

Recombinant Cholesterol Oxidase (CHO)

C774048

Storage temperature: Store at 2-8°C short term (1-2 weeks). Store at -20°C (2 years).
Avoid freeze/thaw cycle. Store in the dark. Desiccated.

Introduction:

Recombinant Cholesterol Oxidase belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with oxygen as acceptor. This enzyme participates in bile acid biosynthesis.

Source: Microorganism

Isoelectric point: 6.7

Michaelis constant: 2.1×10^{-5} M (Cholesterol)

Optimum pH: 7.0~8.0

Optimum temperature: 60°C

pH Stability: 5.0~10.0 (25°C, 20hr)

Thermal stability: <55°C (pH 7.0, 15min)

Inhibitors: $K_4Fe(CN)_6$, SDS

Effect of various chemicals:

Fig. 1

Fig. 3

Fig. 2

Fig. 4

Table 1

Reaction:

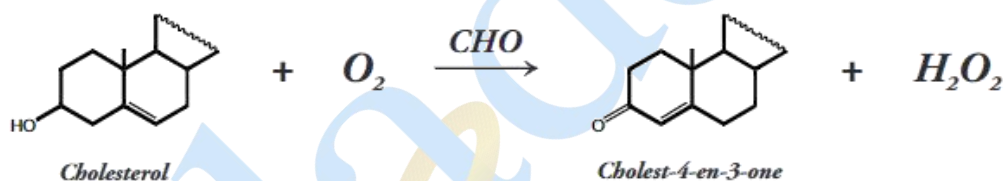


Table 1.

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	95%
$CoCl_2$	2.0	95%
$CuSO_4$	2.0	86%
$FeCl_3$	2.0	13%
$MgSO_4$	2.0	105%
$MnSO_4$	2.0	100%
$NiCl_2$	2.0	86%
$ZnSO_4$	2.0	80%
$K_4Fe(CN)_6$	2.0	105%

Chemical	Concn. (mM)	Residual activity
BME	2.0	93%
NEM	2.0	95%
EDTA	5.0	105%
NaN_3	20.0	107%
Proclin	0.045%	96%
Boric Acid-Borax	2.0	106%
Na-cholate	0.10%	110%
SDS	0.05%	0%
Triton X-100	0.10%	123%
Tween 20	0.10%	127%

Fig. 1 pH Activity

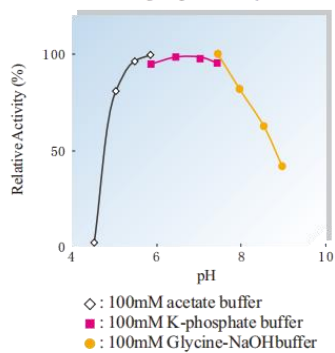


Fig. 3 Temperature activity

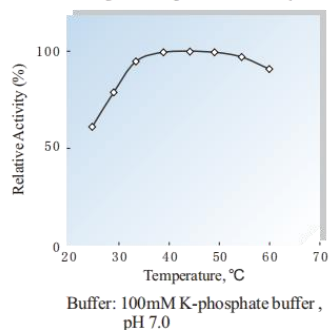


Fig. 2 pH Stability

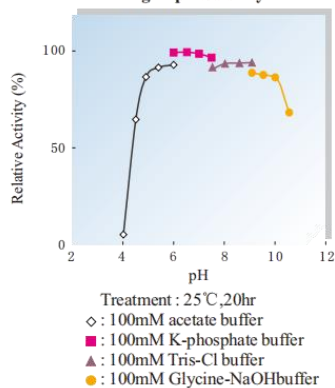


Fig. 4 Thermal stability

