

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0110
LOT:	2008-0110
Activity:	β -Glucosidase
Synonyms:	Gentiobiase; cellobiase; emulsin; elaterase; aryl- β -glucosidase; β -D-glucosidase; β -glucoside glucohydrolase; arbutinase; amygdalinase; <i>p</i> -nitrophenyl β -glucosidase; primeverosidase; amygdalase; limarase; salicilinase; β -1,6-glucosidase; β -D-glucoside glucohydrolase; aryl-beta-glucosidase; beta-glucosidase; beta-D-glucosidase; beta-glucoside glucohydrolase; <i>p</i> -nitrophenyl beta-glucosidase; beta-1,6-glucosidase; beta-D-glucoside glucohydrolase
Nomenclature:	CAZy [GH1, glycoside hydrolase family 1 , member of clan GH-A]
Source organism:	<i>Rhizobium etli</i> CFN 42
Enzyme Commission No.:	3.2.1.21
Activity:	315.9 U/mL } (40°C; pH 5.4; 2 mM <i>p</i> NP- β -D-glucopyranoside)
Specific activity:	
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:	5.4
Temperature optimum:	-
[Protein]:	1.98 mg/mL
Sequence length:	457 amino acids (view sequence)
Accession No.:	Q2K441
Molecular weight:	53741.8 Da (theoretical)
	~ 54000 Da (observed by SDS-PAGE)
	- (observed by mass spectrometry)
Biological function:	Hydrolysis of terminal, non-reducing β -D-glucosyl residues with release of β -D-glucose
Potential application(s):	Biomass conversion , carbohydrate research
Comments:	No detectable activity against <i>p</i> NP- α -D-galactopyranoside. Activity against <i>p</i> NP- β -D-xylopyranoside is 1.93 U/mL (0.9758 U/mg)

- 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 pNP per minute from pNP- β -D-glucopyranoside (2 mM) in 100 mM sodium acetate buffer, pH 5.4, at 40°C, and using an extinction coefficient of 18000 $\text{M}^{-1} \text{cm}^{-1}$

Primary sequence:

MIDANTLAGRFPGDFTFGVATAAFQIEGASKADGRKPSIWDAFCNMPGRVHNRDNGDVACDHYNRLEQDLDLVKE
MGVEAYRFSIAWPRIIPDGTGPVNEAGLDFYDRLVDGCKARGIKTFATLYHWDLP LLLAGDGGWTARSTAYAFQR
YAKTVMSRLGDRLDAVATFNPEWCIVWLSHLYGIHAPGERNMQAALHAMHYMNLAHGLGVEAIRSEAPNVPVGLV
LNAASIIASSTSPADLAAAERAHQFHNGAFFDPVFKGEYPKAFVQALGDRMPVIEDGDLKVISQKLDWWGLNYYT
PERVTDDADRKGDFPWTVKAPPASEVKTDIGWEIYAPGLKLLVEDLYRRYELPCYITENGACDNTGVADGEVDD
TMRLDYLGDHLDVLDLADLIKDGYP LRGYFAWSLMDNFEWAEGYRMRFGLVHVDYETQRRTVKKS GKWYRDLAQFP
KGNHKPG

- Literature:** 1. [Gonzalez et al. \(2006\) Proc. Natl. Acad. Sci. USA 103, 3834-3839](#)