

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0033	
LOT:	2008-0033	
Activity:	Xylan Acetyl Esterase	
Synonyms:	acetylxylan esterase	
Nomenclature:	2A, CE2 belongs to Carbohydrate Esterase family 2	
Source organism:	<i>Clostridium thermocellum</i>	
Enzyme Commission No.:	3.1.1.72	
Activity:	262.5 U/mL	} (50°C; pH 7; <i>p</i> -nitrophenyl acetate)
Specific activity:	175 U/mg	
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:	7 (stable from 6.5 – 8)	
Temperature optimum:	50°C (stable up to 65°C)	
[Protein]:	1.5 mg/mL	
Sequence length:	331 amino acids (view sequence)	
Accession No.	AAA23224	
Molecular weight:	37503 Da	(theoretical)
	~ 37700 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	Hydrolyses 4-nitrophenyl acetate and releases acetate from acetylated xylan, glucomannan and galactoglucomannan	
Potential application(s):	Biomass conversion , carbohydrate research	
Comments:	-	
Usage:	Agitate bottle sufficiently to fully homogenise enzyme precipitate before use	
Assay:	One unit is defined as the amount of enzyme required to release 1 µmol of <i>p</i> -nitrophenol per minute from <i>p</i> -nitrophenyl acetate (1 mM in	

the assay) in 50 mM phosphate buffer, pH 7, at 50°C, containing 1 mg/ml of BSA.

Primary sequence:

MPDEDNPGILYNGRFDSDPNGPKCAWSGSNVELNFYGTASVTIKSGGENWFQAIVDGNPLPPFSVN
ATTSTVKLVSGLAEGAHHLVLWKRTEASLGEVQFLGFDFGSGKLLAAPKPLERKIEFIGDSITCAYGN
EGTSKEQSFTPKNENSYSYAAITARNLNASANMIAWSGIGLTMNYGGAPGLIMDRYPYTLPSYSGVR
WDFSKYVPQVVVINLGTNDFSTSFADKTKFVTAYKNLISEVRRNYPDAHIFCCVGPMLWGTGLDL CRS
YVTEVVNDCNRSGLKVVYFVEFPQQDGSTGYGEDWHPSIATHQLMAERLTAEIKNKLGW

Literature:

1. [Hall et al. \(1988\) Gene 69, 29-38](#)