

## Native Microorganism Glucose Dehydrogenase (PQQ-dependent)

### Product Information

<b>Cat#</b>	DIA-192
<b>Abbr</b>	Glucose Dehydrogenase, Native (Microorganism)
<b>Similar</b>	Glucose Dehydrogenase
<b>Source</b>	Microorganism
<b>Description</b>	In enzymology, a quinoprotein glucose dehydrogenase (EC 1.1.5.2) is an enzyme that catalyzes the chemical reaction: D-glucose + ubiquinone $\leftrightarrow$ 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.
<b>Applications</b>	This enzyme is useful for enzymatic determination of D-Glucose.
<b>Appearance</b>	Purple amorphous powder, lyophilized
<b>Form</b>	Freeze dried powder
<b>Enzyme Commission Number</b>	EC 1.1.5.2
<b>Activity</b>	500 U/mg-solid or more
<b>CAS No.</b>	81669-60-5
<b>Contaminants</b>	Glucose dehydrogenase < $1.0 \times 10^{-3}\%$ (NAD-dependent); Hexokinase < $1.0 \times 10^{-3}\%$
<b>Molecular Weight</b>	approx. 100 kDa (by gel filtration)
<b>pH Stability</b>	pH 3.5-8.5 (25°C, 16hr)
<b>Michaelis Constant</b>	4.8 mM (D-Glucose)
<b>Optimum pH</b>	7

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<b>Optimum temperature</b>	37°C
<b>Thermal stability</b>	below 50°C (pH 7.5, 30min)
<b>Stability</b>	Store at -20°C
<b>Stabilizers</b>	Ca <sup>++</sup> , BSA
<b>Inhibitors</b>	Cu <sup>++</sup> , Pb <sup>++</sup> , Ag <sup>+</sup>
<b>Synonyms</b>	Glucose Dehydrogenase; 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