CZ0059_UG_EN_V2302

Carbohydrate Binding Module 9A, *Thermotoga maritima* (GFP-CBM9_1-CBM9_2)

Catalogue number	Presentation
CZ00591	1 mg
CZ00592	3 x 1 mg

Description

Carbohydrate Binding Module 9A (GFP-CBM9_1-CBM9_2) is a Carbohydrate Binding Protein originating from *Thermotoga maritima*. The recombinant GFP-CBM9_1-CBM9_2, purified from *Escherichia coli*, is a modular protein belonging to the Carbohydrate Binding Module family 9 (CBM9, see more details at www.cazy.org) with two CBM9 module repeats fused to an N-terminal Green Fluorescent Protein (GFP). This GFP protein derivative is particularly recommended for subcellular localization studies, which allows for real-time tracking and imaging in living cells. 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 3.2 M ammonium sulphate, 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 GFP-CBM9_1-CBM9_2 were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).

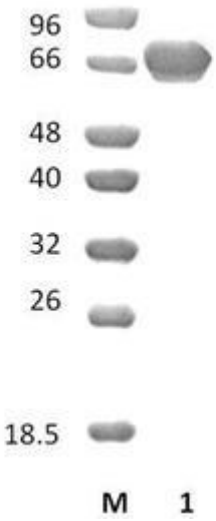

Figure 1. SDS-PAGE analysis of GFP-CBM9_1-CBM9_2 was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 70,22 kDa. Lane M contains a Protein Marker for reference.

Storage temperature

The protein should be stored at 2°C to 8°C in a constant temperature freezer. The protein will remain stable till the expiry date if stored as specified.

Ligand specificity

GFP-CBM9_1-CBM9_2 binds to the reducing ends of 1,3-1,4-β-glucans, 1,4-β-glucans, including xyloglucan, and 1,4-β-xylans CBM9-2 binds specifically to the reducing ends of 1,3-1,4-β-glucans, 1,4-β-glucans, including xyloglucan, and 1,4-β-xylans. The biochemical properties of GFP-CBM9_1-CBM9_2 are detailed in the referenced publication(s) provided below.

Assay conditions

For optimal recovery of GFP-CBM9_1-CBM9_2 activity, carry out the following procedure: centrifuge the necessary volume of the precipitated protein suspension at 13,000 x g for a duration of 5 minutes. Subsequently, decant the ammonium sulphate supernatant and resuspend the resultant pellet in an equivalent volume of solution, comprising 20 mM Tris-HCl (pH 7.5), 20 mM NaCl, and 5 mM CaCl2. Following resuspension, proceed to the appropriate assay as dictated by your experimental requirements.

Reference

Winterhalter *et al.* (1995) Mol Microbiol. 15(3):431-44.

Boraston *et al*. (2001) Biochemistry 40(21):6240-6247.

Notenboom *et al.* (2001) Biochemistry. 40(21):6248-56.

PDB/3d code: 1I82[A], 1I8A[A], 1I8U[A].

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).