

Cathepsin V (CTSV) Active Protein | CTSV active protein

Active Cathepsin V (CTSV)

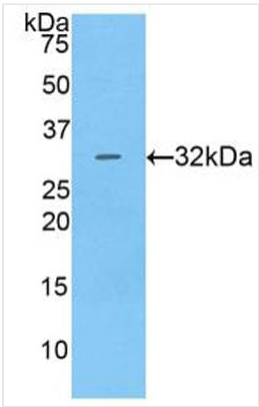
CATALOG # AAA148206	HOST E. coli	REACTIVITY Homo sapiens (Human)	APPLICATIONS Activity Assay
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PRODUCT SYNONYMS

Cathepsin V (CTSV); Active Cathepsin V (CTSV); CTSV active protein

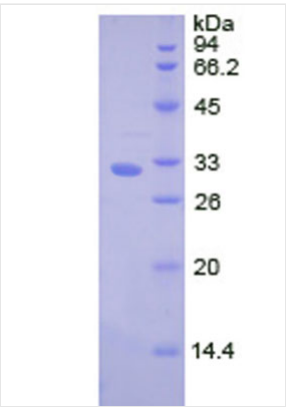
PRODUCT SPECIFICATIONS

Host	E. coli
Reactivity	Homo sapiens (Human)
Purity/Purification	>95%
Form/Format	20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl and 5% trehalose
Concentration	Original Concentration: 250ug/mL (varies by lot)
Applicable Applications for CTSV active protein	Activity Assay
Source	Prokaryotic expression.
Residues	Gly64~Val334
Tags	N-terminal His-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method).
Predicted isoelectric point	8.8
Usage	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Storage: Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.



WB (Western Blot)

Figure 3. Western BlotSample: Recombinant CTSV, Human;Antibody: Rabbit Anti-Human CTSV Ab



SDS-PAGE

Figure 2. SDS-PAGESample: Active recombinant CTSV, Human

GEYSQ GK HGFTMAMNAF GDMTNEEF RQ MMGCFRNQKF
RKGVVFREPL FLDLPKSDVW RKGQYVTPVK NQKQCGSCWA FSATGALEGQ
MFRKTGKLV LSEQLVDCS RQGNQGCNG GFMAFAQYV KENGGLDSEE
SYPYVAVDEI CKYRPENSA NDTGFTVVAP GKEALMKAV ATVGPI SVAM
DAGHSSFQFY KSGIYFEPDC SSKNLDHGVL VVG YGFEGAN SNNSKYHLVK
NSWGPEWGSN GYVKIAKDN NHCGIATAAS YPNV

GEYSQ GK HGFTMAMNAF GDMTNEEF RQ MMGCFRNQKF
RKGVVFREPL FLDLPKSDVW RKGQYVTPVK NQKQCGSCWA FSATGALEGQ
MFRKTGKLV LSEQLVDCS RQGNQGCNG GFMAFAQYV KENGGLDSEE
SYPYVAVDEI CKYRPENSA NDTGFTVVAP GKEALMKAV ATVGPI SVAM
DAGHSSFQFY KSGIYFEPDC SSKNLDHGVL VVG YGFEGAN SNNSKYHLVK
NSWGPEWGSN GYVKIAKDN NHCGIATAAS YPNV

Bioactivity

Cathepsin V (CTSV) is a lysosomal cysteine proteinase which belongs to peptidase C1 family. It is expressed in normal human thymus, testis and corneal epithelium. Cathepsin V plays an important role in corneal physiology and mediates degradation of invariant chain in human thymus. Besides, Retinoblastoma Protein 1 (RB1) has been identified as an interactor of CTSV, thus a binding ELISA assay was conducted to detect the interaction of recombinant human CTSV and recombinant human RB1. Briefly, CTSV were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to RB1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CTSV pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of CTSV and RB1 was shown in Figure 1, and this effect was in a dose dependent manner. Figure 1. The binding activity of CTSV with RB1.

Sequence

ADDITIONAL INFORMATION

Product Categories/Family for CTSV active protein	Enzyme & Kinase; Tumor immunity; Dermatology
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NCBI AND UNIPROT INFORMATION

NCBI GI #	320118898
NCBI GeneID	1515
NCBI Accession #	NP_001188504.1
NCBI GenBank Nucleotide #	NM_001201575.1
UniProt Accession #	O60911; O60233; Q2TB86; Q5T1U0
Molecular Weight	Predicted Molecular Mass: 31.1kDa Accurate Molecular Mass: 32kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	cathepsin L2 preproprotein
NCBI Official Synonym Full Names	cathepsin V
NCBI Official Symbol	CTSV
NCBI Official Synonym Symbols	CTSU; CATL2; CTSL2

NCBI Protein Information	cathepsin L2
UniProt Protein Name	Cathepsin L2
UniProt Gene Name	CTSV
UniProt Synonym Gene Names	CATL2; CTSL2; CTSU

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-homo-sapiens-human-active-protein/cathepsin-v-ctsv/148206>