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CD10 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1878a

Specification

CD10 Antibody - Product Information

Application	**E, WB, IHC**
Primary Accession	P08473
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**85.5kDa KDa**

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

CD10 Antibody - 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
E~~1/10000
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000

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.

CD10 Antibody - 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:6349683, PubMed:6208535, PubMed:15283675, PubMed:8168535). Biologically important in the destruction of opioid peptides such as Met- and Leu- enkephalins by cleavage of a Gly-Phe bond (PubMed:6349683, PubMed:17101991). Catalyzes cleavage of bradykinin, substance P and neurotensin peptides (PubMed:6208535). Able to cleave angiotensin-1, angiotensin-2 and angiotensin 1-9 (PubMed:6349683, PubMed:15283675). Involved in the degradation of atrial natriuretic factor (ANF) and brain natriuretic factor (BNP(1-32)) (PubMed:2531377, PubMed:2972276, PubMed:16254193). Displays UV-inducible elastase activity toward skin preelastic and elastic fibers (PubMed:20876573).

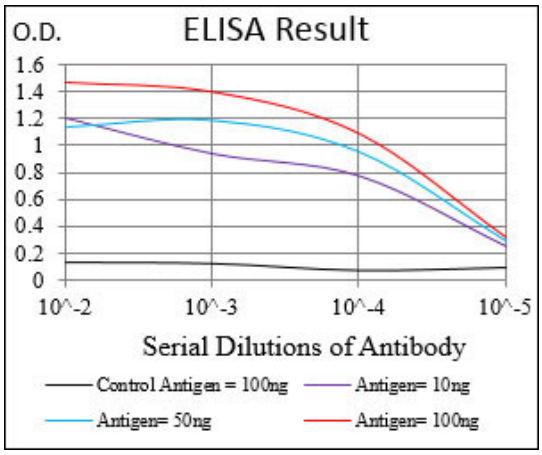
Cellular Location
Cell membrane; Single-pass type II membrane protein

CD10 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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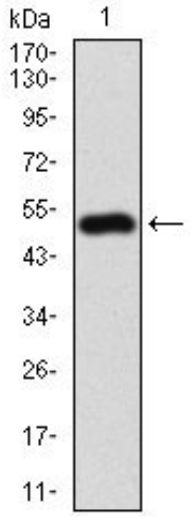


Figure 1: Western blot analysis using CD10 mAb against human CD10 (AA: 52-246) recombinant protein. (Expected MW is 41.4 kDa)

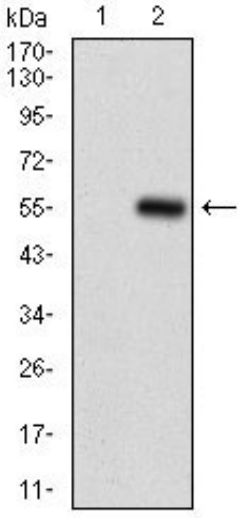


Figure 2: Western blot analysis using CD10 mAb against HEK293 (1) and CD10 (AA: 52-246)-hIgGFc transfected HEK293 (2) cell lysate.

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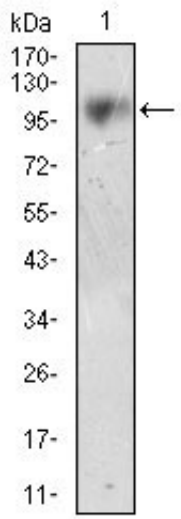


Figure 3: Western blot analysis using CD10 mouse mAb against LNCAP cell lysate.

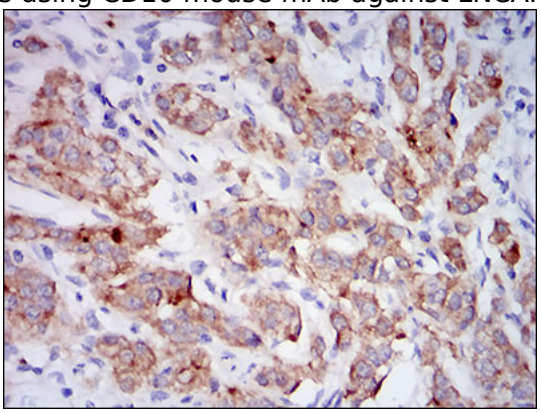


Figure 4: Immunohistochemical analysis of paraffin-embedded prostate cancer tissues using CD10 mouse mAb with DAB staining.

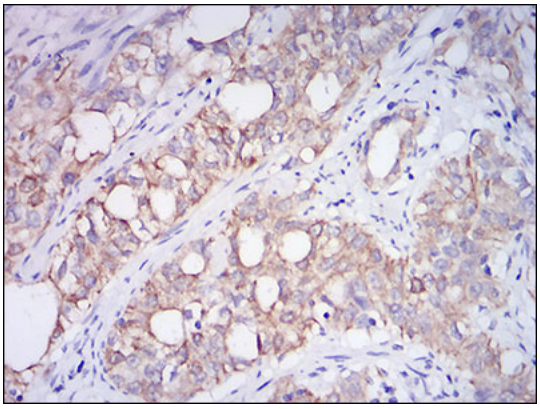


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using CD10 mouse mAb with DAB staining.

CD10 Antibody - Background

This gene encodes a bifunctional signal transduction molecule. Dopaminergic and glutamatergic receptor stimulation regulates its phosphorylation and function as a kinase or phosphatase inhibitor. As a target for dopamine, this gene may serve as a therapeutic target for neurologic and psychiatric disorders. Multiple transcript variants encoding different isoforms have been found for this gene. ;

CD10 Antibody - References

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