

## Anhydrosialidase 33B, *Streptococcus pneumoniae*

### SpNan33B (CBM40-GH33a-GH33b)

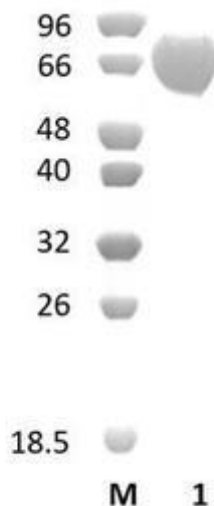
Catalogue number	Presentation
CZ02373	1 mg
CZ02374	3 x 1 mg

#### Description

Anhydrosialidase 33B (*SpNan33B*), assigned the E.C. number 4.2.2.15, is a derivative of *Streptococcus pneumoniae*. It is an enzyme that participates in the elimination of alpha-sialyl groups in N-acetylneuraminic acid glycosides, releasing 2,7-anhydro-alpha-N-acetylneuraminate. The recombinant *SpNan33B*, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 33 (CBM40-GH33a-GH33b) 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 1 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 *SpNan33B* (CBM40-GH33a-GH33b) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *SpNan33B* (CBM40-GH33a-GH33b) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 76,74 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

*SpNan33B* (CBM40-GH33a-GH33b) hydrolyses sialic acids from complex carbohydrates and glycoprotein human alpha-1 (AGP).

#### Temperature and pH optima

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

## Enzyme activity

The substrate specificity and kinetic properties of SpNan33B (CBM40-GH33a-GH33b) 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

Berry *et al.* (1996) J Bacteriol. 178(16):4854-60.

Gut *et al.* (2008) FEBS Lett. 582(23-24):3348-52.

## 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.