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Datasheet for ABIN7317867

CSTB Protein (His tag)



Overview

Quantity:	100 μg
Target:	CSTB
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This CSTB protein is labelled with His tag.

Product Details

Purpose:	Recombinant Human Cystatin B/CSTB Protein (His Tag)(Active)
Sequence:	Met 2-Phe 98
Characteristics:	A DNA sequence encoding the human CSTB (P04080) (Met 2-Phe 98) was expressed, with a polyhistide tag at the N-terminus.
Purity:	> 95 % as determined by reducing SDS-PAGE.
Biological Activity Comment:	Measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate Z-FR-AMC (R&D Systems, Catalog # ES009). The IC50 value is < 15 nM.

Target Details

Target:	CSTB
Alternative Name:	Cystatin B/CSTB (CSTB Products)

Background:

Background: Cystatin-B, also known as CPI-B, Liver thiol proteinase inhibitor, Stefin-B, CSTB and CST6, is a cytoplasm and nucleus protein which belongs to the cystatin family. Cystatin-B / CSTB is an intracellular thiol proteinase inhibitor. Tightly binding reversible inhibitor of cathepsins L, H and B. Cystatin-B / CSTB is able to form a dimer stabilized by noncovalent forces, inhibiting papain and cathepsins I, h and b. Cystatin-B / CSTB is also thought to play a role in protecting against the proteases leaking from lysosomes. Defects in Cystatin-B / CSTB are the cause of progressive myoclonic epilepsy type 1 (EPM1) which is an autosomal recessive disorder characterized by severe, stimulus-sensitive myoclonus and tonic-clonic seizures. The cystatins are a family of cysteine protease inhibitors with homology to chicken cystatin. Cystatins are physiological inhibitors of cysteine proteinases which are widely distributed in human tissues and fluids. Cystatins typically comprise about 115 amino acids, are largely acidic, contain four conserved cysteine residues known to form two disulfide bonds. Cystatins may be glycosylated and / or phosphorylated, with similarity to fetuins, kininogens, stefins, histidine-rich glycoproteins and cystatin-related proteins. Some of the members are active cysteine protease inhibitors, while others have lost or perhaps never acquired inhibitory activity. Cystatins mainly inhibit peptidases belonging to peptidase families C1 (papain family) and C13 (legumain family).

Synonym: CST6;EPM1;EPM1A;PME;STFB;ULD

Molecular Weight:

12.5 kDa

UniProt:

P04080

Pathways:

Response to Water Deprivation

Application Details

Restrictions:

For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile 50 mM Tris, 50 mM NaCl, pH 8.0
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted

samples are stable at < -20°C for 3 months.