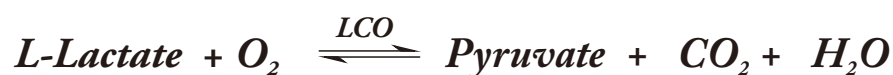


LACTATE OXIDASE

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	SDZ500570
Appearance:	Yellow amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 1.1.3.2
CAS Number:	9028-72-2
Storage temperature:	-2-8°C less than 15 days -20°C long term
Specific activity:	≥ 100U/mg protein
Unit definition:	One unit will convert one micromole of L-Lactate to Pyruvate per minute at pH 7.5 at 37°C.

PROPERTIES

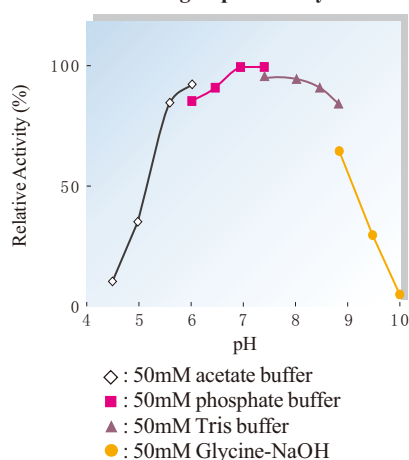
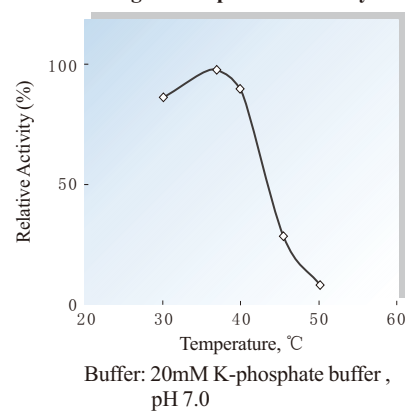
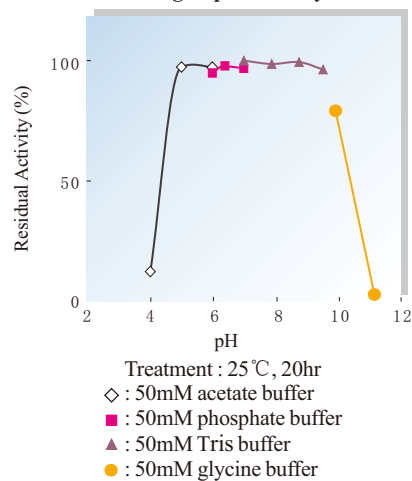
Molecular weight	40kDa(SDS-PAGE)	
Isoelectric point:	5.2	
Michaelis constant:	2.3×10 ⁻³ M(DL-Lactate)	
Optimum pH:	7.0-8.0	{Fig. 1}
Optimum temperature:	35-40°C	{Fig. 3}
pH Stability:	5.0-10.0(25°C, 20hr)	{Fig. 2}
Thermal stability:	< 50°C (pH 7.0, 30min)	{Fig. 4}
Inhibitors:	Cu ²⁺ , Fe ³⁺ , Zn ²⁺ , SDS	
Effect of various chemicals:		{Table 1}

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

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

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl ₂	2.0	110%
CoCl ₂	2.0	98%
CuSO ₄	2.0	23%
FeCl ₃	2.0	52%
MgSO ₄	2.0	100%
MnSO ₄	2.0	97%
NiCl ₂	2.0	89%
ZnSO ₄	2.0	76%
K ₄ Fe(CN) ₆	2.0	100%

Chemical	Concn. (mM)	Residual activity
BME	2.0	98%
NEM	2.0	91%
EDTA	5.0	97%
NaN ₃	20.0	97%
Proclin	0.045%	94%
Na-cholate	0.10%	105%
SDS	0.05%	0%
Triton X-100	0.10%	99%
Tween 20	0.10%	98%

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