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CSTB Human

Catalog #:PRPS-616

For research use only.

Description:CSTB Human Recombinant fused to His-Tag at N-Terminus produced in E.Coli is a single, non-glycosylated polypeptide chain containing 118 amino acids and having a molecular mass of 13 kDa.

Synonyms: Cystatin-B, Stefin-B, Liver thiol proteinase inhibitor, CPI-B, CSTB, CST6, EPM1, PME, STFB.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence:MGSSHHHHHH SSGLVPRGSH MMCGAPSATQ PATAETQHIA DQVRSQLEEK ENKKFPVFKA VSFKSQVVAG TNYFIKVHVG DEDFVHLRVF QSLPHENKPL TLSNYQTNKA KHDELTYF.

Purity: Greater than 95.0% as determined by SDS-PAGE.

Formulation:
The protein solution contains 20mM Tris-HCl pH-8 & 50mM NaCl.

Stability:
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

Usage:
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

Introduction:
Type 1 cystatins are also called stefins which function as intracellular thiol protease inhibitors. Cystatin-B protein is able to form a dimer stabilized by noncovalent forces, inhibiting papain and cathepsins l, h and b. CSTB protein protects proteases leakage from lysosomes. Mutations in Stefin-B gene cause primary defects in patients with progressive myoclonic epilepsy (EPM1), a degenerative disease of the central nervous system. CSTB is overexpressed & elevated in the serum ofHCC patients. Cystatin-B in vivo has a polymeric structure which is sensitive to the redox environment. Cystatin-B inhibits bone resorption by down-regulating intracellular cathepsin K activity despite increased osteoclast survival. Protein and mRNA levels of stefin B are significantly lower in atypical benign meningiomas. Stefins-A & Stefin-B which belong to the type-1 Cystatins, are up-regulated in lung tumours and thus able to counteract harmful tumour-associated proteolytic activity. Human stefin-A & Stefin-B form amyloid fibrils. Copper binding by stefin-B reduces amyloid fibril formation.A number of alternatively spliced CSTB isoforms were recognized in patients with progressive myoclonus epilepsy. Decreased CSTB activity in EPM1 pathogenesis is controled by cathepsins throµgh increased activity of cathepsin-S & cathepsin-L.

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