

ADENOSINE DEAMINASE

Adenosine aminohydrolase

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	qs50055
Appearance:	White amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 3.5.4.4
CAS Number:	9026-93-1
Storage temperature:	-20°C
Specific activity:	≥ 150U/mg protein
Unit definition:	One unit will deaminate one micromole of adenosine to inosine per minute at pH 7.4 at 25°C.

PROPERTIES

Molecular weight:	42 kDa (SDS-PAGE)	
Isoelectric point:	5.8	
Michaelis constant:	8.0×10^{-5} M (Adenosine)	
Optimum pH:	7.5	{Fig. 1}
Optimum temperature:	60°C	{Fig. 3}
pH Stability:	7.5(25°C, 16hr)	{Fig. 2}
Thermal stability:	<60°C (pH 7.4, 30min)	{Fig. 4}
Inhibitors:	Cu^{2+} , Fe^{3+} , Ni^{2+} , SDS	
Effect of various chemicals:		{Table 1}

Table 1.

Effect of Various Chemicals on ADA

[The enzyme dissolved in 50mM Tris-HCl buffer, pH 7.5 (10U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl ₂	2.0	91%
CoCl ₂	2.0	88%
CuSO ₄	2.0	3%
FeCl ₃	2.0	29%
MgSO ₄	2.0	94%
MnSO ₄	2.0	94%
NiCl ₂	2.0	63%
ZnSO ₄	2.0	83%

Chemical	Concn. (mM)	Residual activity
BME	2.0	88%
NEM	2.0	100%
EDTA	5.0	100%
NaN ₃	20.0	98%
Proclin	0.045%	99%
Na-cholate	0.10%	114%
SDS	0.05%	5%
Triton X-100	0.10%	108%
Tween 20	0.10%	114%

