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Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0012
LOT:	2008-0012
Activity:	Xylanase
Synonyms:	Endo-(1→4)-β-xylan 4-xylanohydrolase; endo-1,4-xylanase; xylanase; β-1,4-xylanase; endo-1,4-xylanase; endo-β-1,4-xylanase; endo-1,4-β-D-xylanase; 1,4-β-xylan xylanohydrolase; β-xylanase; β-1,4-xylan xylanohydrolase; endo-1,4-β-xylanase; β-D-xylanase; 4-β-D-xylan xylanohydrolase; endo-(1→4)-beta-xylan 4-xylanohydrolase; beta-1,4-xylanase; endo-beta-1,4-xylanase; endo-1,4-beta-D-xylanase; 1,4-beta-xylan xylanohydrolase; beta-xylanase; beta-1,4-xylan xylanohydrolase; endo-1,4-beta-xylanase; beta-D-xylanase; 4-beta-D-xylan xylanohydrolase
Nomenclature:	CAZy [GH10, glycoside hydrolase family 10, member of clan GH-A], CtGH10, xylanase 10B, xyn10B, xynY
Source organism:	*Clostridium thermocellum* YS
Enzyme Commission No.:	3.2.1.8
Activity:	1500 U/mL (60°C; pH 6.5; soluble wheat flour arabinoxylan)
Specific activity:	1500 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:	65°C (stable up to 72°C)
[Protein]:	1 mg/mL
Sequence length:	353 amino acids (view sequence)
Accession No.:	CAA58242
Molecular weight:	40630.2 Da (theoretical)
	~ 40800 Da (observed by SDS-PAGE)
	- (observed by mass spectrometry)
Biological function:	Catalyses the endohydrolysis of (1→4)-β-D-xylosidic linkages in xylans
Potential application(s):	Biomass conversion, carbohydrate research

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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 xylose-reducing-sugar equivalents per minute from xylan in phosphate-citrate (PC) buffer (50 mM K_2HPO_4, 12 mM citric acid, pH 6.5) at 60°C, where reducing sugars are measured by the method of Miller (1959; *Anal. Chem.* **31**, 426-428)

Primary sequence:

MANYFRVGSVLNSGTVNNSSIKALILREFNSITCENEMKPDATLVQSGSTNTNIRVSLNRAASILNFCAQNNIAV
RGHTLVWHSQTPQWFFKDNFQDNGNWVSQSVMDQRLESYIKNMFAEIQRQYPSLNLYAYDVVNEAVSDDANRTRY
YGGAREPGYGNGRSPWVQIYGDNKFIEKAFTYARKYAPANCKLYYNDYNEYWDHKRDCIASICANLYNKGLLDGV
GMQSHINADMNGFSGIQNYKAALQKYINIGCDVQITELDISTENGKFSLQQQADKYKAVFQAAVDINRTSSKGKV
TAVCVWGPNDANTWLGSQNAPLLFNANNQPKPAYNAVASIIPQSEWGDGNNPA

Literature:
1. Fontes *et al*. (1995) *Biochem. J.* **307**, 151-158