

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0031	
LOT:	2008-0031	
Activity:	Pectin Acetyl Esterase	
Synonyms:	-	
Nomenclature:	12A belongs to Carbohydrate Esterase family 12	
Source organism:	<i>Clostridium thermocellum</i>	
Enzyme Commission No.:	3.1.1.-	
Activity:	200 U/mL	} (50°C; pH 6.5; <i>p</i> -nitrophenyl acetate)
Specific activity:	100 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 6 – 7.5)	
Temperature optimum:	50°C (stable up to 60°C)	
[Protein]:	2 mg/mL	
Sequence length:	204 amino acids (view sequence)	
Accession No.	ABN54336	
Molecular weight:	23609.5 Da	(theoretical)
	~ 23800 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	Hydrolyses 4-nitrophenyl acetate and releases acetate from acetylated pectins	
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 6.5, at 50°C, containing 1 mg/ml of BSA	

Primary sequence:

MRTIYIGGDSTVCNYYPLDTSAQAGWGQMLHKFVDTNVFQIRNMASSGQFARGFRDDGQFEAIMKYLK
PGDIFILQFGINDTNSKNSTTEAQFKEIMTDMVVKAKATGATVVLSTPQGRATDFNSSNVHDSQGRWY
RRATIEVAREQGVRLVDLNLVSSAYFTSIGPEATLALYMPGDTLHPNREGATQLARIVAEELADLLKA

Literature:

1. Unpublished data