

Horseradish Peroxidase (HRP)

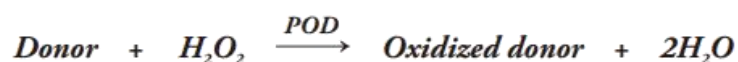
H1507817

Store at -20°C long term (24 months). Upon reconstitution, it is recommended to aliquot. Avoid freeze/thaw cycle.

Product Introduction

Horseradish Peroxidase actively involves in oxidizing reactive oxygen species, innate immunity, hormone biosynthesis and pathogenesis of several diseases.

Reaction



Product description

Appearance:	Reddish-brown amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 1.11.1.7
CAS Number:	9003-99-0
Storage temperature:	-20°C
Activity:	≥ 150 Purpurogallin U/mg solid
Unit definition:	One unit will form 1.0 milligram of purpurogallin from pyrogallol in 20 second at pH 6.0 at 20°C.

Properties

Stability:	Stable at -20°C for at least two years	
Molecular weight:	~40 kDa (SDS-PAGE)	
Optimum pH:	7.0-8.0	
Optimum temperature:	50°C-80°C	[Fig. 1]
pH Stability:	4.0-10.0 (25°C, 20hr)	[Fig. 2]
Thermal stability:	<65°C (pH 6.0, 10min)	[Fig. 3]
Inhibitors:	Zn ²⁺ , Na-cholate	
Effect of various chemicals		[Table 1]

Table 1.

Effect of Various Chemicals on rPOD

[The enzyme dissolved in 100mM Tris-HCl buffer, pH 7.5 (10U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl ₂	2.0	106%
CoCl ₂	2.0	98%
CuSO ₄	2.0	106%
FeCl ₃	2.0	98%
MgSO ₄	2.0	103%
MnSO ₄	2.0	93%
NiCl ₂	2.0	98%
ZnSO ₄	2.0	10%
K ₄ Fe(CN) ₆	2.0	101%

Chemical	Concn. (mM)	Residual activity
BME	2.0	95%
NEM	2.0	99%
EDTA	5.0	94%
NaN ₃	20.0	100%
Proclin	0.045%	109%
Na-cholate	0.10%	78%
SDS	0.05%	106%
Triton X-100	0.10%	128%
Tween 20	0.10%	118%

Fig. 1 pH Activity

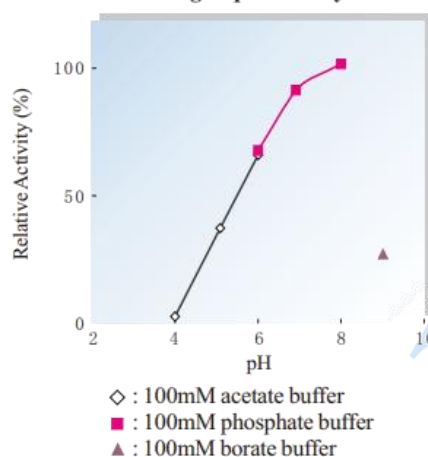


Fig. 3 Temperature activity

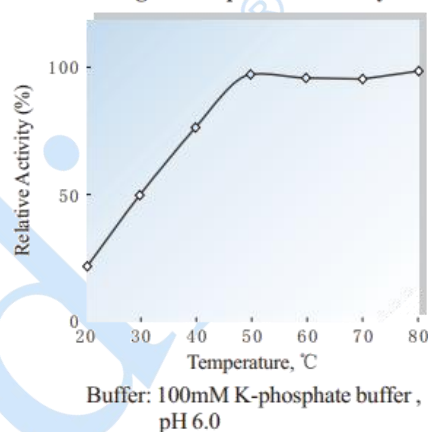


Fig. 2 pH Stability

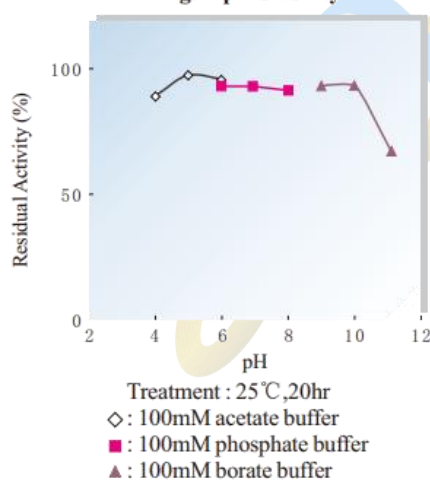


Fig. 4 Thermal stability

