

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0036	
LOT:	2008-0036	
Activity:	Xylan Acetyl Esterase	
Synonyms:	Acetylxylan esterase	
Nomenclature:	4A belongs to CE family 4	
Source organism:	<i>Clostridium thermocellum</i>	
Enzyme Commission No.:	3.1.1.72	
Activity:	40 U/mL	} (50°C; pH 6.5; acetylated birchwood xylan)
Specific activity:	10 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:	6.5 (stable from 5 – 7.5)	
Temperature optimum:	50°C (stable up to 60°C)	
[Protein]:	4 mg/mL	
Sequence length:	208 amino acids (view sequence)	
Accession No.	ABN54169	
Molecular weight:	23860.1 Da	(theoretical)
	~ 24000 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	Deacetylation of xylans and xylo-oligosaccharides. Catalyses the hydrolysis of acetyl groups from polymeric xylan, acetylated xylose, acetylated glucose, α -naphthyl acetate, <i>p</i> -nitrophenyl acetate, but not from triacetyllycerol. Does not act on acetylated mannan or pectin	
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 μ mol of acetate per minute from birchwood xylan in 50 mM	

phosphate buffer, pH 6.5, at 50°C, containing 2 mM CaCl₂ and
1mg/ml of BSA

Primary sequence:

MPNAKLVALTFDDGPDNVLRTARVLDKLDKYNVKATFMVVGQRVNDSTAAIIRRMVNSGHEIGNHSWSY
SGMANMSPDQIRKSIADTNAVIQKYAGTTPKFFRAPNLETSPTLFNNVDLVFVGGLTANDWI PSTTAE
QRAGAVINGVRDGTIILLHDVQPEPHPTPEALDIIIP TLKSRGYEFVTLTELFTLKGVPIDPSVKRMY
NSVP

Literature:

1. Taylor *et al.* (2006) *J. Biol. Chem.* **281**, 10968-10975