Anti-CD10 Antibody [A1G3]

EM1901-24

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P, FC, IF-Tissue
Molecular Wt:	Predicted band size: 86 kDa
Clone number:	A1G3

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: Synthetic peptide within human CD10 aa 200-300.

Positive control: Daudi cell lysate, Ramos cell lysate, LNCaP cell lysate, mouse kidney tissue lysate, human renal clear cell carcinoma tissue, human kidney tissue, human prostate tissue, 293.

Subcellular location: Cell membrane.

Database links: SwissProt: P08473 Human | Q61391 Mouse

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:200-1:1,000
FC	1:50-1:100
IF-Tissue	1:50

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein G affinity purified.

Images

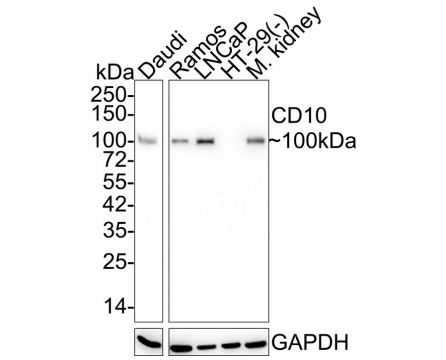

Fig1: Western blot analysis of CD10 on different lysates with Mouse anti-CD10 antibody (EM1901-24) at 1/2,000 dilution.

Lane 1: Daudi cell lysate (20 µg/Lane)
Lane 2: Ramos cell lysate (20 µg/Lane)
Lane 3: LNCaP cell lysate (20 µg/Lane)
Lane 4: HT-29 cell lysate (negative) (20 µg/Lane)
Lane 5: Mouse kidney tissue lysate (40 µg/Lane)

Predicted band size: 86 kDa
Observed band size: 100 kDa

Exposure time: 5 minutes; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (EM1901-24) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

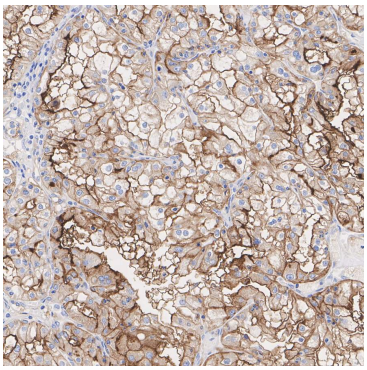

Fig2: Immunohistochemical analysis of paraffin-embedded human renal clear cell carcinoma tissue with Mouse anti-CD10 antibody (EM1901-24) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (EM1901-24) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

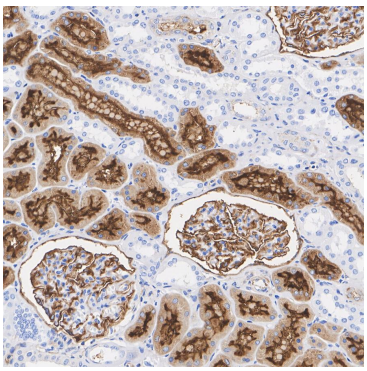

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-CD10 antibody (EM1901-24) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (EM1901-24) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

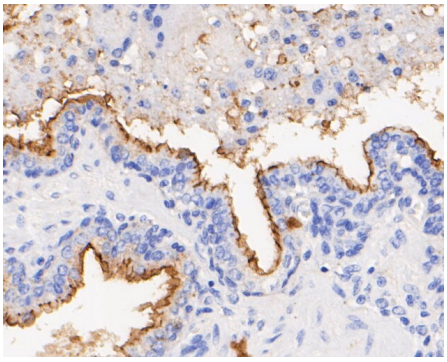

Fig4: Immunohistochemical analysis of paraffin-embedded human prostate tissue using anti-CD10 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (EM1901-24, 1/200) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

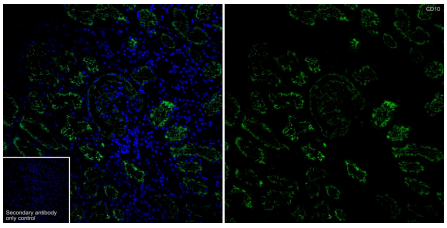

Fig5: Immunofluorescence analysis of paraffin-embedded human kidney tissue labeling CD10 with Mouse anti-CD10 antibody (EM1901-24) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (EM1901-24, green) at 1/50 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

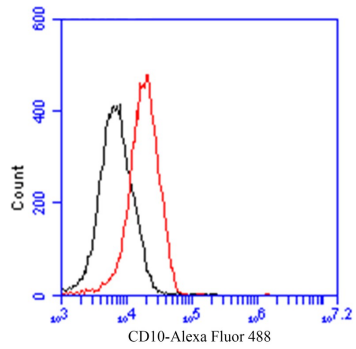

Fig6: Flow cytometric analysis of CD10 was done on 293 cells. The cells were fixed, permeabilized and stained with the primary antibody (EM1901-24, 1/100) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated goat anti-Mouse IgG Secondary antibody at 1/500 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Morisaki N. et. al. Neprilysin is identical to skin fibroblast elastase: its role in skin aging and UV responses. J. Biol. Chem. 285:39819-39827(2010).
2. Auer-Grumbach M. et. al. Rare variants in MME, encoding metalloprotease neprilysin, are linked to late-onset autosomal-dominant axonal polyneuropathies. Am. J. Hum. Genet. 99:607-623(2016).