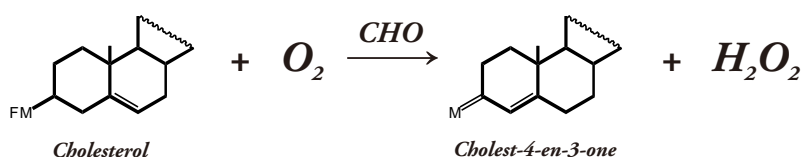


CHOLESTEROL OXIDASE

Cholesterol:oxygen oxidoreductase

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	qs50024
Appearance:	Yellow amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 1.1.3.6
CAS Number:	9028-76-6
Storage temperature:	-20°C
Specific activity:	≥ 80U/mg protein
Unit definition:	One unit will oxidate one micromole of cholesterol per min at pH 7.0 at 37°C.

PROPERTIES

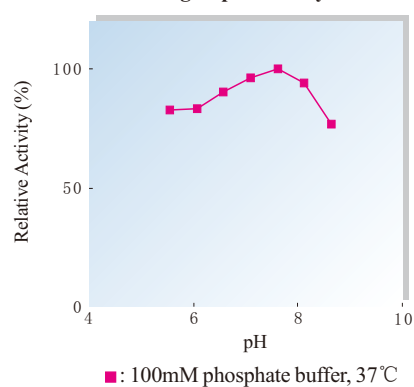
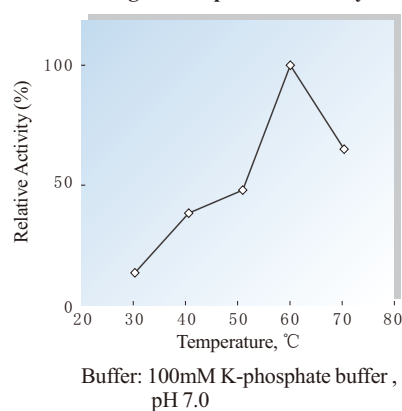
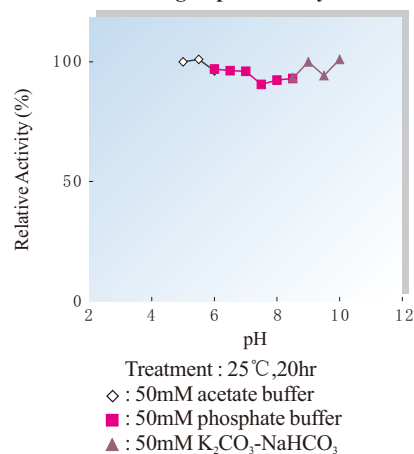
Molecular weight:	55 kDa (Gel filtration)	
Isoelectric point:	6.7	
Michaelis constant:	$2.1 \times 10^{-5} M$ (Cholesterol)	
Optimum pH:	7.5	{Fig. 1}
Optimum temperature:	60°C	{Fig. 3}
pH Stability:	5.0-11.0 (25°C, 20hr)	{Fig. 2}
Thermal stability:	< 50°C (pH 7.0, 15min)	{Fig. 4}
Inhibitors:	SDS	
Effect of various chemicals:		{Table 1}

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

[The enzyme dissolved in 50mM Tris-HCl buffer, pH 7.5 (1U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl ₂	2.0	100%
CoCl ₂	2.0	89%
CuSO ₄	2.0	91%
FeCl ₃	2.0	126%
MgSO ₄	2.0	92%
MnSO ₄	2.0	91%
NiCl ₂	2.0	90%
ZnSO ₄	2.0	124%
BME	2.0	89%

Chemical	Concn. (mM)	Residual activity
NEM	2.0	105%
EDTA	5.0	96%
NaN ₃	20.0	85%
Proclin	0.045%	103%
Na-cholate	0.10%	118%
SDS	0.05%	0%
Triton X-100	0.10%	135%
Tween 20	0.10%	141%
Boric Acid-Borax	2.0	98%

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