

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0039	
LOT:	2008-0039	
Activity:	CtCBM22A	
Synonyms:	Carbohydrate binding module; carbohydrate binding domain	
Nomenclature:	CtCBM22A is a family 22 β -1,4-glucan-binding module	
Source organism:	<i>Clostridium thermocellum</i>	
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]:	0.4 mg/mL	
Sequence length:	164 amino acids (view sequence)	
Accession No.	CAA58242	
Molecular weight:	19204.2 Da	(theoretical)
	-	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	Binds to β -1,4-glucans	
Potential application(s):	Carbohydrate research	
Comments:	CtCBM22A binds to both decorated (wheat arabinoxylan K_a 8×10^4 M^{-1} and rye arabinoxylan K_a 1.1×10^5 M^{-1}) and less decorated (oat spelt xylan K_a 7.6×10^4 M^{-1}) xylans. CtCBM22A also binds to barley β -glucan (K_a 7.8×10^2 M^{-1})	
Usage:	Agitate bottle sufficiently to fully homogenise enzyme precipitate before use	
Assay:	To recover maximal CtCBM22A activity, centrifuge a required volume of the precipitated protein suspension provided (13000 $\times g$ for 2 min),	

remove the supernatant and resuspend the resulting pellet in the same volume of 20 mM Tris-HCl, pH 7.5, 20 mM NaCl, 5 mM CaCl₂. Proceed with the assay as required

Primary sequence:

MKPEEPDANGYYYHDTFEGSVGQWTARGPAEVLLSGRTAYKGSSESLLVNRNRTAAWNGAQRALNPRTFV
PGNTYCF SVVASFIEGASSTTFCKMLQYVDGSGTQRYDTIDMKT VGP NQWVHLYNPQYRIPSDATDMY
VYVETADDTINFYIDEAIGAVAGTVIEG

Literature:

1. Charnock *et al.*, (2000) *Biochemistry* **39**, 5013-5021
2. Xie *et al.*, (2001) *Biochemistry* **40**, 9167-9176