

## Diacetylchitobiose deacetylase 14A, *Bacillus cereus*

### BcChe14A (CE14)

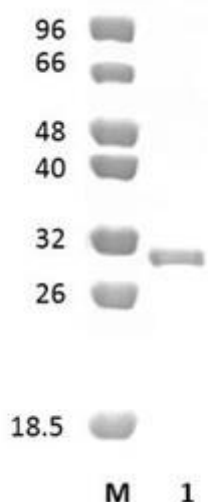
Catalogue number	Presentation
CZ04391	1 mg
CZ04392	3 x 1 mg

#### Description

Diacetylchitobiose deacetylase 14A (*BcChe14A*), assigned the E.C. number 3.5.1.-, is a derivative of *Bacillus cereus*. It is an enzyme that exhibits deacetylase activity with the N-acetyl moiety of the N-acetylglucosamine and the diacetylchitobiose and triacetylchitotriose. The recombinant *BcChe14A*, purified from *Escherichia coli*, is a single-domain Carbohydrate Esterase family 14 (CE14) 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 *BcChe14A* (CE14) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of *BcChe14A* (CE14) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 28,31 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

*BcChe14A* (CE14) participates in the de-esterification of N-acetylglucosamine (GlcNAc), N-acetylchitooligosaccharides diacetylchitobiose (GlcNAc<sub>2</sub>) and triacetylchitobiose (GlcNAc<sub>3</sub>).

#### Temperature and pH optima

The pH optimum for enzymatic activity is 8 while temperature optimum is 37 °C.

## Enzyme activity

The substrate specificity and kinetic properties of BcChe14A (CE14) 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

Fadoulglou *et al.* (2006) Acta Crystallogr Sect F Struct Biol Cryst Commun. 62(Pt 3):261-4.

Fadoulglou *et al.* (2007) FEBS J. 274(12):3044-54.

Fang *et al.* (2013) Biochem J. 454(2):239-47.

## 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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**NZYtech Lda.** Estrada do Paço do Lumiar, Campus do Lumiar - Edifício E, R/C, 1649-038 Lisboa, Portugal Tel.: +351.213643514 Fax:  
+351.217151168 [www.nzytech.com](http://www.nzytech.com)