10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Cathepsin G Picoband Antibody

Catalog # ABO12541

Specification

Anti-Cathepsin G Picoband Antibody - Product Information

Application	**WB**
Primary Accession	P28293
Host	**Rabbit**
Reactivity	**Mouse**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Cathepsin G(CTSG) detection. Tested with WB in Mouse.

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

Anti-Cathepsin G Picoband Antibody - Additional Information

Gene ID 13035

Other Names
Cathepsin G, 3.4.21.20, Vimentin-specific protease, VSP, Ctsg

Calculated MW
29096 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Mouse

Subcellular Localization
Membrane. Strongly associated with membranes.

Protein Name
Cathepsin G

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived mouse Cathepsin G recombinant protein (Position: I21-T261). Mouse Cathepsin G shares 70.2% amino acid (aa) sequence identity with human 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.**

Anti-Cathepsin G Picoband Antibody - Protein Information

Name Ctsg

Function
Serine protease with trypsin- and chymotrypsin-like specificity. Also displays antibacterial activity against Gram-negative and Gram-positive bacteria independent of its protease activity. Prefers Phe and Tyr residues in the P1 position of substrates but also cleaves efficiently after Trp and Leu. 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. Required for recruitment and activation of platelets which is mediated by the F2RL3/PAR4 platelet receptor. Binds reversibly to and stimulates B cells and CD4(+) and CD8(+) T cells. Also binds reversibly to natural killer (NK) cells and enhances NK cell cytotoxicity through its protease activity. Cleaves complement C3 (By similarity). Cleaves vimentin (PubMed:1577012). Cleaves thrombin receptor F2R/PAR1. Cleaves the synovial mucin-type protein PRG4/lubricin. Cleaves and activates IL36G which promotes expression of chemokines CXCL1 and CXLC8 in keratinocytes. Cleaves IL33 into mature forms which have greater activity than the unprocessed form. Cleaves coagulation factor F8 to produce a partially activated form. Also cleaves and activates coagulation factor F10. 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. During apoptosis, cleaves SMARCA2/BRM to produce a 160 kDa cleavage product which localizes to the cytosol. Cleaves MBP in B cell lysosomes at '221- Phe-|-Lys-222', degrading the major immunogenic MBP epitope and preventing the activation of MBP-specific autoreactive T cells. Cleaves annexin ANXA1 and antimicrobial peptide CAMP to produce peptides which act on neutrophil N-formyl peptide receptors to enhance the release of CXCL2. Acts as a ligand for the N-formyl peptide receptor FPR1, enhancing phagocyte chemotaxis. Has antibacterial activity against the Gram-negative bacteria N.gonorrhoeae and P.aeruginosa. Likely to act against N.gonorrhoeae by interacting with N.gonorrhoeae penA/PBP2. Exhibits potent antimicrobial activity against the Gram-positive bacterium L.monocytogenes. 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. Has antibacterial activity against M.tuberculosis (By similarity). Induces platelet aggregation which is strongly potentiated in the presence of ELANE (By similarity).

Cellular Location
Cell membrane {ECO:0000250|UniProtKB:P08311}; Peripheral membrane protein. Cytoplasmic granule {ECO:0000250|UniProtKB:P08311}. Secreted {ECO:0000250|UniProtKB:P08311}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P08311}. Lysosome {ECO:0000250|UniProtKB:P08311}. Nucleus {ECO:0000250|UniProtKB:P08311} Note=Secreted by activated neutrophils. Detected in synovial fluid Localizes to lysosomes in B cells where it is not endogenously synthesized but is internalized from the cell membrane. Localizes to the nucleus during apoptosis. {ECO:0000250|UniProtKB:P08311}

Tissue Location
In adult, detected only in bone marrow where expression is restricted to a small population of early myeloid cells

Anti-Cathepsin G Picoband Antibody - Protocols

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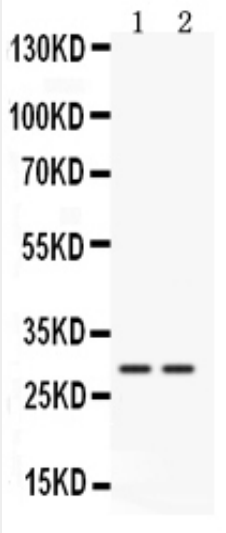
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Cathepsin G Picoband Antibody - Images



Western blot analysis of Cathepsin G expression in mouse liver extract (lane 1) and mouse kidney extract (lane 2). Cathepsin G at 29KD was detected using rabbit anti- Cathepsin G Antigen Affinity purified polyclonal antibody (Catalog # ABO12541) at0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

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 CTSGÂ gene.Â This gene is mapped to 14q12. In transgenic mice, it was found thatÂ 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 thisÂ gene, a member of theÂ peptidase S1 protein family, is found in azurophil granules of neutrophilic polymorphonuclearÂ leukocytes.Â The encoded protease has a specificity similar to that ofÂ chymotrypsin C, and may participate in the killing and digestion of engulfed pathogens, and inÂ connective tissueÂ remodeling at sites ofÂ inflammation.Â