Creative Enzymes®

Pyranose Oxidase from Coriolus sp., Recombinant

Cat. No. NATE-0500

Lot. No. (See product label)

Introduction

Description	Pyranose oxidase (P2O) catalyzes the oxidation of aldopyranoses at position C-2 to yield the corresponding 2-ketoaldoses. P2O is a homotetrameric protein that contains covalently bound flavin adenine dinucleotide (FAD). The in vivo substrates of P2O are thought to be D-glucose, D-galactose, and D-xylose. They are oxidized to 2-keto-D-glucose (D-arabino-hexos-2-ulose, 2-dehydro-D-glucose), 2-keto-D-galactose (D-lyxo-hexos-2-ulose, 2-dehydro-D-galactose), and 2-keto-D-xylose (D-threopentos-2-ulose, 2-dehydro-D-xylose), respectively. Pyranose oxidase has significant activity with carbohydrates such as, L-sorbose, D-glucono-1,5-lactone, and D-allose. When pyranose oxidase catalyzes the oxidation of aldopyranoses, electrons are transferred to molecular oxygen which results in the formation of hydrogen peroxide.
Applications	Pyranose oxidase (P20) is used for the determination of D-glucose and 1,5-anhydroglucitol in clinical analysis. It is used to study the biotransformations of carbohydrates and is used as an important marker for glycemic control in diabetes patients
Synonyms	pyranose oxidase; EC 1.1.3.10; glucose 2-oxidase; pyranose-2-oxidase; 37250-80-9; P2O

Product Information

Species	Coriolus sp.
Source	E. coli
EC Number	EC 1.1.3.10
CAS No.	37250-80-9
Activity	> 2.7 units/mg solid
Unit Definition	One unit produces 1.0 µmol of hydrogen peroxide per minute at 37°C, pH 7.0.

Storage and Shipping Information

Storage	−20°C