

# cathepsin V (BV55-1): sc-58336

## BACKGROUND

cathepsin V (CTSU, CTSV, CATL2, cathepsin U, cathepsin L2) is a lysosomal cysteine proteinase that influences corneal physiology and mediates degradation of invariant chain in human thymus. cathepsin V is present in corneal epithelium, activated macrophages and colorectal and breast carcinomas. A 1.8 kb mRNA to cathepsin V is present in normal human thymus and testis. cathepsin V is a member of the peptidase C1 family. Cysteine proteinases are synthesized as proenzymes, which are processed to the corresponding proenzymes. The proenzymes are either targeted to the lysosome or continue along the cellular secretory route.

## REFERENCES

1. Adachi, W., et al. 1998. Isolation and characterization of human cathepsin V: a major proteinase in corneal epithelium. *Invest. Ophthalmol. Vis. Sci.* 39: 1789-1796.
2. Santamaria, I., et al. 1998. cathepsin L2, a novel human cysteine proteinase produced by breast and colorectal carcinomas. *Cancer Res.* 58: 1624-1630.
3. Itoh, R., et al. 1999. Genomic organization and chromosomal localization of the human cathepsin L2 gene. *DNA Res.* 6: 137-140.
4. Bromme, D., et al. 1999. Human cathepsin V functional expression, tissue distribution, electrostatic surface potential, enzymatic characterization and chromosomal localization. *Biochemistry* 38: 2377-2385.
5. Tolosa, E., et al. 2003. cathepsin V is involved in the degradation of invariant chain in human thymus and is overexpressed in myasthenia gravis. *J. Clin. Invest.* 112: 517-526.

## CHROMOSOMAL LOCATION

Genetic locus: CTSL2 (human) mapping to 9q22.2.

## SOURCE

cathepsin V (BV55-1) is a mouse monoclonal antibody raised against a synthetic peptide surrounding amino acid 21 of cathepsin V of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

cathepsin V (BV55-1) is recommended for detection of cathepsin V and procathepsin V of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with other cathepsins.

Suitable for use as control antibody for cathepsin V siRNA (h): sc-44526, cathepsin V shRNA Plasmid (h): sc-44526-SH and cathepsin V shRNA (h) Lentiviral Particles: sc-44526-V.

Molecular Weight of cathepsin V: 42 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.