

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0002
LOT:	2008-0002
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, CtAraf51A
Source organism:	<i>Clostridium thermocellum</i> ATCC 27405
Enzyme Commission No.:	3.2.1.55
Activity:	31 U/mL
Specific activity:	124 U/mg
	} (60°C; pH 7.0; 1 mM <i>p</i> -nitrophenyl- α -L-arabinofuranoside)
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:	7.0 (stable from 6.0 - 8.0)
Temperature optimum:	65°C (stable up to 70°C)
[Protein]:	0.25 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

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 sufficiently to fully homogenise enzyme precipitate before use
Assay:	One unit is defined as the amount of enzyme required to release 1 μ mol of <i>p</i> -nitrophenol per minute from <i>p</i> -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:

MKKARMTVDKDYKIAEIDKRIYGSFVEHLGRAVYDGLYQPGNSKSDDEDGFRKDVIELVKELNVPIIRYPGGNFVS
NYFWEDGVGPVEDRPRRLDLAWKSIEPNQVGINEFAKWCKKVNAEIMMAVNLGTRGISDACNLLEYCNHPGGSKY
SDMRIKHGVKEPHNIKVWCLGNEMDGPWQVGHKTMDEYGRIAEETARAMKMIDPSIELVACGSSSKDMP TFPQWE
ATVLDYAYDYVDYISLHQYYGNKENDTADFLAKSDDLDDFIRSVIATCDYIKAKKRSKKDIYLSFDEWNVVYHSN
NEDANIMQNEPWRIAPPLLEDIYTFEDALLVGLMLITLMKHADRIKIACLAQLINVIAPIVTERNGGAAWRQTIF
YPFMHASKYGRGIVLQPVINSPLHDTSKHEDVTDIESVAIYNEEKEEVTIFAVNRNIHEDIVLVSDVRGMKDYRL
LEHIVLEHQDLKIRNSVNGEEVYPKNSDKSSFDDGILTSMLRRASWNVIRIGK

Literature: 1. [Taylor et al. \(2006\) *Biochem. J.* **395**, 21-37](#)