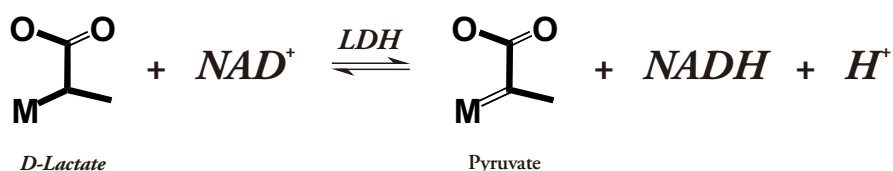


D-LACTATE DEHYDROGENASE

(R)-Lactate:NAD⁺ Oxidoreductase

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	SDZ500161
Appearance:	White amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 1.1.1.28
CAS Number:	9028-36-8
Storage temperature:	-20°C
Specific activity:	≥ 400U/mg protein
Unit definition:	One unit will convert one micromole of pyruvate to D-lactate per min at pH 7.4 at 25°C.

PROPERTIES

Molecular weight:	38 kDa (SDS-PAGE)	
Isoelectric point:	5.8	
Michaelis constant:	5.4 × 10 ⁻⁴ M (Pyruvate, pH 7.0)	
Optimum pH:	7.0	{Fig. 1}
Optimum temperature:	30°C	{Fig. 3}
pH Stability:	5.0~8.0 (25°C, 48hr)	{Fig. 2}
Thermal stability:	< 45°C (pH 7.0, 15min)	{Fig. 4}
Inhibitors:	Co ²⁺ , Cu ²⁺ , Zn ²⁺ , SDS	
Effect of various chemicals:		{Table 1}

Table 1.**Effect of Various Chemicals on D-LDH**

[The enzyme dissolved in 100mM K-phosphate buffer, pH 7.4 (28U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl ₂	2.0	94%
CoCl ₂	2.0	12%
CuSO ₄	2.0	77%
FeCl ₃	2.0	89%
MgSO ₄	2.0	97%
MnSO ₄	2.0	95%
NiCl ₂	2.0	87%
ZnSO ₄	2.0	75%
BME	2.0	96%

Chemical	Concn. (mM)	Residual activity
NEM	2.0	90%
EDTA	5.0	91%
NaN ₃	20.0	92%
Proclin	0.045%	98%
Na-cholate	0.10%	101%
SDS	0.05%	3%
Triton X-100	0.10%	102%
Tween 20	0.10%	97%
Boric Acid-Borax	2.0	94%

