Creative Enzymes
Diagnostic Enzymes

Native Microorganism Glucose Dehyrogenase (PQQ-dependent)

Product Information

Cat#	DIA-192
Abbr	Glucose Dehyrogenase, Native (Microorganism)
Similar	Glucose Dehyrogenase
Source	Microorganism
Description	In enzymology, a quinoprotein glucose dehydrogenase (EC 1.1.5.2) is an enzyme that catalyzes the chemical reaction: D-glucose + ubiquinone ↔D-glucono-1,5-lactone + ubiquinol. Thus, the two substrates of this enzyme are D-glucose and ubiquinone, whereas its two products are D-glucono-1,5-lactone and ubiquinol. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with a quinone or similar compound as acceptor. This enzyme participates in pentose phosphate pathway. It employs one cofactor, PQQ.
Applications	This enzyme is useful for enzymatic determination of D-Glucose.
Appearance	Purple amorphous powder, lyophilized
Form	Freeze dried powder
Enzyme Commission Number	EC 1.1.5.2
Activity	500 U/mg-solid or more
CAS No.	81669-60-5
Contaminants	Glucose dehydrogenase < 1.0×10^{-3}% (NAD-dependent); Hexokinase < 1.0×10^{-3}%
Molecular Weight	approx. 100 kDa (by gel filtration)
pH Stability	pH 3.5-8.5 (25°C, 16hr)
Michaelis Constant	4.8 mM (D-Glucose)
Optimum pH	7

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Optimum temperature	37°C
Thermal stability	below 50°C (pH 7.5, 30min)
Stability	Store at -20°C
Stabilizers	Ca^{++}, BSA
Inhibitors	Cu^{++}, Pb^{++}, Ag^{+}
Synonyms	Glucose Dehyrogenase; EC 1.1.5.2; D-glucose:ubiquinone oxidoreductase; D-glucose:(pyrroloquinoline-quinone) 1-oxidoreductase; glucose dehydrogenase (PQQ-dependent); glucose dehydrogenase (pyrroloquinoline-quinone); quinoprotein D-glucose dehydrogenase

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