

SARCOSINE OXIDASE

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	SDZ500350
Appearance:	Yellowish amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 1.5.3.1
CAS Number:	9029-22-5
Storage temperature:	-20°C
Specific activity:	≥ 40U/mg protein
Unit definition:	One unit will oxidase one micromole of Sarcosine per min at pH 8.0 at 37°C.

PROPERTIES

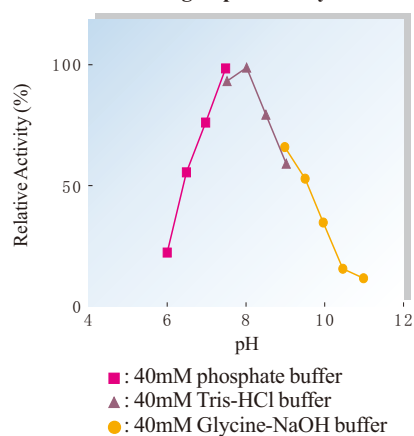
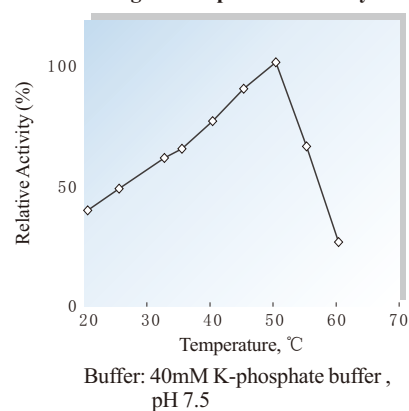
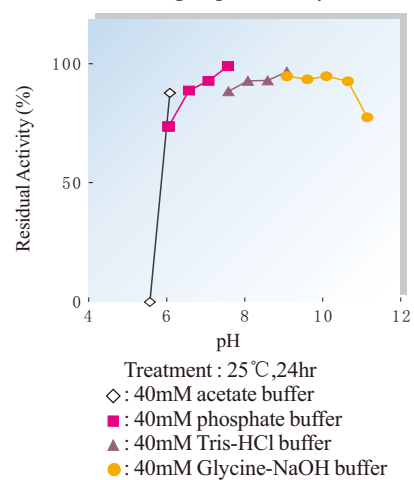
Molecular weight:	44kDa (SDS-PAGE)	
Isoelectric point:	5.8	
Michaelis constant:	$4.3 \times 10^{-3}\text{M}$ (Sarcosine)	
Optimum pH:	8.0	{Fig. 1}
Optimum temperature:	50°C	{Fig. 3}
pH Stability:	6.0-10.5 (25°C, 24hr)	{Fig. 2}
Thermal stability:	< 50°C (pH 8.0, 30min)	{Fig. 4}
Inhibitors:	Cu^{2+} , NEM, Proclin	
Effect of various chemicals:		{Table 1}

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

[The enzyme dissolved in 50mM 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	114%
CoCl ₂	2.0	107%
CuSO ₄	2.0	48%
FeCl ₃	2.0	108%
MgSO ₄	2.0	113%
MnSO ₄	2.0	114%
NiCl ₂	2.0	115%
ZnSO ₄	2.0	87%

Chemical	Concn. (mM)	Residual activity
BME	2.0	104%
NEM	2.0	28%
EDTA	5.0	102%
Proclin	0.045%	29%
NaN ₃	20.0	89%
Na-cholate	0.10%	123%
SDS	0.05%	105%
Triton X-100	0.10%	128%
Tween 20	0.10%	130%

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