

## $\beta$ -Acetylglucosaminidase 18A, *Bacteroides thetaiotaomicron*

### *BtAcp18A* (GH18)

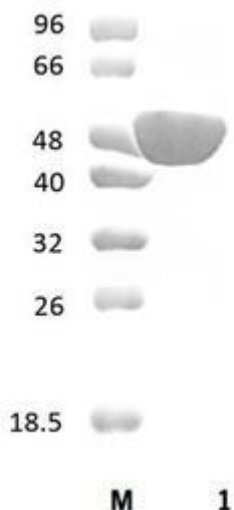
Catalogue number	Presentation
CZ01061	1 mg
CZ01062	3 x 1 mg

#### Description

$\beta$ -Acetylglucosaminidase 18A (*BtAcp18A*), assigned the E.C. number 3.2.1.96, is a derivative of *Bacteroides thetaiotaomicron*. It is an enzyme that participates in the endohydrolysis of the diacetylchitobiosyl unit in high-mannose glycopeptides and glycoproteins containing the (Man(GlcNAc)(2))Asn-structure: one N-acetyl-D-glucosamine residue remains attached to the protein, the rest of the oligosaccharide is released intact. The recombinant *BtAcp18A*, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 18 (GH18) 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 *BtAcp18A* (GH18) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *BtAcp18A* (GH18) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 50,34 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

*BtAcp18A* (GH18) hydrolyses mammalian high mannose N-glycans (HMNG), such as Man9GlcNAc2.

## Temperature and pH optima

The pH optimum for enzymatic activity is 7.5 while temperature optimum is 37 °C.

## Enzyme activity

The substrate specificity and kinetic properties of *BtAcp18A* (GH18) 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

Cuskin *et al.* (2015) *Nature* 517, 165-169.

Mahowald *et al.* (2009) *Proc Natl Acad Sci U S A.* 106(14):5859-5864.

Trastoy *et al.* (2020) *Nat Commun.* 11(1):899.

## 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  $\geq 75\%$ , 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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