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Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0002
LOT:	2011-0002-1 (11071)
Activity:	α-L-Arabinofuranosidase
Synonyms:	α-*N*-Arabinofuranosidase; arabinosidase; α-arabinosidase; α-L-arabinosidase; α-arabinofuranosidase;polysaccharide α-L-arabinofuranosidase; α-L-arabinofuranoside hydrolase; L-arabinosidase; α-L-arabinanase; α-L-arabinofuranoside arabinofuranohydrolase; alpha-*N*-arabinofuranosidase; alpha-arabinosidase; alpha-L-arabinosidase; alpha-arabinofuranosidase;polysaccharide alpha-L-arabinofuranosidase; alpha-L-arabinofuranoside hydrolase; alpha-L-arabinanase; alpha-L-arabinofuranoside arabinofuranohydrolase
Nomenclature:	CAZy [GH51, glycoside hydrolase family 51, member of clan GH-A], arabinofuranosidase 51A, *Ct*Ara*f*51A
Source organism:	*Clostridium thermocellum* ATCC 27405
Enzyme Commission No.:	3.2.1.55
Activity:	125 U/mL (60°C; pH 7.0; 1 mM *p*-nitrophenyl-α-L-arabinofuranoside)
Specific activity:	125 U/mg
Purity:	> 95 % as judged by SDS-PAGE
Form and storage:	Supplied as a stabilised glycerol solution, shipped at room temperature (store at -20°C on arrival)
pH optimum:	7.0 (stable from 6.0 - 8.0)
Temperature optimum:	65°C (stable up to 70°C)
[Protein]:	1.0 mg/mL
Sequence length:	503 amino acids (view sequence)
Accession No.:	ABN53749
Molecular weight:	58765.7 Da (theoretical) ~ 58900 Da (observed by SDS-PAGE) - (observed by mass spectrometry)
Biological function:	Catalyses the hydrolysis of terminal non-reducing α-L-arabinofuranoside residues in α-L-arabinosides

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Potential application(s): Biomass conversion, carbohydrate research

Comments: The enzyme acts on α-L-arabinofuranosides, α-L-arabinans containing (1,3)- and/or (1,5)-linkages, arabinoxylans and arabinogalactans

Usage: Agitate bottle prior to use

Assay: One unit is defined as the amount of enzyme required to release 1 µmol of *p*-nitrophenol per minute from *p*-nitrophenyl-α-L-arabinofuranoside (1 mM in the assay) in 50 mM phosphate buffer, pH 7.0, at 60°C, containing 1 mg/mL of BSA

Primary sequence:

MKKARMTVDKDYKIAEIDKRIYGSFVEHLGRAVYDGLYQPGNSKSDEDGFRKDVIELVKELNVPIIRYPGGNFVS
NYFWEDGVGPVEDRPRRLDLAWKSIEPNQVGINEFAKWCKKVNAEIMMAVNLGTRGISDACNLLEYCNHPGGSKY
SDMRIKHGVKEPHNIKVWCLGNEMDGPWQVGHKTMDEYGRIAEETARAMKMIDPSIELVACGSSSKDMPTFPQWE
ATVLDYAYDYVDYISLHQYYGNKENDTADFLAKSDDLDDFIRSVIATCDYIKAKKRSKKDIYLSFDEWNVWYHSN
NEDANIMQNEPWRIAPPLLEDIYTFEDALLVGLMLITLMKHADRIKIACLAQLINVIAPIVTERNGGAAWRQTIF
YPFMHASKYGRGIVLQPVINSPLHDTSKHEDVTDIESVAIYNEEKEEVTIFAVNRNIHEDIVLVSDVRGMKDYRL
LEHIVLEHQDLKIRNSVNGEEVYPKNSDKSSFDDGILTSMLRRASWNVIRIGK

Literature:

1. Taylor *et al.* (2006) *Biochem. J.* **395**, 21-37