

α -Mannosidase 38A, *Streptococcus pyogenes* SpMns38A (GH38)

Catalogue number:

CZ04401, 1 mg
CZ04402, 3 × 1 mg

Description

SpMns38A (GH38), SPy1604, E.C. number 3.2.1.-, is a mannosyl-oligosaccharide 1,3- α -mannosidase from *Streptococcus pyogenes*. Recombinant SpMns38A (GH38), purified from *Escherichia coli*, is a single domain family 38 Glycoside Hydrolase (GH38) (www.cazy.org). The enzyme is provided in 35 mM NaHepes buffer, pH 7.5, 750 mM NaCl, 200 mM imidazol, 3.5 mM CaCl₂ and 25% (v/v) glycerol, at a 1 mg/mL concentration. Bulk quantities of this product are available on request.

Electrophoretic Purity

SpMns38A (GH38) purity was determined by sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) followed by BlueSafe staining (MB15201) (Figure 1).

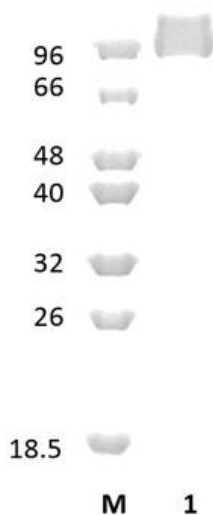


Figure 1. SDS-PAGE analysis of SpMns38A (GH38) (Lane 1). Electrophoresis was performed using a 14% polyacrylamide gel. The Mw of the enzyme is 104.8 kDa. Lane M contains NZYTech Low Molecular Weight (LMW) Protein Marker (MB082).

Storage temperature

This enzyme should be stored at -20 °C.

Substrate specificity

SpMns38A (GH38) hydrolyses disaccharides, aryl glycosides and mammalian high mannose N-glycans.

Temperature and pH optima

The pH optimum for enzymatic activity is 7 while temperature optimum is 37 °C.

Enzyme activity

Substrate specificity and kinetic properties of SpMns38A (GH38) 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

Suits *et al.* PLoS One. 2010 Feb 3.5(2):e9006.

Quality control assay

Protein purity is $\geq 50\%$ 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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