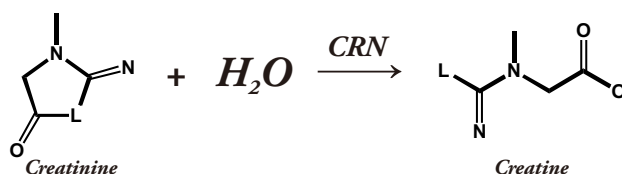


CREATININASE

Creatinine amidohydrolase

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	qs50034
Appearance:	White amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 3.5.2.10
CAS Number:	9025-13-2
Storage temperature:	-20°C
Specific activity:	≥ 500U/mg protein
Unit definition:	One unit will convert one micromole of creatinine to creatine per min at pH 7.5 at 37°C.

PROPERTIES

Molecular weight:	29kD(SDS-PAGE)	
Isoelectric point:	5.7	
Michaelis constant:	$5.8 \times 10^{-3}M$ (Creatinine)	
Optimum pH:	7.0~ 8.0	{Fig. 1}
Optimum temperature:	70°C	{Fig. 3}
pH Stability:	8.5~9.0 (25°C, 16hr)	{Fig. 2}
Thermal stability:	< 70°C (pH 7.4, 30min)	{Fig. 4}
Inhibitors:	Cu^{2+}, Zn^{2+}	
Effect of various chemicals:		{Table 1}

Table 1.

Effect of Various Chemicals on CRN

[The enzyme dissolved in 50mM Tris 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	100%
CoCl ₂	2.0	300%
CuSO ₄	2.0	24%
FeCl ₃	2.0	118%
MgSO ₄	2.0	100%
MnSO ₄	2.0	120%
NiCl ₂	2.0	100%
ZnSO ₄	2.0	65%

Chemical	Concn. (mM)	Residual activity
BME	2.0	120%
NEM	2.0	100%
EDTA	5.0	100%
NaN ₃	20.0	100%
Proclin	0.045%	159%
Na-cholate	0.10%	125%
SDS	0.05%	125%
Triton X-100	0.10%	173%
Tween 20	0.10%	135%

