

Cytidine deaminase, human recombinant

CATALOG #: 7363-100 100 µg

ALTERNATE NAMES: CDA, CDD, Cytidine aminohydrolase, Cytosine nucleoside deaminase

SOURCE: E. coli

PURITY: > 90% by SDS-PAGE

FORM: Liquid

FORMULATION: 0.5 mg/ml in 20 mM Tris-HCl buffer (pH 8.0) containing 100 mM NaCl, 1 mM DTT, 2 mM EDTA and 40% glycerol.

MOL. WEIGHT: 18.3 kDa (166 aa, 1-146 aa + His Tag).

STORAGE CONDITIONS: Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

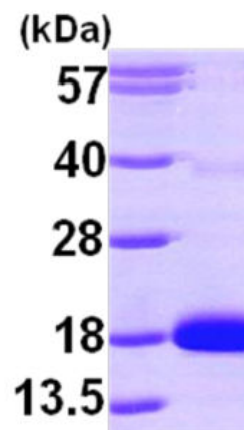
DESCRIPTION: CDA (Cytidine deaminase) is an enzyme that scavenges exogenous and endogenous cytidine and 2'-deoxycytidine for UMP synthesis. This protein is one of several deaminases responsible for maintaining the cellular pyrimidine pool. The protein also catalyzes the deamination of chemotherapeutic cytosine nucleoside analogs such as Ara-C and 5-azacytidine, which results in the loss of their cytotoxic and antitumor function. It can form homotetramers and is mainly expressed in granulocytes. Recombinant human CDA protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography.

AMINO ACID SEQUENCE: MGSSHHHHHH SGLVPRGSH MAQKRPACTL
 KPECVQQLLV CSQEAKQSAY CPYSHFPVGA ALLTQEGRIF KGCNIENACY
 PLGICAERTA IQKAVSEGYK DFRAIAIASD MQDDFISPCG ACRQVMREFG
 TNWPVYMTKP DGTIVYMTVQ ELLPSSFGPE DLQKTQ

BIOLOGICAL ACTIVITY: Specific activity is > 3.5 unit/mg. One unit of activity was defined as the amount required to deaminate 1.0 µmole of cytidine per min at pH 7.5 at 25°C

ACTIVITY ASSAY:

1. Prepare 150 µl assay buffer. The final concentrations are 50 mM Tris-HCl (pH 7.5), 100 µM cytidine.
2. Add 50 µl recombinant CDA protein with concentration 0.25 µg in assay buffer.
3. Mix by inversion and records the decrease at A280 nm for approximately 5 minutes.



Cytidine millimolar extinction coefficient:

- 5.27 (mM⁻¹.cm⁻¹)
- 100 µM / 50 mM Tris-HCl (pH 7.5)
- PerkinElmer VICTOR X3 / A280nm
- UV Plate (Costar, Cat. No. 3635)
- Cytidine (Sigma, Cat. No. C4654)

15% SDS-PAGE (3ug)

CDA, human recombinant

RELATED PRODUCTS:

- 2'-Deoxy-5-fluorocytidine (Cat. No. 2387-50, -250)
- 5-Aza-2'-deoxycytidine (Cat. No. 1754-10, -50)
- 5-Azacytidine (Cat. No. 1854-50, -250)
- 5-Methylcytidine (Cat. No. 2306-50, -250)
- Clofarabine (Cat. No. 2236-5, -25)
- Gemcitabine Hydrochloride (Cat. No. 1759-25, -100)
- Tetrahydrouridine (Cat. No. 1671-10, -25)
- EZSolution™ Tetrahydrouridine (Cat. No. 2355-25)
- Zebularine (Cat. No. 2225-1, -5)

FOR RESEARCH USE ONLY! Not to be used in humans.