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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-Cathepsin B [2A2] Standard Size Ab04088-10.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This is a reformatted human IgG1 Fc Silent Fc Silent™ antibody, based on the original human IgG1 format, created for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Human IgG1, Fc Silent™, Kappa

Clone Number: 2A2

Alternative Name(s) of Target: Cat B; CTSB; CPSB; APPS; APP secretase; Cathepsin B1

UniProt Accession Number of Target Protein: P07858

Published Application(s): inhibit, WB, ELISA

Published Species Reactivity: Human

Immunogen: The original antibody was generated by immunizing BALB/c mice with highly purified recombinant human cathepsin B expressed in E. coli.

Specificity: This antibody binds human cathepsin B (Cat B) at an epitope near the active site and inhibits its proteolytic activity. It was reported to specifically bind the 'EPGYSP' sequence located between amino acid residues 133–138 of cathepsin B. Cat B is a lysosomal cysteine protease which is shown to participate in processes of tumor growth, invasion and metastasis. It is seen that increased level of tumor cathepsin B is not balanced by increase in cysteine proteases leading to uncontrolled proteolysis in the extracellular matrix. Significantly increased levels of Cat B have also been found in sera of patients with breast, colorectal, liver, pancreatic and melanoma cancers.

Application Notes: This antibody is capable of binding cathepsin B in an antigen immobilized ELISA. The binding reactivity of this antibody to cathepsin B was also confirmed with western blot. This antibody significantly inhibited the invasion of ras-transformed MCF-10A neoT cells through matrigel. This antibody was further reported to significantly inhibit cathepsin B activity against BODYPY FL casein (PMID: 12530548). In a study, the intracellular and extracellular cathepsin B activities in the invasion of ras-transformed human breast epithelial cells, MCF-10A neoT were assessed using this antibody. This antibody was shown to impair both the intracellular and the extracellular fractions of cathepsin B activity (PMID: 12581740). This antibody was also used in the generation of an ammodoxytoxin-anti-cathepsin B immunoconjugate to deliver secretory phospholipase A2 into cancerous cells (PMID: 18221975). This antibody was reported to potentiate cathepsin B exopeptidase activity with a activation constant (Ka) of 22.3 nm,

although simultaneously inhibiting its endopeptidase activity (PMID: 19656187).

Antibody First Published in: Fan et al. Molecular cloning and cholerization of an inhibitory anti-cathepsin B antibody and its expression in Chinese hamster ovary cells Biol Chem. 2002 Nov;383(11):1817-20.

[PMID:12530548](#)

Note on publication: Describes the cloning and generation of chimeric antibody against cathepsin B in CHO cells.

Product Form

Size: 100 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note - This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.