



Recombinant Protein Technical Manual

Recombinant Human Cystatin B/CSTB Protein (His Tag)(Active)

RPES3235

Product Data:

Product SKU: RPES3235

Size: 50µg

Species: Human

Expression host: E. coli

Uniprot: P04080

Protein Information:

Molecular Mass: 12.5 kDa

AP Molecular Mass: 15 kDa

Tag: N-His

Bio-activity: 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.

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: 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.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile 50mM Tris, 50mM NaCl, pH 8.0

Reconstitution: Please refer to the printed manual for detailed information.

Application:

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

Immunogen Information:

Sequence: Met 2-Phe 98

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 L, 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).