Creative Enzymes
Diagnostic Enzymes

Glycerokinase from Microorganism

Product Information

Cat#	DIA-149
Abbr	GK (Microorganism)
Alias	GK
Similar	Glycerokinase
Source	Microorganism
Description	Glycerol kinase is a phosphotransferase enzyme involved in triglycerides and glycerophospholipids synthesis. Glycerol kinase catalyzes tge MgATP-dependent phosphorylation of glycerol to produce sn-glycerol-3-phosphate and is the rate limiting enzyme in the utilization of glycerol. It is also subject to feedback regulation by fructose-1,6-bisphosphate.
Applications	This enzyme is useful for enzymatic determination of glycerol and triglyceride when coupled with glycerol-3-phosphate dehydrogenase, glycerol-3-phosphate oxidase or pyruvate kinase and lactate dehydrogenase, lipoprotein lipase in clinical analysis.
Appearance	White amorphous powder, lyophilized
Form	Freeze dried powder
Enzyme Commission Number	EC 2.7.1.30
Activity	30 U/mg-solid or more
CAS No.	9030-66-4
Contaminants	Catalase < 1.0×10^{-1}% NADH oxidase < 1.0×10^{-3}% Adenosine triphosphatase < 1.0×10^{-3}%
Isoelectric point	4.3
pH Stability	pH 5.5-10.0 (25°C, 20hr)
Michaelis Constant	9.4×10^{-5}M (Glycerol), 1.3×10^{-5}M (ATP), 2.1×10^{-3}M (Dihydroxyacetone)

Tel: 1-631-562-8517 1-516-512-3133
Email:info@creative-enzymes.com
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY11967, USA

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Structure	Four subunits of approx. 58,000
Optimum pH	10
Optimum temperature	70°
Thermal stability	below 65°C (pH 7.5, 30min)
Stability	Stable at-20°C
Inhibitors	p-Chloromercuribenzoate, Hg^{++}, Ag^{+}
Synonyms	glycerokinase; GK; ATP: glycerol-3-phosphotransferase; glycerol kinase phosphorylating; glyceric kinase; EC 2.7.1.30

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