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Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0041
LOT:	2008-0041
Activity:	Carbohydrate binding module (see comments for activity)
Synonyms:	CBM; CBD; carbohydrate binding domain
Nomenclature:	CtCBM30 is a family 30 carbohydrate binding module
Source organism:	*Clostridium thermocellum YS*
Enzyme Commission No.:	**-**
Activity:	See comments below
Specific activity:	
Purity:	>95% as judged by SDS-PAGE
Form and storage:	Supplied in 3.2 M ammonium sulphate, store at 4°C (shipped at room temperature)
pH optimum:	-
Temperature optimum:	**-**
[Protein]:	4 mg/mL
Sequence length:	179 amino acids (view sequence)
Accession No.	BAA12070
Molecular weight:	21264.9 Da (theoretical)
	- (observed by SDS-PAGE)
	- (observed by mass spectrometry)
Biological function:	Anchoring of modular enzyme to target polysaccharide
Major application(s):	Research
Comments:	CtCBM30 binds to xyloglucan (K_a 7.2 × 10^4 M^{-1}), hydroxyethylcellulose (K_a 4.5 × 10^4 M^{-1}), β-glucan (K_a 2.8 × 10^4 M^{-1}) and lichenan (K_a 3.6 × 10^4 M^{-1}). PDB: 1wmx
Usage:	Agitate bottle sufficiently to fully homogenise enzyme precipitate before use
Assay:	To recover maximal CtCBM30 activity, centrifuge a required volume of the precipitated protein suspension provided (13000 ×g for 2 min),

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remove the supernatant and re-suspend the resulting pellet in the same volume of 20 mM Tris-HCl, pH 7.5, 20 mM NaCl, 5 mM $CaCl_2$. Proceed with the assay as required

Primary sequence:

MIFKDSPVVGWSGSGMGELETIGDTLPVDTTVTYNGLPTLRLNVQTTVQSGWWISLLTLRGWNTHDLSQYVENGY
LEFDIKGKEGGEDFVIGFRDKVYERVYGLEIDVTTVISNYVTVTTDWQHVKIPLRDLMKINNGFDPSSVTCLVFS
KRYADPFTVWFSDIKITSEDNEKSAPAIK

Literature:

1. Najmudin *et al.* (2006) *J. Biol. Chem.* **281**, 8815-8828