

Anti-Cathepsin G Picoband Antibody
Catalog # ABO11770**Specification**

Anti-Cathepsin G Picoband Antibody - Product Information

Application	WB
Primary Accession	P08311
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Cathepsin G(CTSG) detection. Tested with WB in Human;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Cathepsin G Picoband Antibody - Additional Information

Gene ID 1511

Other Names

Cathepsin G, CG, 3.4.21.20, CTSG

Calculated MW

28837 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Rat, Human

Subcellular Localization

Cell surface .

Protein Name

Cathepsin G

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃N.

Immunogen

E.coli-derived human Cathepsin G recombinant protein (Position: A76-L255). Human Cathepsin G shares 66% amino acid (aa) sequence identity with mouse Cathepsin G.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After r° Constitution, at 4°C for one month. It° Can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the peptidase S1 family.

Anti-Cathepsin G Picoband Antibody - Protein Information

Name CTSG

Function

Serine protease with trypsin- and chymotrypsin-like specificity (PubMed:29652924, PubMed:8194606). Also displays antibacterial activity against Gram-negative and Gram-positive bacteria independent of its protease activity (PubMed:2116408, PubMed:2117044). Prefers Phe and Tyr residues in the P1 position of substrates but also cleaves efficiently after Trp and Leu (PubMed: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:10702240, PubMed:3390156). 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 release 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:1937776, PubMed:2116408). 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, 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). Induces platelet aggregation which is strongly potentiated in the presence of ELANE (PubMed:25211214, PubMed:9111081).

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)

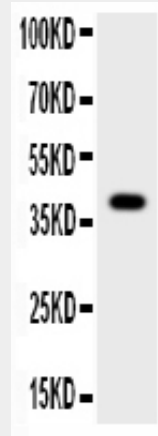
Anti-Cathepsin G Picoband Antibody - Protocols

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](#)

Anti-Cathepsin G Picoband Antibody - Images



Anti-Cathepsin G Picoband antibody, ABO11770-1.jpg All lanes: Anti-Cathepsin G(ABO11770) at 0.5ug/ml WB: Rat Thymus Tissue Lysate at 40ug Predicted bind size: 38KD Observed bind size: 38KD

Anti-Cathepsin G Picoband Antibody - Background

Cathepsin G is an enzymatic protein belonging to the peptidase or protease families. In humans, it is coded by the CTSG gene. This gene is mapped to 14q12, human Cathepsin G gene was expressed in early myeloid precursors in a manner coordinate with the expression of the endogenous murine gene in the bone marrow and spleen. The protein encoded by this gene, a member of the peptidase S1 protein family, is found in azurophil granules of neutrophilic polymorphonuclear leukocytes. The encoded protease has a specificity similar to that of chymotrypsin C, and may participate in the killing and digestion of engulfed pathogens, and in connective tissue remodeling at sites of inflammation.