



Creative Enzymes

Diagnostic Enzymes

Pyranose Oxidase from Microorganism

Product Information

Cat#	NATE-1718
Abbr	PROD (Microorganism)
Similar	P2O
Source	Microorganism
Description	<p>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.</p>
Form	Yellow power, lyophilized
Enzyme Commission Number	EC 1.1.3.10
Activity	>10U/mg protein
CAS No.	37250-80-9
Molecular Weight	70kDa (SDS-PAGE)
Isoelectric point	5.95
pH Stability	4.0~11.0(50°C,30min)
Michaelis Constant	8.6 10 ⁻³ M(1.5 anhydroglucitol) 7.12×10 ⁻⁴ M (D-glucose)

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Unit Definition	One unit will convert one micromole of Dglucose to 2-Dehydro-D-glucose per minute at pH 7.0 at 37°C.
Optimum pH	6
Optimum temperature	60°C
Thermal stability	