

## Native Cellulomonas sp. Glycerokinase

Cat. No. NATE-0287

Lot. No. (See product label)

### Introduction

**Description** Glycerol kinase is a phosphotransferase enzyme involved in triglycerides and glycerophospholipids synthesis. Glycerol kinase catalyzes the 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.

**Synonyms** EC 2.7.1.30; glycerokinase; GK; ATP:glycerol-3-phosphotransferase; glycerol kinase (phosphorylating); glyceric kinase; 9030-66-4

### Product Information

**Source** Cellulomonas sp.

**Form** Lyophilized powder containing phosphate buffer salts and sodium gluconate

**EC Number** EC 2.7.1.30

**CAS No.** 9030-66-4

**Molecular Weight** mol wt ~128 kDa ((by gel filtration)

**Activity** 20 U/mg-solid or more

**Isoelectric point** 4.2

**pH Stability** pH 5.5 x 10.0 (25°C, 20hr)

**Optimum pH** 9.8 (G-3-PDH system), 7.8 (G-3-P oxidase system)

**Thermal stability** below 40°C (pH 7.5, 15min)

**Optimum temperature** 50°C

**Michaelis Constant** 4.4 x 10<sup>-5</sup>M (Glycerol), 4.3 x 10<sup>-4</sup>M (ATP)

**Inhibitors** p-Chloromercuribenzoate, heavy metal ions (Pb<sup>++</sup>, Fe<sup>++</sup>, Hg<sup>++</sup>, Ag<sup>+</sup>)

**Unit Definition** One unit will convert 1.0 μmole of glycerol and ATP to L-α-glycerophosphate and ADP per min at pH 9.8 at 25°C in a coupled system with PK/LDH.

### Storage and Shipping Information

**Storage** -20°C