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CD10 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1880a

Product Information

Application	WB, IHC, E
Primary Accession	P08473
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5E9A5
Isotype	IgG1
Calculated MW	85514
Description	This gene encodes a common acute lymphocytic leukemia antigen that is an important cell surface marker in the diagnosis of human acute lymphocytic leukemia (ALL). This protein is present on leukemic cells of pre-B phenotype, which represent 85% of cases of ALL. This protein is not restricted to leukemic cells, however, and is found on a variety of normal tissues. It is a glycoprotein that is particularly abundant in kidney, where it is present on the brush border of proximal tubules and on glomerular epithelium. The protein is a neutral endopeptidase that cleaves peptides at the amino side of hydrophobic residues and inactivates several peptide hormones including glucagon, enkephalins, substance P, neurotensin, oxytocin, and bradykinin. This gene, which encodes a 100-kD type II transmembrane glycoprotein, exists in a single copy of greater than 45 kb. The 5' untranslated region of this gene is alternatively spliced, resulting in four separate mRNA transcripts. The coding region is not affected by alternative splicing.
Immunogen	Purified recombinant fragment of human CD10 (AA: 52-246) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	4311
Other Names	Neprilysin, 3.4.24.11, Atriopeptidase, Common acute lymphocytic leukemia antigen, CALLA, Enkephalinase, Neutral endopeptidase 24.11, NEP, Neutral endopeptidase, Skin fibroblast elastase, SFE, CD10, MME, EPN
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD10 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

Protein Information

Name	MME {ECO:0000303|PubMed:27588448, ECO:0000312|HGNC:HGNC:7154}
Function	Thermolysin-like specificity, but is almost confined on acting on polypeptides of up to 30 amino acids (PubMed:15283675, PubMed:6208535, PubMed:6349683, PubMed:8168535). Biologically important in the destruction of opioid peptides such as Met- and Leu-enkephalins by cleavage of a Gly-Phe bond (PubMed:17101991, PubMed:6349683). Catalyzes cleavage of bradykinin, substance P and neurotensin peptides (PubMed:6208535). Able to cleave angiotensin-1, angiotensin-2 and angiotensin 1-9 (PubMed:15283675, PubMed:6349683). Involved in the degradation of atrial natriuretic factor (ANF) and brain natriuretic factor (BNP(1-32)) (PubMed:16254193, PubMed:2531377, PubMed:2972276). Displays UV-inducible elastase activity toward skin preelastic and elastic fibers (PubMed:20876573).
Cellular Location	Cell membrane; Single-pass type II membrane protein

Background

The protein encoded by this gene belongs to the perilipin family, members of which coat intracellular lipid storage droplets. This protein is associated with the lipid globule surface membrane material, and maybe involved in development and maintenance of adipose tissue. However, it is not restricted to adipocytes as previously thought, but is found in a wide range of cultured cell lines, including fibroblasts, endothelial and epithelial cells, and tissues, such as lactating mammary gland, adrenal cortex, Sertoli and Leydig cells, and hepatocytes in alcoholic liver cirrhosis, suggesting that it may serve as a marker of lipid accumulation in diverse cell types and diseases. Alternatively spliced transcript variants have been found for this gene. ; ; ;

References

1. Pathol Res Pract. 2012 May 15;208(5):281-5. 2. J Dermatol Sci. 2013 Feb;69(2):105-13.

Images

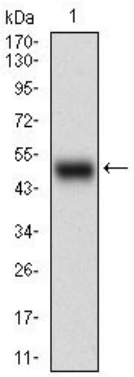
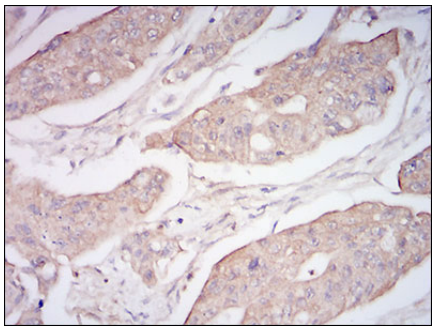


Figure 1: Western blot analysis using CD10 mAb against human CD10 (AA: 52-246) recombinant protein. (Expected MW is 41.4 kDa)

Figure 2: Western blot analysis using CD10 mAb against HEK293 (1) and CD10 (AA: 52-246)-hIgGFc transfected HEK293 (2) cell lysate.



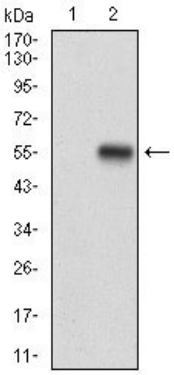


Figure 4: Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using CD10 mouse mAb with DAB staining.