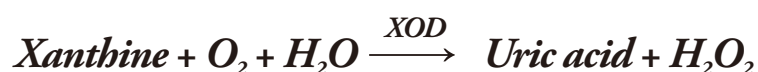
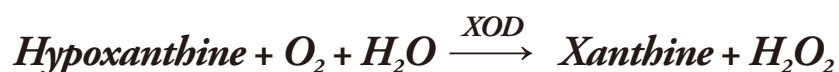


XANTHINE OXIDASE

Xanthine:oxygen oxidoreductase

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	SDZ500110
Appearance:	Brown amorphous powder
Source:	Arthrobacter sp.
Enzyme Commission Number:	EC 1.17.3.2
CAS Number:	9002-17-9
Storage temperature:	-20°C
Specific activity:	≥ 50U/mg protein
Unit definition:	One unit will convert one micromole of Xanthine to Uric acid per min at pH 7.5 at 37°C.

PROPERTIES

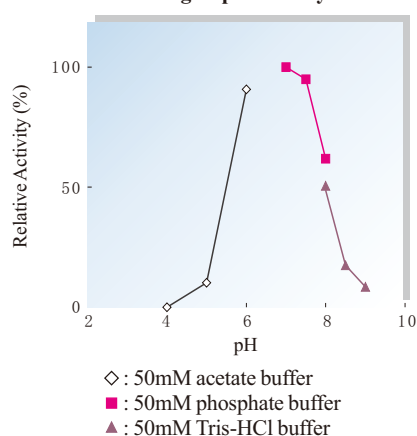
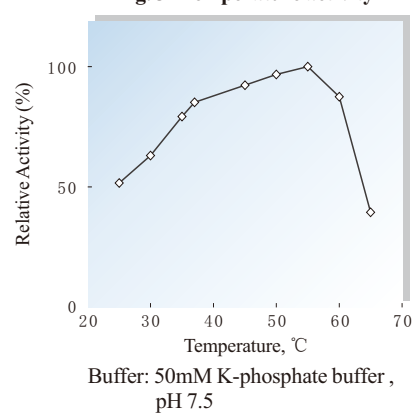
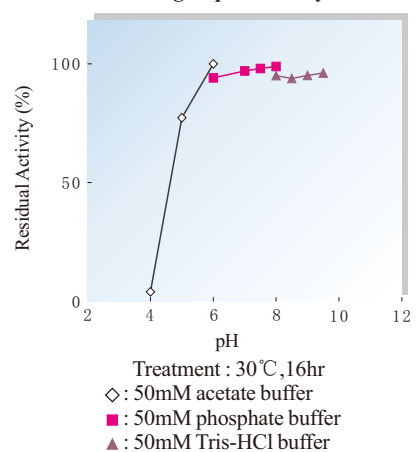
Molecular weight:	160 kDa (gel)	
Isoelectric point:	4.0	
Michaelis constant:	1.4 × 10 ⁻⁴ M (Xanthine)	
Optimum pH:	7.0 ~ 7.5	{Fig. 1}
Optimum temperature:	55°C	{Fig. 3}
pH Stability:	6.0~9.5(30°C,16hr)	{Fig. 2}
Thermal stability:	< 55°C (pH 7.5, 20min)	{Fig. 4}
Inhibitors:	Cu ²⁺ , BME, NEM	
Effect of various chemicals:		{Table 1}

Table 1.**Effect of Various Chemicals on XOD**

[The enzyme dissolved in 100mM Tris-HCl buffer, pH 8.0 (10U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl ₂	2.0	98%
CoCl ₂	2.0	95%
CuSO ₄	2.0	61%
FeCl ₃	2.0	109%
MgSO ₄	2.0	99%
MnSO ₄	2.0	97%
NiCl ₂	2.0	98%
ZnSO ₄	2.0	80%

Chemical	Concn. (mM)	Residual activity
BME	2.0	0%
NEM	2.0	83%
EDTA	5.0	100%
Proclin	0.045%	99%
NaN ₃	20.0	101%
Na-cholate	0.10%	106%
SDS	0.05%	108%
Triton X-100	0.10%	102%
Tween 20	0.10%	110%

Fig. 1 pH Activity**Fig. 3 Temperature activity****Fig. 2 pH Stability****Fig. 4 Thermal stability**