

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0053
LOT:	2008-0053
Activity:	Acetyl xylan esterase
Synonyms:	Acetylxylan esterase; xylan acetyl esterase
Nomenclature:	CAZy [CE2, carbohydrate esterase family 2] , ce2A, axe2C, CJA_0450, pJF120, 02530
Source organism:	<i>Cellvibrio japonicus</i> NCIMB 10462
Enzyme Commission No.:	3.1.1.72
Activity:	69.48 U/mL
Specific activity:	150.1 U/mg
	} (25°C; pH 8.5; 0.27 mM pNP-acetate)
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:	8.5
Temperature optimum:	-
[Protein]:	0.463 mg/mL
Sequence length:	325 amino acids (view sequence)
Accession No.:	B3PIB0 , ACE84991.1 , YP_001980973.1
Molecular weight:	37304.6 Da (theoretical)
	~ 38000 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):	Biocatalysis , biomass conversion , carbohydrate research
Comments:	PDB: 2WAA
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 micromole of pNP from pNP-acetate (0.27 mM) per minute at pH 8.5

and 25°C, in 0.1 M HEPES buffer, pH 8.5, as measured at 400 nm,
and using an extinction coefficient of 18000 M⁻¹ cm⁻¹

Primary sequence:

MSDPHIQVMGRTHINDDASLTFGYPGVSLSTIVAGSRLTAEMQSSNGNSWIDVIIDNHPPTS IKLDAQQQTVELF
HFPNSGEHRVEIIHRSENWHGQVTLKQLTLTGTQFLPAPVLPQRKILVLGDSVTCGEAIDRVAGEDKNTRWWNAR
ESYGMLTAKALDAQVQLVCWGGRGLIRSWNGKTDDANLPDFYQFTLGDTGQAPQWDHHRYPDLIIISAIGTNDFS
PGIPDRATYINTYTRFVRTLLDNHPQATIVLTEGAILNGDKKAALVSYIGETRQQLHSNRVIFYASSSHHPGDNSD
AHPTKDQHAAMARELTPQLRQIMDW

Literature:

1. DeBoy *et al.* (2008) *J. Bacteriol.* **190**, 5455-5463