Creative Enzymes®

Native Rhizopus sp. Glucoamylase

Cat. No. DIA-190

Lot. No. (See product label)

Introduction

Description	Glucan 1,4-alpha-glucosidase is an enzyme located on the brush border of the small intestine with system name 4-alpha-D-glucan glucohydrolase. This enzyme catalyses the following chemical reaction: Hydrolysis of terminal (1->4)-linked alpha-D-glucose residues successively from non-reducing ends of the chains with release of beta-D-glucose. Most forms of the enzyme can rapidly hydrolyse 1,6-alpha-D-glycosidic bonds when the next bond in the sequence is 1,4.
Applications	This enzyme is useful for structural investigation of carbohydrates and for enzymatic determination of α-amylase when coupled with the related enzymes in clinical analysis.
Synonyms	EC 3.2.1.3; glucoamylase; amyloglucosidase; gamma-amylase; lysosomal alpha-glucosidase; acid maltase; exo-1,4-alpha-glucosidase; glucose amylase; gamma-1,4-glucan glucohydrolase; acid maltase; 1,4-alpha-D-glucan glucohydrolase

Product Information

Source	Rhizopus sp.
Appearance	White amorphous powder (salt-free), lyophilized
Form	Freeze dried powder
EC Number	EC 3.2.1.3
CAS No.	9032-08-0
Molecular Weight	approx. 70 kDa
Activity	Gradel 30U/mg-solid or more
pH Stability	pH 4.0-8.5 (25°C, 20hr)
Optimum pH	4.5-5.0
Thermal stability	below 45°C (pH 5.5, 10min)
Optimum temperature	60°C
Michaelis Constant	$11\pm1.1\times10^{-4}$M (Maltose), $3.6\pm0.51\times10^{-4}$M (Maltotriose), $2.5\pm0.33\times10^{-4}$M (Maltotetraose), $1.6\pm0.02\times10^{-4}$M (Maltopentaose)
Specificity	This enzyme completely hydrolyzes soluble starch, amylopectin, glycogen,α-orß-limit dextrin, amylose, maltooligosaccharides and panose.

Storage and Shipping Information

Stability	Stable at-20°C for at least 6 months