Active Recombinant Human Procathepsin K Protein

Cat. No. CTSK-22H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CTSK was expressed in Insect cells.
Species	Human
Source	Insect Cells
Description	Cathepsin K, a member of the papain family of cysteine proteases, acts upon proteins such as collagen, AL amyloid, kinin and elastin. It is a lysosomal protease expressed primarily in osteoclasts, but also in other cell types such as macrophages. It functions in bone remodeling and is implicated in disease states such as atherosclerosis, arthritis and pycnodysostosis.
Form	Liquid. In 27.8μ20mM sodium phosphate, pH 6.9, 500mM NaCl, 1 mM EDTA.
Bio-activity	To activate proenzyme, add 32.5mM NaOAc, pH 3.5, to 20% of procathepsin K volume (e.g., 5μprocathepsin K + 1μ32.5mM NaOAc, pH 3.5), and incubate at room temperature for 25-30 minutes, or at +4 centigrade for approximately seven hours.
Molecular Mass	35.3kDa
Purity	≥95% (SDS-PAGE)
Applications	Useful tool to study enzyme kinetics, cleave target substrates and screen for inhibitors.

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Notes	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -80 centigrade.
Stability	Use/Stability: -80 centigrade. After initial defrost, aliquot product into individual tubes and refreeze at -80 centigrade. Avoid repeated freeze/defrost cycles and extended periods unfrozen. This enzyme is stable when stored as received under the above conditions. Procedures such as dilution of the enzme followed by refreezing could lead to loss of activity.
Storage	Long Term Storage: -80 centigrade

GENE INFORMATION

Gene Name	CTSK cathepsin K [Homo sapiens]
Official Symbol	CTSK
Synonyms	CTSK; cathepsin K; cathepsin K (pycnodysostosis) , CTSO, CTSO2, PYCD; PKND; cathepsin O; cathepsin X; cathepsin O1; cathepsin O2; CTSO; PYCD; CTS02; CTSO1; CTSO2; MGC23107;
Gene ID	1513
mRNA Refseq	NM_000396
Protein Refseq	NP_000387
MIM	601105
UniProt ID	P43235
Chromosome	1q21

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Location	
Pathway	Immune System, organism-specific biosystem; Innate Immune System, organism-specific biosystem; Lysosome, organism-specific biosystem; Lysosome, conserved biosystem; Osteoclast Signaling, organism-specific biosystem; Osteoclast differentiation, organism-specific biosystem; Osteoclast differentiation, conserved biosystem;
Function	cysteine-type endopeptidase activity; cysteine-type peptidase activity; peptidase activity;

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