Phosphoenolpyruvate Carboxylase from Microorganism

PPC-301

SPECIFICATIONS

Product name	Orthophosphate: oxaloacetate carboxy-lyase (phosphorylating)
EC	4.1.1.31
Appearance	White amorphous powder, lyophilized
Activity	Grade III, 5.0 U/mg-solid or more
contaminants	Lactate dehydrogenase : $\leq 1.0\times10^{-3}$ %
	Pyruvate kinase : ≤ 0.5 %
Stability	Stable at -20℃ for at least 12 months
Molecular weight	approx. 390,000 (by gel filtration)
Isoelectric point	6.0 ± 0.1
Structure	4 Subunits per mole of enzyme
Michaelis constant	1.9×10^{-4} M (Phosphoenolpyruvate)
Optimum pH	7.5 - 8.0
Optimum temperature	60℃
pH Stability	pH 5.0 - 8.0 (25℃, 24hr)
Thermal stability	below 40℃ (pH 7.0, 15min)

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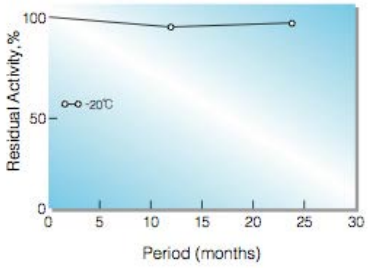

Fig.1. Stability (Powder form)
(kept under dry conditions)

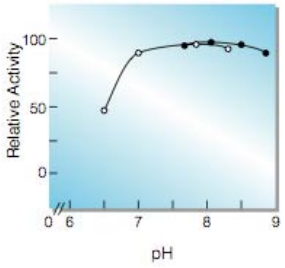

Fig.2. pH-Activity
(30℃, in 50mM buffer solution: pH6.0-8.5, MES: pH7.5-9.0, Tris-HCl)

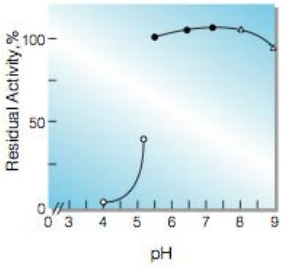

Fig.4. pH-Stability
(25℃,24hr-treatment with 50mM buffer solution contg. 10mM $MgSO_4$: pH3.0-5.0, Acetate;pH5.0-8.0, K-phosphate; pH8.0-9.0, Tris-HCl)

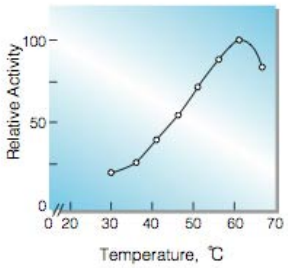

Fig.3. Temperature activity
(in 20mM K-phosphate buffer,pH7.0)

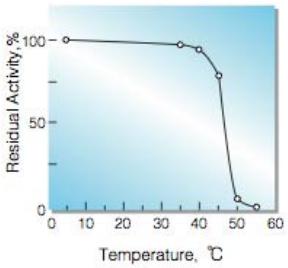

Fig.5. Thermal stability
(15min-treatment with 20mM K-phosphate buffer,pH7.0 enzyme concn.: 2.0U/ml)