14% polyacrylamide gel. The Mw of the enzyme is 51,15 kDa. Lane M contains NZYTech Low Molecular Weight (LMW) Protein Marker (MB082).

### Storage temperature

This enzyme should be stored at -20 °C.

### Substrate specificity

SpMns125A (GH125) hydrolyses 2,4-dinitrophenyl- $\beta$ -D-mannopyranoside.

### Temperature and pH optima

The pH optimum for enzymatic activity is 7.4 while temperature optimum is 37 °C.

### Enzyme activity

Substrate specificity and kinetic properties of SpMns125A (GH125) are described in the reference provided below. Follow the instructions described in the paper for the implementation of enzyme assays and to obtain values of specific activity. To measure catalytic activity of GHs, quantify reducing sugars released from polysaccharides through the method described by Miller (1959; Anal. Chem. 31, 426-428).

### Reference

Gregg *et al.* J Biol Chem. 2011 Apr 29;286(17):15586-96.

### Quality control assay

Protein purity is  $\geq 90\%$  as judged by SDS-PAGE followed by BlueSafe staining (MB15201).

### Certificate of Analysis

Test	Criteria	Result
Protein purity	Purity in line with the stated value	Meets specification

Approved by:



Patrícia Ponte  
Senior Manager, Quality Systems

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