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Product Information

Anti-ADAM-10, C-terminal
produced in rabbit, affinity isolated antibody

Catalog Number **A2726**

Product Description

Anti-ADAM-10, C-terminal, is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 732-748 of human ADAM-10 (**A D**isintegrin **A**nd **M**etalloproteinase-10).[1, 9] The sequence is identical to bovine and rat and differs by one amino acid in mouse. The antibody is purified by affinity chromatography.

Anti-ADAM-10, C-terminal, may be used for the detection and localization of human, mouse, rat, and bovine ADAM-10 and does not react with other ADAMs. A prominent proform at 80-85 kDa is usually seen, with bands at 60 kDa and below 50 kDa in most cases.

ADAM-10, also known as Kuzbanian (Kuz), MADM (mammalian disintegrin metalloprotease), or myelin-associated metalloproteinase, is a member of the ADAM (a disintegrin and metalloprotease-like domain) family.[1, 2] ADAM-10 was first described as a membrane-associated protease that degraded myelin basic protein in the brain. A *Drosophila* mutant named Kuzbanian (Kuz), with defects in Notch signaling of neuronal development, was also shown to be dependent on ADAM-10. Its role in neurogenesis involves processing notch, notch ligand delta, and amyloid protein precursor at the α site).[3, 4] Other groups studying Alzheimer's disease identified ADAM-10 as an α-secretase that cleaves amyloid plaque protein (APP), and other investigators showed that it could act as a "sheddase", releasing TNF-α.[5] These disparate groups later identified ADAM-10 as a member of the metalloproteinase family with disintegrin domain (ADAMs), and showed that it also contains an EGF-like domain, transmembrane domain, and a cytoplasmic domain. Later work describes ADAM-10 in the lung, heart, brain, kidney, and a wide range of tissues. It is widely expressed in tissues and can be found on the cell surface and within the cell.[6]

ADAM-10 contains the canonical HExxHxxxxxH zinc metalloproteinase motif, and has been shown to be proteolytically active. In bovine kidney, it cleaves Type-IV collagen making ADAM-10 a "gelatinase."[7] It is efficiently inhibited by the endogenous MMP inhibitors TIMP-1 and TIMP-3, but not by TIMP-2 and TIMP-4.[8]

ADAM-10 is highly conserved with 97% amino acid identity between mouse, rat, bovine, and human. There is 45% identity between mouse and *Drosophila*. The predicted mass of the full length human ADAM-10 (748 amino acids) is 84.1 kDa.

Reagent

Supplied in phosphate buffered saline containing 0.02% sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Antibody can be stored at 2-8 °C for three months and at −20 °C for one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Product Profile

Immunoblotting: a minimum working dilution of 1:500-1:2,000 is determined using tissue or cell lysates. Using Jurkat whole cell lysates, an 85 kDa band can be detected, which may represent the precursor (proform) protein. A 60 kDa faint band may be detected in some cell lines including Jurkat, which appears to be the processed mature protein.

Note: Overloading of the primary antibody can lead to multiple bands appearing in some preparations. The presence of glycosylated forms and breakdown products can lead to other bands.

In order to obtain the best results and assay sensitivity in various techniques and preparations, we recommend determining optimum working dilutions by titration.

References

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