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MME/CD10 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1949b

Product Information

Application	WB, IHC-P, E
Primary Accession	P08473
Other Accession	NP_000893.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgM,k
Clone Names	307CT12.12.5
Calculated MW	85514
Antigen Region	272-300

Additional Information

Gene ID	4311
Other Names	Neprilysin, Atriopeptidase, Common acute lymphocytic leukemia antigen, CALLA, Enkephalinase, Neutral endopeptidase 2411, NEP, Neutral endopeptidase, Skin fibroblast elastase, SFE, CD10, MME, EPN
Target/Specificity	This MME/CD10 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 272-300 amino acids from human MME/CD10.
Dilution	WB~~1:500~1000 IHC-P~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Euglobin precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MME/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

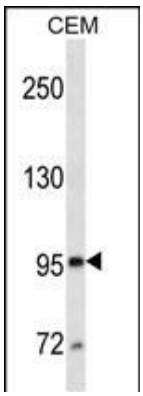
Background

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. [provided by RefSeq].

References

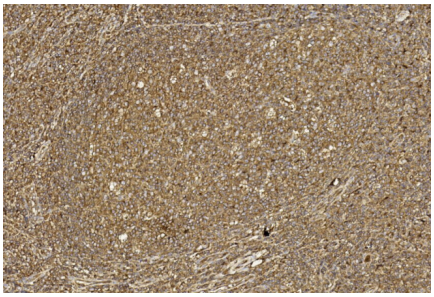
Wang, S., et al. J. Neurochem. 115(1):47-57(2010)
Ikenaga, N., et al. Gastroenterology 139(3):1041-1051(2010)
Kim, H.S., et al. Histopathology 56(6):708-719(2010)
Toussaint, J., et al. PLoS ONE 5 (8) (2010) :
Cui, L., et al. PLoS ONE 5 (8), E12121 (2010) :

Images



MME/CD10 (Cat. #AM1949b) western blot analysis in CEM cell line lysates (35µg/lane).This demonstrates the MME/CD10 antibody detected the MME/CD10 protein (arrow).

Immunohistochemical analysis of paraffin-embedded Human tonsil section using Pink1(Cat#AM1949b). AM1949b was diluted at 1:1000 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



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