

Glycerol 3-phosphate Oxidase (GPO)

rp221575

Storage temperature: -20°C. Avoid freeze/thaw cycle. Store in the dark. Desiccated.

Introduction:

Glycerol 3-phosphate Oxidase (GPO) that catalyzes the interconversion of glycerol 3-phosphate to dihydroxyacetone phosphate. Rely on the proven diagnostic quality of this product.

Isoelectric point: 4.7

Michaelis constant: 2.4×10^{-3} mol/L (L- α -Glycerophosphate)

Optimum pH: 6.5

Fig. 1

Optimum temperature: 40°C

Fig. 3

pH Stability: 6.0~8.0 (25°C, 12hr)

Fig. 2

Thermal stability: <50°C (pH7.4, 30min)

Fig. 4

Inhibitors: SDS

Effect of various chemicals:

Table 1

Reaction:



Table 1

Effect of Various Chemicals on GPO

[The enzyme dissolved in 20 mM PIPES buffer, pH 7.4 (10 U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn.(mM)	Residual activity
None	-	100%
FeCl ₃	2.0	98%
CaCl ₂	2.0	104%
NiCl ₂	2.0	101%
MgSO ₄	2.0	105%
MnSO ₄	2.0	108%
ZnSO ₄	2.0	97%

Chemical	Concn.(mM)	Residual activity
CoCl ₂	2.0	98%
CuSO ₄	2.0	102%
BME	2.0	104%
EDTA	5.0	105%
Tween20	0.1%	106%
Triton-X100	0.1%	105%
SDS	0.05%	8%

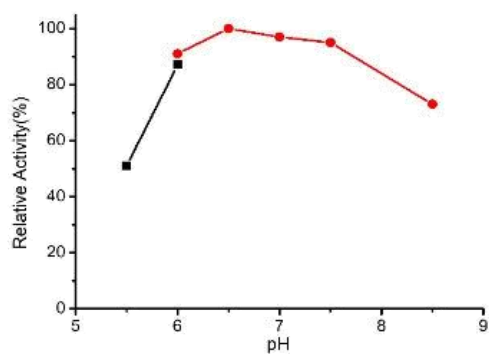


Fig.1 pH activity

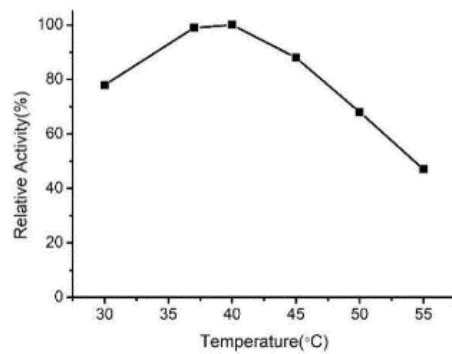


Fig.2 Temperature activity

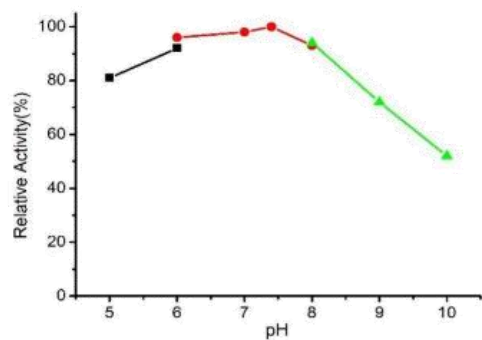


Fig.3 pH Stability

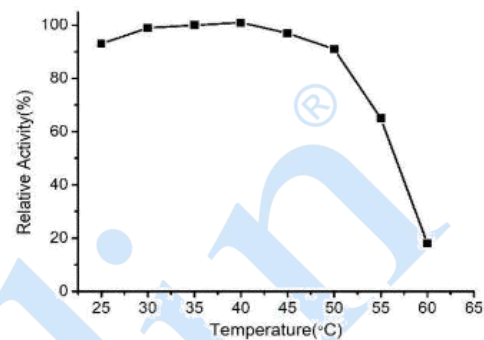


Fig.4 Thermal stability