

## Recombinant Enzyme Product Specification Sheet

<b>Cat. No.:</b>	PRO-E0032
<b>LOT:</b>	2008-0032
<b>Activity:</b>	Pectin Acetyl Esterase
<b>Synonyms:</b>	-
<b>Nomenclature:</b>	12B belongs to Carbohydrate Esterase family 12
<b>Source organism:</b>	<i>Clostridium thermocellum</i>
<b>Enzyme Commission No.:</b>	3.1.1.-
<b>Activity:</b>	150 U/mL
<b>Specific activity:</b>	100 U/mg
	} (50°C; pH 6.5; <i>p</i> -nitrophenyl acetate)
<b>Purity:</b>	>95% as judged by SDS-PAGE
<b>Form and storage:</b>	Supplied in 3.2 M ammonium sulphate, store at 4°C (shipped at room temperature)
<b>pH optimum:</b>	6.5 (stable from 6 – 7.5)
<b>Temperature optimum:</b>	50°C (stable up to 60°C)
<b>[Protein]:</b>	1.5 mg/mL
<b>Sequence length:</b>	219 amino acids ( <a href="#">view sequence</a> )
<b>Accession No.</b>	<a href="#">ABN54336</a>
<b>Molecular weight:</b>	25900.1 Da (theoretical)
	~ 26100 Da (observed by SDS-PAGE)
	- (observed by mass spectrometry)
<b>Biological function:</b>	Hydrolyses 4-nitrophenyl acetate and releases acetate from acetylated pectins
<b>Potential application(s):</b>	<a href="#">Biomass conversion</a> , <a href="#">carbohydrate research</a>
<b>Comments:</b>	-
<b>Usage:</b>	Agitate bottle sufficiently to fully homogenise enzyme precipitate before use
<b>Assay:</b>	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:**

MEEKITIIYIAGDSTVQTYNASYAPQAGWGQFLGQYFTSNVVIENRAIAGRSSRSFVEEGR LDSILSVI  
KPGDYLFIQFGHNDADISKPERYSAPYTTYKEYLRKYVDGARQKGAIPVLITPVARLNYKNNAFVND F  
PDYCTAMKQVAEEKNVKLIDLMTKSLNYNSIGYNETYKLFMVSVNNTDYTHFTEKGAQQIARLVAQG  
VKEANLDIAKYLKTN

**Literature:**

1. Unpublished data