

## Sialidase 33A, *Verrucomicrobia bacterium*

### VbNan33A (GH33)

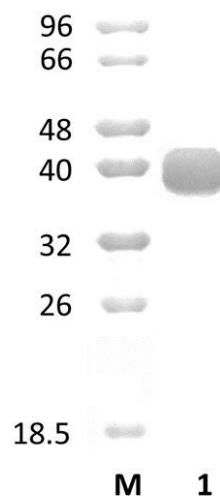
Catalogue number	Presentation
CZ10941	1 mg
CZ10942	3 x 1 mg

#### Description

Sialidase 33A (VbNan33A), assigned the E.C. number 3.2.1.18, is a derivative of *Verrucomicrobia bacterium*. It is an exo- $\alpha$ -sialidase. The recombinant VbNan33A, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 33 (GH33) 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 VbNan33A (GH33) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of VbNan33A (GH33) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 40,24 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

VbNan33A (GH33) hydrolyses 4-methylumbelliferyl- $\alpha$ -d-N-acetylneuraminic acid (4MU-Neu5Ac).

#### Temperature and pH optima

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

### Specific activity

The specific activity of *VbNan33A* (GH33) was determined against 4-methylumbelliferyl- $\alpha$ -D-N-acetylneuraminic acid (4MU-Neu5Ac), under standard conditions (37 °C in 0.1 M of citrate-phosphate buffer, pH 7.0), by monitoring 4MU fluorescence at  $\lambda_{ex}$  = 365 nm and  $\lambda_{em}$  = 445 nm. One unit of enzyme activity (1 U) is defined as the amount of enzyme required to release 1  $\mu$ mol of product, per min, under standard conditions. The specific activity of *VbNan33A* (GH33) is denoted as 34 U/mg for 4MU-Neu5Ac.

### 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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