Creative Enzymes®

Native Porcine Trehalase

Cat. No. NATE-0717

Lot. No. (See product label)

Introduction

Description Trehalase is a glycoside hydrolase enzyme located in on the brush border of the small intestine that catalyzes the conversion of trehalose to glucose. It is found in most animals. The non-reducing disaccharide trehalose (α-D-glucopyranosyl-1,1-α-D-glucopyranoside) is one of the most important storage carbohydRates, which is present in almost all forms of life except mammals. The disaccharide is hydrolyzed into two molecules of glucose by the enzyme trehalase. There are two types of trehalases found in Saccharomyces cerevisiae, viz. neutral trehalase (NT) and acid trehalase (AT) classified according to their pH optima. NT has an optimum pH of 7.0, while that of AT is 4.5. Recently it has been reported that more than 90% of total AT activity in S. cerevisiae is extracellular and cleaves extracellular trehalose into glucose in the periplasmic space.

Applications Trehalase has been used in a study to assess changes in carbohydrate metabolism in Plasmopara viticola-infected grapevine leaves. Trehalase has also been used in a study to investigate growth arrest by trehalose-6-phosphate.

Synonyms α,α-Trehalose glucohydrolase; Trehalase; EC 3.2.1.28; 9025-52-9; α,α-trehalase

Product Information

Species Porcine

Source Porcine kidney

Form buffered aqueous glycerol solution; Solution in 50% glycerol containing 1% Triton™ X-100 and 25 mM potassium phosphate, pH 6.5

EC Number EC 3.2.1.28

CAS No. 9025-52-9

Activity > 1.0 units/mg protein

Concentration 0.5-10.0 mg/mL protein basis (BCA)

Unit Definition One unit will convert 1.0 µmole of trehalose to 2.0 µmoles of glucose per min at pH 5.7 at 37°C (liberated glucose determined at pH 7.5).

Storage and Shipping Information

Storage −20°C