

Native *Rhizopus* sp. Glucoamylase

Cat. No. DIA-190

Lot. No. (See product label)

Introduction

Description Glucan 1,4- α -glucosidase is an enzyme located on the brush border of the small intestine with system name 4- α -D-glucan glucohydrolase. This enzyme catalyses the following chemical reaction: Hydrolysis of terminal (1- \rightarrow 4)-linked α -D-glucose residues successively from non-reducing ends of the chains with release of β -D-glucose. Most forms of the enzyme can rapidly hydrolyse 1,6- α -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 α -glucosidase; acid maltase; exo-1,4- α -glucosidase; glucose amylase; gamma-1,4-glucan glucohydrolase; acid maltase; 1,4- α -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 $11 \pm 1.1 \times 10^{-4}$ M (Maltose), $3.6 \pm 0.51 \times 10^{-4}$ M (Maltotriose), $2.5 \pm 0.33 \times 10^{-4}$ M (Maltotetraose), $1.6 \pm 0.02 \times 10^{-4}$ M (Maltopentaose)

Specificity This enzyme completely hydrolyzes soluble starch, amylopectin, glycogen, α - or β -limit dextrin, amylose, maltooligosaccharides and panose.

Storage and Shipping Information

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