
# Glycerol Kinase from Microorganism

# GYK-311

## SPECIFICATIONS

| | |
|---|---|
| Product name | ATP: Glycerol 3-phosphotransferase |
| EC | 2.7.1.30 |
| Appearance | White amorphous powder lyophilized |
| Activity | Grade III, 30 U/mg-solid or more |
| Contaminants | Catalase : ≤ $1.0x10^{-1}$ %, NADH oxidase : ≤ $1.0x10^{-3}$ % |
| | Adenosine triphosphate : ≤ $1.0x10^{-3}$ % |
| Stability | Stable at -20°C for at least 12 months |
| Molecular weight | approx. 220,000 (by gel filtration) |
| Structure | 4 subunits of approx 58,000 |
| Isoelectric point | 4.3 |
| Michaelis constants | $9.4×10^{-5}$ M (Glycerol), $1.3×10^{-5}$ M (ATP), $2.1x10^{-3}$ M (dihydroxiacetone) |
| Inhibitors | p-Chloromercuribenzoate, $Hg^{++}$, $Ag^{+}$ |
| Optimum pH | 10.0 |
| Optimum temperature | 70°C |
| pH Stability | pH 5.5 - 10.0 (25°C, 20hr) |
| Thermal stability | below 65°C (pH 7.5, 30min) |

# ENZYMES BY SORACHIM

## Glycerol Kinase from Microorganism

## GYK-311

## SPECIFICATIONS

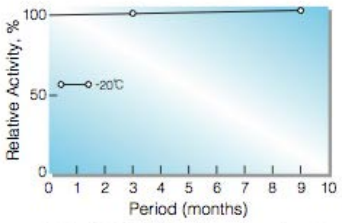


Fig.1. Stability (Powder form)

(kept under dry conditions)

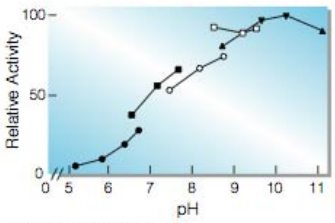


Fig.2. pH-Activity

(37℃ 10min-reaction in 45mM buffer solution: pH5.2-6.7,MES;pH6.6-7.7,HEPES; pH7.5-8.7,TAPS;pH8.5-9.6,CHES; pH8.7-11.2,Glycine-NaOH)

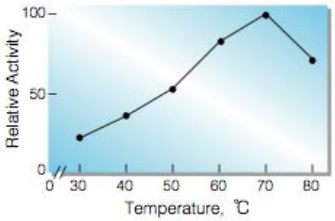


Fig.3. Temperature activity

(10min-reaction in 45mM HEPES buffer,pH7.9)

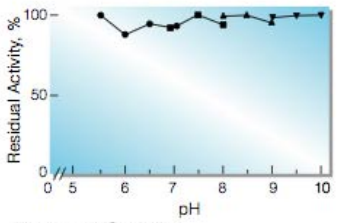


Fig.4. pH-Stability

(enzyme concn. ca.300U/ml 25℃ 20hr-treatment in 50mM buffer solution: pH5.6-7.1,MES;pH7.1-8.0,HEPES;pH8.0-9.0, TAPS;pH9.0-10.0,CHES)

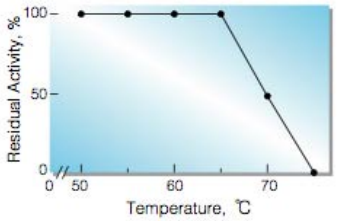


Fig.5. Thermalstability

(enzyme concn. ca.300U/ml 30min-treatment with 20mM K-phosphate buffer, pH7.5)