

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0034
LOT:	2008-0034
Activity:	Xylan Acetyl Esterase
Synonyms:	Acetylxylan esterase
Nomenclature:	CE3A belongs to Carbohydrate Esterase family 3
Source organism:	<i>Clostridium thermocellum</i> ATCC 27405
Enzyme Commission No.:	3.1.1.72
Activity:	112.5 U/mL
Specific activity:	45 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 – 8)
Temperature optimum:	50°C (stable up to 60°C)
[Protein]:	2.5 mg/mL
Sequence length:	205 amino acids (view sequence)
Accession No.	ABN52033
Molecular weight:	23859 Da (theoretical)
	~ 24000 Da (observed by SDS-PAGE)
	- (observed by mass spectrometry)
Biological function:	Deacetylation of xylans and xylo-oligosaccharides
Potential application(s):	Biomass conversion , carbohydrate research
Comments:	Catalyses the hydrolysis of acetyl groups from polymeric xylan, acetylated xylose, acetylated glucose, α -naphthyl acetate, <i>p</i> -nitrophenyl acetate but not from triacetyl glycerol. Does not act on acetylated mannan or pectin
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 <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:

MKTIKIMPVGDSCTEGMGGGEMGSYRTELYRLLTQAGLSIDFVGSQRSGPSSLPDKDHEGHSJWTIPQ
IASNINNWLNTHNPDVVFLWIGNDLLLNGNLNATGLSNLIDQIFTVKPNVTLFVADYYPWPEAIKQY
NAVIPGIVQQKANAGKKVYFVKLSEIQFDRNTDISWDGLHLSEIGYKKIANIWKYTTIDILRALAGET
Q

Literature:

1. Unpublished data