

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239)
Mouse Monoclonal Antibody
Catalog # ALS16658**Specification**

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) - Product Information

Application	IHC
Primary Accession	P08311
Other Accession	1511
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	28837

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) - Additional Information**Gene ID** 1511**Other Names**

CTSG, CATG, Cathepsin G, CG

Target/Specificity

Recognizes human Cathepsin G.

Reconstitution & Storage

Tissue culture supernatant, 15 mM sodium azide. May be stored at 4°C for short-term only. For long-term storage and to avoid repeated freezing and thawing, aliquot and store at -20°C. Aliquots are stable for at least 12 months at -20°C.

Precautions

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) is for research use only and not for use in diagnostic or therapeutic procedures.

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) - Protein Information**Name** CTSG**Function**

Serine protease with trypsin- and chymotrypsin-like specificity (PubMed: [8194606](http://www.uniprot.org/citations/8194606), PubMed: [29652924](http://www.uniprot.org/citations/29652924)). Also displays antibacterial activity against Gram-negative and Gram-positive bacteria independent of its protease activity (PubMed: [2116408](http://www.uniprot.org/citations/2116408), PubMed: [2117044](http://www.uniprot.org/citations/2117044)). Prefers Phe and Tyr residues in the P1 position of substrates but also cleaves efficiently after Trp and Leu (PubMed: [29652924](http://www.uniprot.org/citations/29652924)). Shows a

preference for negatively charged amino acids in the P2' position and for aliphatic amino acids both upstream and downstream of the cleavage site (PubMed:29652924). Required for recruitment and activation of platelets which is mediated by the F2RL3/PAR4 platelet receptor (PubMed:3390156, PubMed:10702240). Binds reversibly to and stimulates B cells and CD4(+) and CD8(+) T cells (PubMed:7842483, PubMed:9000539). Also binds reversibly to natural killer (NK) cells and enhances NK cell cytotoxicity through its protease activity (PubMed:9000539, PubMed:9536127). Cleaves complement C3 (PubMed:1861080). Cleaves vimentin (By similarity). Cleaves thrombin receptor F2R/PAR1 and acts as either an agonist or an inhibitor, depending on the F2R cleavage site (PubMed:10702240, PubMed:7744748). Cleavage of F2R at '41-Arg-|- Ser-42' results in receptor activation while cleavage at '55-Phe-|-Trp-56' results in inhibition of receptor activation (PubMed:7744748). Cleaves the synovial mucin-type protein PRG4/lubricin (PubMed:32144329). Cleaves and activates IL36G which promotes expression of chemokines CXCL1 and CXCL8 in keratinocytes (PubMed:30804664). Cleaves IL33 into mature forms which have greater activity than the unprocessed form (PubMed:22307629). Cleaves coagulation factor F8 to produce a partially activated form (PubMed:18217133). Also cleaves and activates coagulation factor F10 (PubMed:8920993). Cleaves leukocyte cell surface protein SPN/CD43 to releases its extracellular domain and trigger its intramembrane proteolysis by gamma-secretase, releasing the CD43 cytoplasmic tail chain (CD43-ct) which translocates to the nucleus (PubMed:18586676). Cleaves CCL5/RANTES to produce RANTES(4-68) lacking the N-terminal three amino acids which exhibits reduced chemotactic and antiviral activities (PubMed:16963625). During apoptosis, cleaves SMARCA2/BRM to produce a 160 kDa cleavage product which localizes to the cytosol (PubMed:11259672). Cleaves myelin basic protein MBP in B cell lysosomes at '224-Phe-|-Lys-225' and '248-Phe-|-Ser-249', degrading the major immunogenic MBP epitope and preventing the activation of MBP-specific autoreactive T cells (PubMed:15100291). Cleaves annexin ANXA1 and antimicrobial peptide CAMP to produce peptides which act on neutrophil N-formyl peptide receptors to enhance the release of CXCL2 (PubMed:22879591). Acts as a ligand for the N-formyl peptide receptor FPR1, enhancing phagocyte chemotaxis (PubMed:15210802). Has antibacterial activity against the Gram-negative bacteria *N.gonorrhoeae* and *P.aeruginosa* (PubMed:2116408, PubMed:1937776). Likely to act against *N.gonorrhoeae* by interacting with *N.gonorrhoeae* penA/PBP2 (PubMed:2126324). Exhibits potent antimicrobial activity against the Gram-positive bacterium *L.monocytogenes* (PubMed:2117044). Has antibacterial activity against the Gram-positive bacterium *S.aureus* and degrades *S.aureus* biofilms, allowing polymorphonuclear leukocytes to penetrate the biofilm and phagocytose bacteria (PubMed:2117044).

target="_blank">2117044, PubMed:32995850). Has antibacterial activity against M.tuberculosis (PubMed:15385470). Mediates CASP4 activation induced by the Td92 surface protein of the periodontal pathogen T.denticola, causing production and secretion of IL1A and leading to pyroptosis of gingival fibroblasts (PubMed:29077095).

Cellular Location

Cell membrane; Peripheral membrane protein. Cytoplasmic granule. Secreted. Cytoplasm, cytosol. Lysosome. Nucleus. Note=Secreted by activated neutrophils (PubMed:3390156). Detected in synovial fluid (PubMed:32144329) Localizes to lysosomes in B cells where it is not endogenously synthesized but is internalized from the cell membrane (PubMed:15100291). Localizes to the nucleus during apoptosis (PubMed:11259672).

Tissue Location

Expressed in neutrophils (at protein level) (PubMed:3799965). Expressed in B cells (PubMed:15100291)

Volume

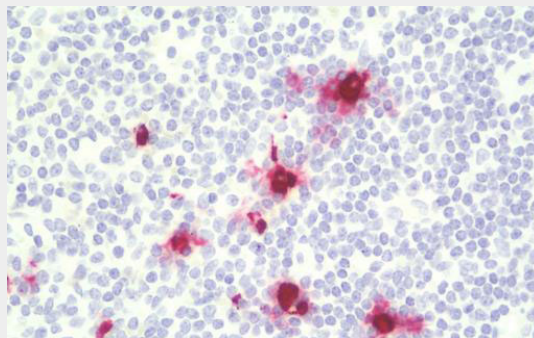
50 µl

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) - Images



Anti-CTSG / Cathepsin G antibody IHC staining of human tonsil.

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) - Background

Serine protease with trypsin- and chymotrypsin-like specificity. Cleaves complement C3. Has antibacterial activity against the Gram-negative bacterium P.aeruginosa, antibacterial activity is inhibited by LPS from P.aeruginosa, Z-Gly-Leu-Phe- CH₂Cl and phenylmethylsulfonyl fluoride.

CTSG / Cathepsin G Antibody (N-Terminus, clone 9i239) - References

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Avril L.E.,et al.FEBS Lett. 345:81-86(1994).