
Product Name: KD-Validated Cathepsin L/V/K/H Recombinant Rabbit Monoclonal Antibody

Catalog #: KVA01061

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM
Reactivity	Human,M
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000
Molecular Weight	Predicted, 38 kDa, observed, 38 kDa

Antigen Information

Gene Name	CTSL/CTSV/CTSK/CTSH CTSL; Cathepsin L; Cathepsin L1; CTSL1; Major Excreted Protein; Procathepsin L; EC 3.4.22.15; FLJ31037; MEP; EC 3.4.22; CATL; CTSV; Cathepsin V; CTSU; Cathepsin L2; CTSL2; Cathepsin U; CATL2; Cathepsin L2, Preproprotein; EC 3.4.22.43; EC 3.4.22; CTSK; Cathepsin K; CTSO; PKND;
Alternative Names	CTSO; Cathepsin O2; EC 3.4.22.38; Cathepsin O; Cathepsin X; PYCD; Cathepsin K (Pycnodysostosis); Cathepsin O1; EC 3.4.22; CTSO2; CTSO1; CTSH; Cathepsin H; ACC-4; ACC-5; ACC4; ACC5; CPSB; Pro-Cathepsin H; N-Benzoylarginine-Beta-Naphthylamide Hydrolase; Cathepsin B3; Cathepsin BA; EC 3.4.22.16; EC 3.4.22; Aleurai
Gene ID	1514,1515,1513,1512
SwissProt ID	P07711,O60911, P43235,P09668

Immunogen

A synthesized peptide derived from human Cathepsin L/V/K/H

Background

CTSL: The protein encoded by this gene is a lysosomal cysteine proteinase that plays a major role in intracellular protein catabolism. Its substrates include collagen and elastin, as well as alpha-1 protease inhibitor, a major controlling element of neutrophil elastase activity. The encoded protein has been implicated in several pathologic processes, including myofibril necrosis in myopathies and in myocardial ischemia, and in the renal tubular response to proteinuria. This protein, which is a member of the peptidase C1 family, is a dimer composed of disulfide-linked heavy and light chains, both produced from a single protein precursor. Additionally, this protein cleaves the S1 subunit of the SARS-CoV-2 spike protein, which is necessary for entry of the virus into the cell. [provided by RefSeq, Aug 2020]

CTSV: The protein encoded by this gene, a member of the peptidase C1 family, is a lysosomal cysteine proteinase that may play an important role in corneal physiology. This gene is expressed in colorectal and breast carcinomas but not in normal colon, mammary gland, or peritumoral tissues, suggesting a possible role for this gene in tumor processes. Alternatively spliced variants, encoding the same protein, have been identified. [provided by RefSeq, Jan 2011]

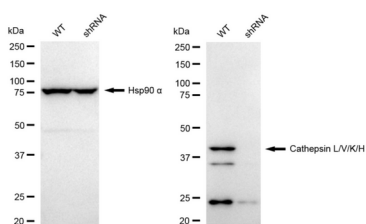
CTSK: The protein encoded by this gene is a lysosomal cysteine proteinase involved in bone remodeling and resorption. This protein, which is a member of the peptidase C1 protein family, is predominantly expressed in osteoclasts. However, the encoded protein is also expressed in a significant fraction 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]

CTSH: The protein encoded by this gene is a lysosomal cysteine proteinase important in the overall degradation of lysosomal proteins. It is composed of a dimer of disulfide-linked heavy and light chains, both produced from a single protein precursor. The encoded protein, which belongs to the peptidase C1 protein family, can act both as an aminopeptidase and as an endopeptidase. Increased expression of this gene has been correlated with malignant progression of prostate tumors. Alternate splicing of this gene results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jan 2016]

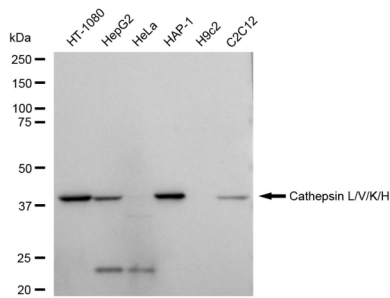
Research Area

Signal Transduction

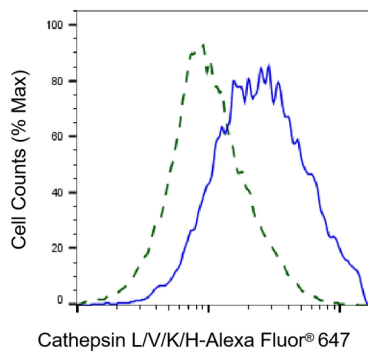
Image Data



Western blotting analysis using Cathepsin L/V/K/H antibody (KVA01061). Cathepsin L/V/K/H expression in wild type (WT) and Cathepsin L/V/K/H shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with Cathepsin L/V/K/H antibody (KVA01061, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Western blotting analysis using Cathepsin L/V/K/H antibody (KVA01061). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with Cathepsin L/V/K/H antibody (KVA01061, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Validation of Cathepsin L/V/K/H knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with Cathepsin L/V/K/H antibody (KVA01061, 1:2,000) and analyzed using BD flow cytometer.