Creative Enzymes®

Native Aspergillus niger Glucose Oxidase

Cat. No. NATE-0311

Lot. No. (See product label)

Introduction

Description The glucose oxidase enzyme (GOx) also known as notatin (EC number 1.1.3.4) is an oxido-reductase that catalyses the oxidation of glucose to hydrogen peroxide and D-glucono-δ-lactone. This enzyme is produced by certain species of fungi and insects and displays antibacterial activity when oxygen and glucose are present.

Applications Glucose oxidase is widely used in the food and pharmaceutical industries as well as a major component of glucose biosensors.

Synonyms EC 1.1.3.4; glucose oxyhydrase; corylophyline; penatin; glucose aerodehydrogenase; microcid; β-D-glucose oxidase; D-glucose oxidase; D-glucose-1-oxidase; β-D-glucose:quinone oxidoreductase; glucose oxyhydrase; deoxin-1; GOD; 9001-37-0; glucose oxidase enzyme; GOx; notatin; glucose oxidase

Product Information

Source Aspergillus niger

Form Type I, buffered aqueous solution; Solution in 50 mM potassium phosphate, 100 mM sodium acetate, 250 mM KCl, with 0.004% thimerosal, pH 4.5; Type II, Type VI, lyophilized powder. Type V, Lyophilized powder containing phosphate buffer salts and sodium chloride

EC Number EC 1.1.3.4

CAS No. 9001-37-0

Molecular Weight 160 kDa (gel filtration)

Activity Type I, <0.1 units/mg protein; Type II, 100,000-250,000 units/g solid (without added oxygen); Type III, 2,000-10,000 units/g solid (without added oxygen); Type IV, 15,000-50,000 units/g solid (without added oxygen); Type V, > 100,000 units/g solid (without added oxygen); Type VI, ~200 units/mg; Type VII, > 15,000 units/g solid (without added oxygen).

Contaminants <0.1 units/mg protein catalase

Isoelectric point 4.2

pH Stability 42467

Optimum pH 5.5

Unit Definition One unit will oxidize 1.0 μmole of β-D-glucose to D-gluconolactone and H2O2 per min at pH 5.1 at 35°C, equivalent to an O2 uptake of 22.4 μl per min. If the reaction mixture is saturated with oxygen, the activity may increase by up to 100%.

Storage and Shipping Information

Storage −20°C