CZ0961_UG_EN_V2302

Isoamylase 13A, *Escherichia coli*

*Ec*Iso13A (CBM48-GH13)

Catalogue number	Presentation
CZ09611	0.25 mg
CZ09612	3 x 0.25 mg

Description

Isoamylase 13A (*Ec*Iso13A), assigned the E.C. number 3.2.1.68, is a derivative of *Escherichia coli*. It is an enzyme that participates in the hydrolysis of 1,6-α-D-glucosidic branch linkages in glycogen, amylopectin and their beta-limit dextrins. The recombinant *Ec*Iso13A, purified from *Escherichia coli*, is a modular Glycoside Hydrolase family 13 (CBM48-GH13) 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 $CaCl_2$, and 25% (v/v) glycerol, at a concentration of 0.25 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 *Ec*Iso13A (CBM48-GH13) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).

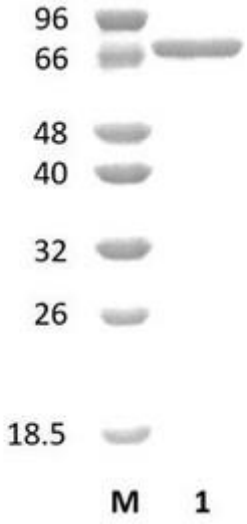

Figure 1. SDS-PAGE analysis of *Ec*Iso13A (CBM48-GH13) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 75,67 kDa. Lane M contains a Protein Marker for reference.

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

*Ec*Iso13A (CBM48-GH13) hydrolyses α-1,6-glycosidic linkages of phosphorylase-limit dextrins.

Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 5.6-6.4 and at a temperature of 45-50°C. Maximal enzymatic activity is achieved at pH 5.6 and a consistent temperature of 45°C.

Enzyme activity

The substrate specificity and kinetic properties of *Ec*Iso13A (CBM48-GH13) 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

Jeanningros *et al.* (1976) Biochim Biophys Acta. 438(1):186-99.

Song *et al.* (2010) Proteins. 78(8):1847-55.

Dauvillée *et al.* (2005) Journal of Bacteriology 187:1465–1473..

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 ≥90%, as assessed by SDS-PAGE and subsequent BlueSafe staining (MB15201).

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