The cathepsin family of proteolytic enzymes contains several diverse classes of proteases. The cysteine protease class comprises cathepsins B, L, H, K, S and O. The aspartyl protease class is composed of cathepsins D and E. Cathepsin G is in the serine protease class. Most cathepsins are lysosomal and each is involved in cellular metabolism, participating in various events such as peptide biosynthesis and protein degradation. Cathepsin S has been shown to be an elastinolytic cysteine proteinase present in alveolar macrophages.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: CTSS (human) mapping to 1q21.3; Ctss (mouse) mapping to 3F2.1.

**SOURCE**

cathepsin S (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 302-331 at the C-terminus of cathepsin S of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271573P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

cathepsin S (B-12) is recommended for detection of cathepsin S of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for cathepsin S siRNA (h): sc-29940, cathepsin S siRNA (m): sc-29941, cathepsin S shRNA Plasmid (h): sc-29940-SH, cathepsin S shRNA Plasmid (m): sc-29941-SH, cathepsin S shRNA (h) Lentiviral Particles: sc-29940-V and cathepsin S shRNA (m) Lentiviral Particles: sc-29941-V.

Molecular Weight of cathepsin S precursor: 37 kDa.

Molecular Weight of mature cathepsin S: 24 kDa.

Positive Controls: GA-10 whole cell lysate: sc-364230, THP-1 cell lysate: sc-2238 or U-87 MG cell lysate: sc-2411.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting LuminoL Reagent: sc-2048.

2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).


**DATA**

`cathepsin S (B-12): sc-271573. Western blot analysis of cathepsin S expression in U-87 MG (A) and GA-10 (B) whole cell lysates.`

**SELECT PRODUCT CITATIONS**


**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 for detailed protocols and support products.

See cathepsin S (E-3): sc-271619 for cathepsin S antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.