CTSK Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	CTSK, Recombinant Protein
Full Product Name	Recombinant Human CTSK protein (His tag)
Product Gene Name	CTSK recombinant protein
Product Synonym Names	CTS02; CTSK; CTSO; CTSO1; CTSO2; PKND; PYCD
Sequence	Ala115-Met 329
Host	E coli
Form/Format	Lyophilized from sterile PBS, pH 7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Purity/Purification	>95% as determined by reducing SDS-PAGE.
Preparation and Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 degree C. Reconstituted protein solution can be stored at 4-8 degree C for 2-7 days. Aliquots of reconstituted samples are stable at < -20 degree C for 3 months.
Molecular Weight	36,966 Da
Chromosome Location	Chromosome: 1; NC_000001.10 (150768684..150780917, complement). Location: 1q21
OMIM	265800
3D Structure	ModBase 3D Structure for P43235
Species	Human
Tag	N-His
Endotoxin	<10EU/mg of the protein as determined by the LAL method.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5mg/mL. Concentration is measured by UV-Vis.
Product Categories/Family for CTSK recombinant protein	Proteins; Recombinant Proteins; Others; Cancer; Cell Biology; Cardiovascular; Neuroscience; Signal Transduction
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CTSK recombinant protein	Thiol protease involved in osteoclastic bone resorption and may participate partially in the disorder of bone remodeling. Displays potent endoprotease activity against fibrinogen at acid pH. May play an important role in extracellular matrix degradation. Involved in the release of thyroid hormone thyroxine (T4) by limited proteolysis of TG/thyroglobulin in the thyroid follicle lumen.
Other Notes	Small volumes of CTSK recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CTSK purchase	MBS2580480 is a recombinant protein targeting CTSK. Also known as Recombinant Human CTSK protein (His tag). Host: E coli.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CTSK. It may not necessarily be applicable to this product.

NCBI GI #	4503151
NCBI GeneID	1513
NCBI Accession #	NP_000387.1
UniProt Primary Accession #	P43235
UniProt Secondary Accession #	Q6FHS6
UniProt Related Accession #	P43235
GenBank Nucleotide #	NM_000396.3
NCBI Official Full Name	cathepsin K preproprotein
NCBI Official Synonym Full Names	cathepsin K
NCBI Official Symbol	CTSK
NCBI Official Synonym Symbols	CTSO; PKND; PYCD; CTS02; CTSO1; CTSO2
UniProt Protein Name	Cathepsin K
UniProt Synonym Protein Names	Cathepsin O; Cathepsin O2; Cathepsin X
Protein Family	Cathepsin
UniProt Gene Name	CTSK
UniProt Synonym Gene Names	CTSO; CTSO2
UniProt Entry Name	CATK_HUMAN
NCBI Protein Information	cathepsin K; cathepsin O; cathepsin X; cathepsin O1; cathepsin O2
NCBI Summary for CTSK	The protein encoded by this gene is a lysosomal cysteine proteinase involved in bone remodeling and resorption. This protein, which is a member of the peptidase C1 protein family, is predominantly expressed in osteoclasts. However, the encoded protein is also expressed in a significant fraction of human breast cancers, where it could contribute to tumor invasiveness. Mutations in this gene are the cause of pycnodysostosis, an autosomal recessive disease characterized by osteosclerosis and short stature. [provided by RefSeq, Apr 2013]
UniProt Comments for CTSK	CTSK: Closely involved in osteoclastic bone resorption and may participate partially in the disorder of bone remodeling. Displays potent endoprotease activity against fibrinogen at acid pH. May play an important role in extracellular matrix degradation. Defects in CTSK are the cause of pycnodysostosis (PKND). PKND is an autosomal recessive osteochondrodysplasia characterized by osteosclerosis and short stature. Belongs to the peptidase C1 family. Protein type: Protease; EC 3.4.22.38 Chromosomal Location of Human Ortholog: 1q21 Cellular Component: extracellular space; extracellular region Molecular Function: collagen binding; protein binding; proteoglycan binding; fibronectin binding; cysteine-type endopeptidase activity; cysteine-type peptidase activity Biological Process: extracellular matrix disassembly; collagen catabolic process; intramembranous ossification; extracellular matrix organization and biogenesis; proteolysis involved in cellular protein catabolic process; toll-like receptor signaling pathway; innate immune response; proteolysis; bone resorption Disease: Pycnodysostosis
Research Articles on CTSK	**1.** Our results demonstrate that increased adhesion, migration and invasiveness of tumor cells depend on the inactivation of the tumor suppressive function of profilin 1 by cathepsin X.

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