

DATASHEET

Version 20181206

Cathepsin D, Human

Cat. No.: Z03331-10

Size: 10.0 ug

Synonyms: Cathepsin D; CTSD

Description:

Cathepsin D, also known as CTSD and CPSD, belongs to the peptidase A1 family. Cathepsin D is an aspartic protease that becomes activated at a pH of 5 in hepatocyte endosomes where it degrades insulin. In addition to low pH, activation of cathepsin D depends critically on protonation of its Asp active site residue. Asp-protonation and low pH leads to a conformational switch in cathepsin-D where the N terminal segment of the protease moves out of the active site. Cathepsin D can be cleaved into the following 2 chains: cathepsin D light chain and cathepsin D heavy chain, which is expressed in the aorta extracellular space. Cathepsin D plays a role in antigen processing, cell proliferation and tissue renewal, and prohormone activation.

Recombinant Human Cathepsin D produced in CHO cells is a polypeptide chain containing 402 amino acids. A fully biologically active molecule, rh Cathepsin D has a molecular mass of 44 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 LVRIPLHKFT SIRRTMSEVG GSVEDLIAKG PVSQYSQAVP
00041 AVTEGPIPEV LKNYMDAQYY GEIGIGTPPQ CFTVVFDTGS
00081 SNLWVPSIHC KLLDIACWIH HKYNSDKSST YVKNGTSDFI
00121 HYGSGSLSGY LSQDTVSVPC QSASSASALG GVKVERQVFG
00161 EATKQPGITF IAAKFDGILG MAYPRISVNN VLPVFDNLMQ
00201 QKLVDQNIFS FYLSRDPDAQ PGGELMLGTT DSKYYKGSLS
00241 YLNVTRKAYW QVHLDQVEVA SGLTLCKEGC EAIVDTGTSL
00281 MVGPVDEVRE LQKAIGAVPL IQGEYMIPEE KVSTLPAITL
00321 KLGKGYKLS PEDYTLKVSQ AGKTLCLSGF MGMDIPPPSG
00361 PLWILGDVFI GRYTTFVDRD NNRVGFEEAA RLHHHHHHHH
00401 HH
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Source: CHO

Biological Activity: The Specific Activity is > 200 pmol/min/μg, measured by Cathepsin D's ability to cleave the fluorogenic peptide substrate Mca-GKPILFFRLK(Dnp)-D-R-NH₂ (Enzo, Catalog: P145).

Assay Buffer: 0.1 M NaOAc, 0.1 M NaCl, pH 3.5, 10 mM DTT.

Molecular Weight: 44 kDa, observed by reducing SDS-PAGE.

Formulation: Liquid after a 0.2 μm filtered solution in 50 mM NaOAc, 150 mM NaCl, pH 6.5.

Purity: > 95% as analyzed by SDS-PAGE.

Endotoxin Level: < 0.2 EU/μg, determined by LAL method.

Storage: Recombinant Human Cathepsin D remains stable up to 6 months at lower than -70°C from date of receipt under sterile conditions. Up to 3 months at lower than -70°C under sterile conditions after opening. Avoid repeated freeze-thaw cycles.