

CYSTATHIONINE β -LYASE

REACTION:



PRODUCT DESCRIPTION

Catalog No.:	qs50030
Appearance:	Yellowish amorphous powder
Source:	Microorganism
Enzyme Commission Number:	EC 4.4.1.8
CAS Number:	9055-05-4
Storage temperature:	-20°C
Specific activity:	≥ 45U/mg protein
Unit definition:	One unit will hydrolyze one micromole of cystathionine per min at pH 8.0 at 37°C.

PROPERTIES

Molecular weight:	43kD (SDS-PAGE)	
Isoelectric point:	6.2	
Michaelis constant:	1.0×10 ⁻³ M (L-Cystathionine)	
Optimum pH:	8.0-8.5	{Fig. 1}
Optimum temperature:	37°C	{Fig. 3}
pH Stability:	5.5-9.5 (25°C, 16hr)	{Fig. 2}
Thermal stability:	< 45°C (pH 7.5, 30min)	{Fig. 4}
Inhibitors:	Co ²⁺ , Cu ²⁺ , Fe ³⁺ , Mn ²⁺ , Ni ²⁺ , Zn ²⁺ , NEM, SDS	
Effect of various chemicals:		{Table 1}

Table 1.

Effect of Various Chemicals on CBL

[The enzyme dissolved in 50mM Tris-HCl buffer, pH8.0 (20U/ml) was incubated with each chemical at 37°C for 2hr.]

Chemical	Concn. (mM)	Residual activity
None	-	100%
CaCl ₂	2.0	119%
CoCl ₂	2.0	3%
CuSO ₄	2.0	2%
FeCl ₃	2.0	20%
MgSO ₄	2.0	116%
MnSO ₄	2.0	74%
NiCl ₂	2.0	19%
ZnSO ₄	2.0	2%

Chemical	Concn. (mM)	Residual activity
BME	2.0	98%
NEM	2.0	12%
EDTA	5.0	113%
NaN ₃	20.0	110%
Na-cholate	0.10%	107%
SDS	0.05%	4%
Triton X-100	0.10%	110%
Tween 20	0.10%	111%

Fig. 1 pH Activity

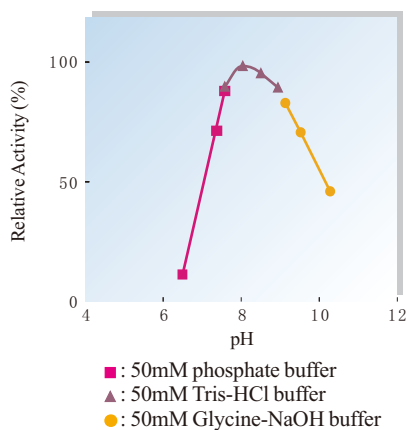


Fig. 3 Temperature activity

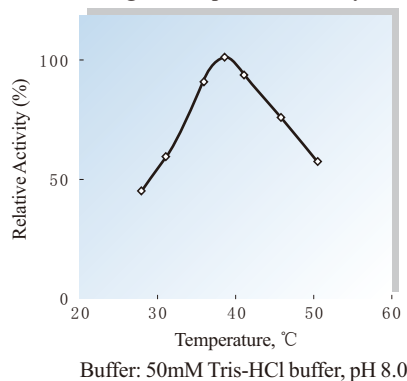


Fig. 2 pH Stability

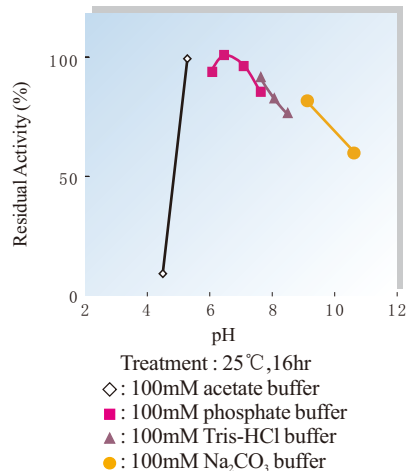


Fig. 4 Thermal stability

