

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0059	add this product to cart
LOT:	2009-0059-1	view other galactanases
Activity:	Galactanase	
Synonyms:	Endo-1,4- β -galactanase; endo- β -1,4-galactanase; arabinogalactanase; arabinogalactan endo-1,4- β -galactosidase; arabinogalactan 4- β -D-galactanohydrolase	
Nomenclature:	CAZy [GH53, glycoside hydrolase family 53, member of clan GH-A], GalA, galA, ganA	
Source organism:	<i>Cellvibrio japonicus</i> NCIMB 10462	
Enzyme Commission No.:	3.2.1.89	
Activity:	555.2 U/mL	} (37°C; pH 7.5; 2.25 mg/mL potato galactan)
Specific activity:	192.8 U/mg	
Purity:	> 92 % 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:	6-8	
Temperature optimum:	> 37°C	
[Protein]:	2.88 mg/mL	
Sequence length:	355 amino acids (view sequence)	
Accession No.:	P48841, CAA62990.1, X91885	
Molecular weight:	57776.5 Da	(theoretical)
	~ 55000 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	Endohydrolysis of (1→4)- β -D-galactosidic linkages in arabinogalactans	
Potential application(s):	Biomass conversion, carbohydrate research	
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 D-glucose equivalents per minute from potato galactan. The final assay conditions comprised 2.25 mg/mL potato galactan in 225 mM HEPES buffer, pH 7.5, containing 18 mM CaCl_2 , at 37°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:

MDNTPFYVGADLSYVNEMESCGATYRDQGKKVDPFQLFADKGD LVRVRLWHNATWTKYSDLKDVSKTLKRAKNA
GMKTL LDFHYS DTWTDPEKQFIPKAWAHITDTKELAKALYDYTTDTLASLDQQQLLPNLVQVGNETNIEILQAED
TLVHGI PNWQRNATLLNSGVNAVRDYSKKTGKPIQVVLHIAQPENALWWFKQAKENGVIDYDVIGLSYYPQWSEY
SLPQLPDAIAELQNTYHKPVMIVETAYPWTLHNF'DQAGNVLGEKAVQPEFPASPRGQLTYLLTTLTQLVKSAGGMG
VIYWEPAWVSTRCRTLWGKGS HWENASFFDATRKNNALPAFLFFKADYQASAQAE

Literature:

1. [Braithwaite et al. \(1998\) *Biochemistry* **36**, 15489-15500](#)