

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0023
LOT:	2008-0023
Activity:	Endo-1,4- β -galactanase
Synonyms:	Galactanase; arabinogalactanase; arabinogalactan 4- β -D-galactanohydrolase; endo-1,4-beta-galactanase; arabinogalactan 4-beta-D-galactanohydrolase
Nomenclature:	CAZy [GH53, glycoside hydrolase family 53, member of clan GH-A]
Source organism:	<i>Clostridium thermocellum</i> ATCC 27405
Enzyme Commission No.:	3.2.1.89
Activity:	15000 U/vial
Specific activity:	10000 U/mg
	} (60°C; pH 5.5; galactan)
Purity:	> 95 % as judged by SDS-PAGE
Form and storage:	Lyophilised powder, store at -20°C (shipped at room temperature)
pH optimum:	5.5 (stable from 5 – 7.5)
Temperature optimum:	60°C (stable up to 70°C)
[Protein]:	1.5 mg/mL
Sequence length:	310 amino acids (view sequence)
Accession No.:	ABN52631
Molecular weight:	36405.3 Da (theoretical)
	~ 36600 Da (observed by SDS-PAGE)
	- (observed by mass spectrometry)
Biological function:	Catalyses the endohydrolysis of (1→4)- β -D-galactosidic linkages in arabinogalactans
Potential application(s):	Biomass conversion , carbohydrate research
Comments:	-
Usage:	Dissolve to 1.5 mg/mL in 50 mM MES buffer, pH 5.5, containing 20 mM NaCl and aliquot for storage at -20°C. The enzyme is stable for 6 months when stored in this manner
Assay:	One unit is defined as the amount of enzyme required to release 1 μ mol of galactose-reducing-sugar equivalents per minute from

galactan in 50 mM MES buffer, pH 5.5, at 60°C, where reducing sugars are measured by the method of Miller (1959; *Anal. Chem.* **31**, 426-428)

Primary sequence:

MAPTFAKGADVSWLPEMEANGYKIFYNDDGIEQDCLQILKDHGIDSIRLRVWVNPNGYCNKEETIKMALRAKKMG
FRIMINFHYSDSWADPGKQTKPAAWAKYDFNGLMKAVYDYTYDVMSALKANGITPEWVQVGNETNNGMLWEDGKA
TNSMRNFAWLINCGYDAVKAVSPETKVI VHIANGYDNALYRWIFDGITANGARFDVIGMSLYPTASDWPQLTNQC
LNNMKDMI SRYGKEIMICEIGMDYWEAQACKDFITDI IQKTKSLPDNKGLGVFYWEPQCYNWQYYNKGAFDLSGK
PTIALDAFLT

Literature:

1. Unpublished data