Creative Enzymes
Diagnostic Enzymes

Pyranose Oxidase from Microorganism

Product Information

Cat#	NATE-1718
Abbr	PROD (Microorganism)
Similar	P2O
Source	Microorganism
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.
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℃,30min)
Michaelis Constant	8.6 10^-3 M(1.5 anlydroglucitol) 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℃.
Optimum pH	6
Optimum temperature	60℃
Thermal stability	

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