

## Carbohydrate Binding Module 22A, *Clostridium thermocellum* (GFP-CBM22)

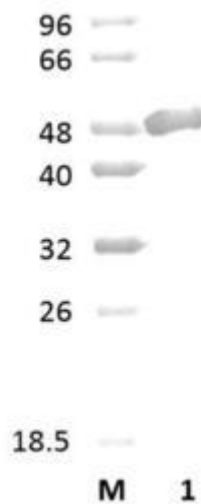
Catalogue number	Presentation
CZ03351	1 mg
CZ03352	3 x 1 mg

### Description

Carbohydrate Binding Module 22A (GFP-CBM22) is a Carbohydrate Binding Protein originating from *Clostridium thermocellum*. The recombinant GFP-CBM22, purified from *Escherichia coli*, is a modular protein belonging to the Carbohydrate Binding Module family 22 (CBM22, see more details at [www.cazy.org](http://www.cazy.org)) 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<sub>2</sub> 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-CBM22 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-CBM22 was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 47,56 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-CBM22 binds to decorated and undecorated 1,4- $\beta$ -xylans. CBM22 also binds to 1,3-1,4- $\beta$ -glucans. The biochemical properties of GFP-CBM22 are detailed in the referenced publication(s) provided below.

## Assay conditions

For optimal recovery of GFP-CBM22 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 CaCl<sub>2</sub>. Following resuspension, proceed to the appropriate assay as dictated by your experimental requirements.

## Reference

Charnock *et al.* (2000) *Biochemistry* 39, 5013-5021.

Xie *et al.* (2001) *Biochemistry* 40, 9167-9176.

## 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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