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Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0354
LOT:	2009-0354
Activity:	Endo-arabinanase
Synonyms:	Arabinanase; arabinan endo-1,5-α-L-arabinosidase; endo-1,5-α-L-arabinanase; endo-α-1,5-arabanase; endo-arabanase; 1,5-α-L-arabinan 1,5-α-L-arabinanohydrolase; 5-α-L-arabinan 5-α-L-arabinanohydrolase; arabinan endo-1,5-alpha-L-arabinosidase; endo-1,5-alpha-L-arabinanase; endo-alpha-1,5-arabanase; endo-arabanase; 1,5-α-L-arabinan 1,5-α-L-arabinanohydrolase; 5-alpha-L-arabinan 5-alpha-L-arabinanohydrolase
Nomenclature:	CAZy [GH43, glycoside hydrolase family 43, member of clan GH-F], SCO2427, SCC42.08c
Source organism:	*Streptomyces coelicolor* A3(2)
Enzyme Commission No.:	3.2.1.99
Activity:	73.76 U/mL (35°C; pH 6.0; 4 mg/mL sugar beet arabinanan)
Specific activity:	16.05 U/mg
Purity:	> 80 % 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:	6.0
Temperature optimum:	> 35°C
[Protein]:	4.60 mg/mL
Sequence length:	297 amino acids (view sequence)
Accession No.:	Q9KXY8, CAB92901, NP_626671
Molecular weight:	33858.2 Da (theoretical)
	~ 33000 Da (observed by SDS-PAGE)
	- (observed by mass spectrometry)
Biological function:	Catalyses the endohydrolysis of (1→5)-α-arabinofuranosidic linkages in (1→5)-arabinans
Potential application(s):	Biomass conversion, carbohydrate research
Comments:	-

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Usage: Agitate vial sufficiently to fully homogenise enzyme precipitate before use

Assay: One unit is defined as the amount of enzyme required to release 1 µmol of D-glucose equivalents per minute from sugar beet arabinan (4.00 mg/mL) in 50 mM sodium acetate buffer, pH 6.0, containing 1.0 mg/mL BSA, at 35^{o}C, and using the DNSA assay method of Miller (1959; *Anal. Chem.* **31**, 426-428) to follow reducing sugar liberated at 575 nm

Primary sequence:

MYPNPGRVTGSVVTHDPTMIRTSSGQYRLYATGGGISSKASSDRTAFSAGADAFGSRPGWWSRYSSVPEAWAPDI
SYHGGKYLMYYSVSSFGSNTSAIGLAGSTTGAPGSWSDYGIVYTSGSASDYNAIDPNLFVDDDGTWWLSFGSWWT
GIKMIRIDPATGKQLASDTARRSLASRPTGTKAVEAPYVVKRNGYYYLFASYDTCCAGTGSTYKVKVGRATSVTG
PYRDRNGVAMTDNGGTPVLESHGSVIGPGGQSIMNDVDGDLIVYHYYDGNDNGTPKLGINLLDWSSGWPVAY

Literature:

1. Bentley *et al.* (2002) *Nature* **417**, 141-147