Creative Enzymes®

Native Thermotoga neopolitana β-Glucosidase

Cat. No. NATE-0771

Lot. No. (See product label)

Introduction

Description	β-glucosidase is a glucosidase enzyme located in on the brush border of the small intestine that acts upon β1->4 bonds linking two glucose or glucose-substituted molecules (i.e., the disaccharide cellobiose). It is one of the cellulases, enzymes involved in the decomposition of cellulose and related polysaccharides; more specifically, an exocellulase with specificity for a variety of beta-D-glycoside substRates. It catalyzes the hydrolysis of terminal non-reducing residues in beta-D-glucosides with release of glucose.
Applications	The enzyme may be used for hydrolysis of various glycosides such as polyphenol glycosides including naturally occurring antioxidants such as quercetin-glycosides found in various vegetables. For complete hydrolysis of 1 µmol of quercetin-4-glycoside in 5 minutes at 80°C and pH 5.5, about 28 pmol (~25 µg) enzyme was needed (Turner et al 2006)
Synonyms	β-glucosidase; glycoside hydrolase; β-D-glucoside glucohydrolase; EC 3.2.1.6; gentiobiase; cellobiase; emulsin; elaterase; aryl-β-glucosidase; β-D-glucosidase; arbutinase; amygdalinase; p-nitrophenyl β-glucosidase; primeverosidase; amygdalase; linamarase; salicilinase; β-1,6-glucosidase

Product Information

Source	Thermotoga neopolitana
EC Number	EC 3.2.1.6
CAS No.	62213-14-3
Optimum temperature	the enzyme has optimum activity around 90°C
Structure	The crystal structure of β-glucosidase from Thermotoga neopolitana has been determined to 2.05 Å resolution (Pozzo et al. 2010). – PDB entry 2X41
Unit Definition	One unit (U) of enzyme activity is the amount that leads to the release of 1 µmol of p-nitrophenyl from p-nitrophenyl-β-D-glucanopyranoside (pNPG) per minute.