

Pectin acetyl esterase 12A, *Clostridium thermocellum*

CtPae12A (CE12)

Catalogue number	Presentation
CZ00361	2 mg
CZ00362	3 x 2 mg

Description

Pectin acetyl esterase 12A (CtPae12A), assigned the E.C. number 3.1.1.-, is a derivative of *Clostridium thermocellum*. It is an enzyme that participates in the deacetylation of pectins. The recombinant CtPae12A, purified from *Escherichia coli*, is a single-domain Carbohydrate Esterase family 12 (CE12) enzyme (see more details at 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 CaCl₂, and 25% (v/v) glycerol, at a concentration of 2 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 CtPae12A (CE12) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



Figure 1. SDS-PAGE analysis of CtPae12A (CE12) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 23,76 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

CtPae12A (CE12) participates in the de-esterification of 4-nitrophenyl acetate.

Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 6.0-8.5 and at a temperature of 65°C. Maximal enzymatic activity is achieved at pH 7 and a consistent temperature of 65°C.

Specific activity

CtPae12A (CE12) specific activity is 100 U/mg, using p-nitrophenyl acetate as substrate.

Enzyme activity

Substrate specificity and kinetic properties of CtPae12A (CE12) 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

Hirano *et al.* (2016) Sci Rep. 2016; 6: 35709.

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.

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.