

CD44 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM1901b

Specification

CD44 Antibody - Product Information

Application	IF, WB, IHC-P, FC,E
Primary Accession	P16070
Other Accession	NP_000601.3
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a ,K

CD44 Antibody - Additional Information

Gene ID 960

Other Names

CD44 antigen, CDw44, Epican, Extracellular matrix receptor III, ECMR-III, GP90 lymphocyte homing/adhesion receptor, HUTCH-I, Heparan sulfate proteoglycan, Hermes antigen, Hyaluronate receptor, Phagocytic glycoprotein 1, PGP-1, Phagocytic glycoprotein I, PGP-I, CD44, CD44, LHR, MDU2, MDU3, MIC4

Target/Specificity

This CD44 monoclonal antibody is against human Peyer's patch endothelial cells (CD44) .

Dilution

IF~~1:10~50
WB~~1:2000
IHC-P~~1:25
FC~~1:50

Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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

CD44 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CD44 Antibody - Protein Information

Name CD44

Synonyms LHR, MDU2, MDU3, MIC4

Function Cell-surface receptor that plays a role in cell-cell interactions, cell adhesion and migration, helping them to sense and respond to changes in the tissue microenvironment (PubMed:[16541107](#), PubMed:[19703720](#), PubMed:[22726066](#)). Participates thereby in a wide variety of cellular functions including the activation, recirculation and homing of T-lymphocytes, hematopoiesis, inflammation and response to bacterial infection (PubMed:[7528188](#)). Engages, through its ectodomain, extracellular matrix components such as hyaluronan/HA, collagen, growth factors, cytokines or proteases and serves as a platform for signal transduction by assembling, via its cytoplasmic domain, protein complexes containing receptor kinases and membrane proteases (PubMed:[18757307](#), PubMed:[23589287](#)). Such effectors include PKN2, the RhoGTPases RAC1 and RHOA, Rho-kinases and phospholipase C that coordinate signaling pathways promoting calcium mobilization and actin-mediated cytoskeleton reorganization essential for cell migration and adhesion (PubMed:[15123640](#)).

Cellular Location

Cell membrane; Single-pass type I membrane protein. Cell projection, microvillus {ECO:0000250|UniProtKB:P15379}. Secreted Note=Colocalizes with actin in membrane protrusions at wounding edges Co-localizes with RDX, EZR and MSN in microvilli. Localizes to cholesterol-rich membrane-bound lipid raft domains {ECO:0000250|UniProtKB:P15379, ECO:0000269|PubMed:23589287}

Tissue Location

Detected in fibroblasts and urine (at protein level) (PubMed:25326458, PubMed:36213313, PubMed:37453717). Detected in placenta (at protein level) (PubMed:32337544). Isoform 10 (epithelial isoform) is expressed by cells of epithelium and highly expressed by carcinomas. Expression is repressed in neuroblastoma cells

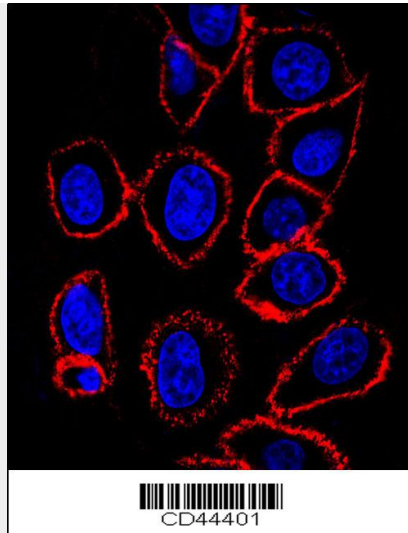
CD44 Antibody - Protocols

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

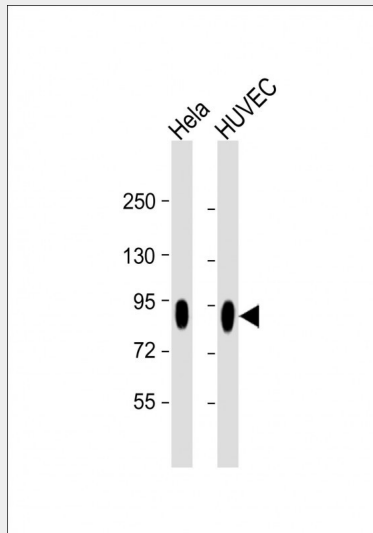
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CD44 Antibody - Images

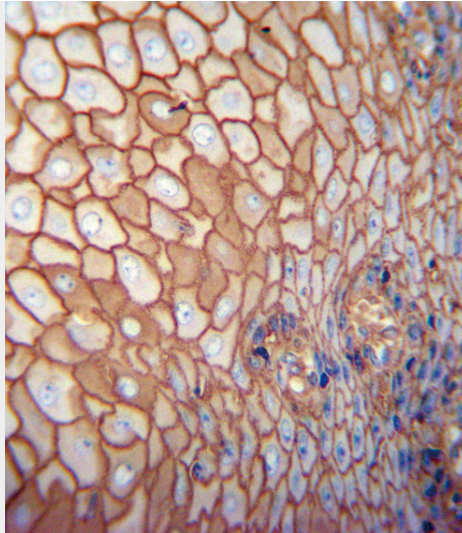




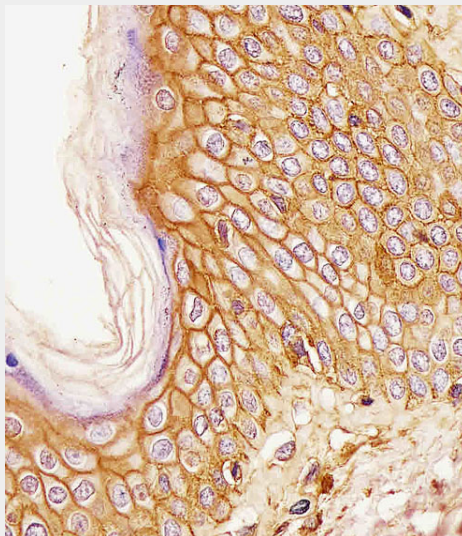
CD44 antibody (Cat. #AM1901b) confocal immunofluorescent analysis with hela cell. 0.01 mg/ml primary antibody was followed by PE-conjugated goat anti-mouse IgG (whole molecule). PE emits red fluorescence. DAPI was used to stain the cell nuclear (blue).



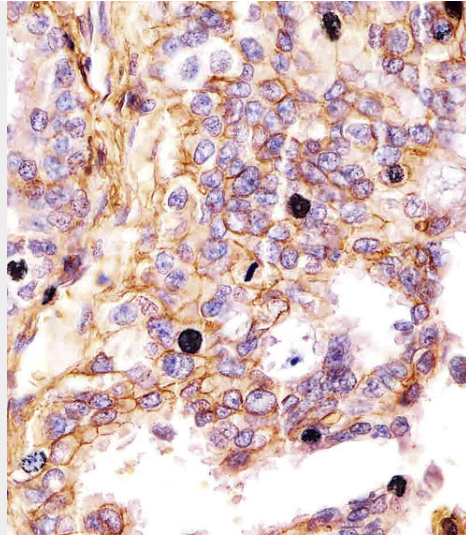
All lanes : Anti-CD44 Antibody at 1:2000 dilution Lane 1: HeLa whole cell lysate Lane 2: HUVEC whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 82 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



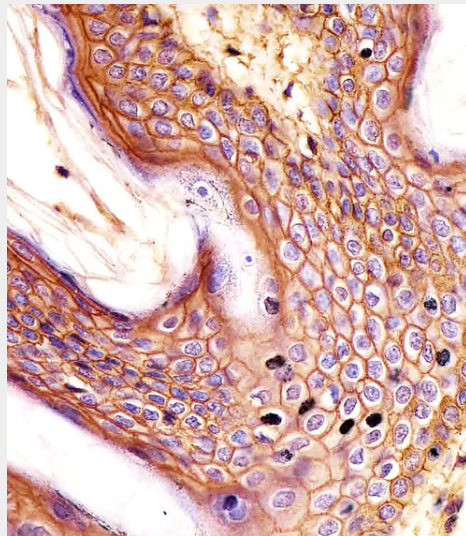
CD44 antibody (Cat. #AM1901b) immunohistochemistry analysis in formalin fixed and paraffin embedded human esophagus carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the CD44 antibody for immunohistochemistry. Clinical relevance has not been evaluated.



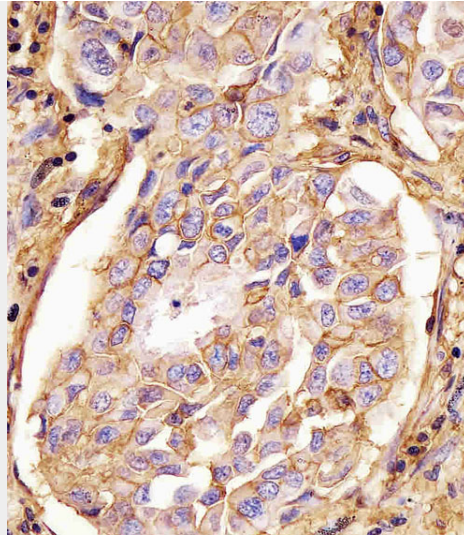
AM1901b staining CD44 in human skin tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



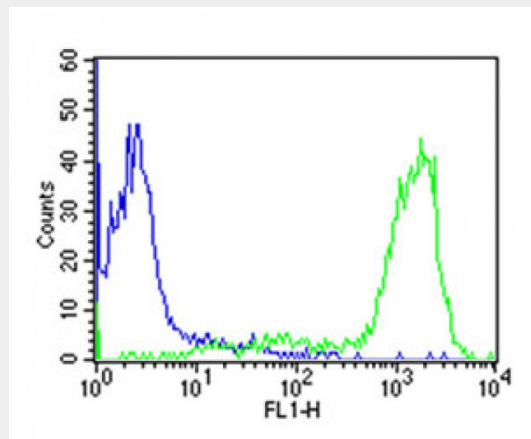
AM1901b staining CD44 in human lung adenocarcinoma tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



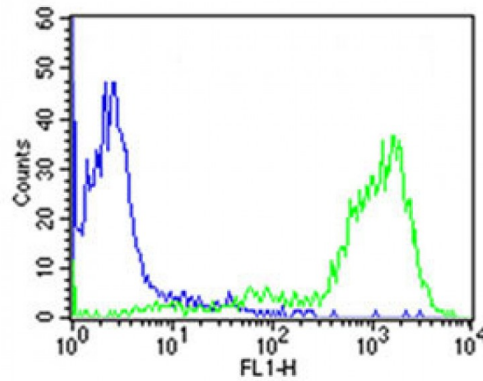
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Overlay histogram showing human peripheral blood lymphocytes stained with CD44 antibody (green line). The cells were incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (1:50 dilution) for 60min at 37°C. The secondary antibody used was Goat Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed (OJ192088) at 1/200 dilution for 40min at 37°C. Isotype control antibody (blue line) was mouse IgG2a (1µg/1x10⁶ cells) used under the same conditions. Acquisition of >10,000 events was performed.



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CD44 Antibody - Background

The protein encoded by this gene is a cell-surface glycoprotein involved in cell-cell interactions, cell adhesion and migration. It is a receptor for hyaluronic acid (HA) and can also interact with other ligands, such as osteopontin, collagens, and matrix metalloproteinases (MMPs). This protein participates in a wide variety of cellular functions including lymphocyte activation, recirculation and homing, hematopoiesis, and tumor metastasis. Transcripts for this gene undergo complex alternative splicing that results in many functionally distinct isoforms, however, the full length nature of some of these variants has not been determined. Alternative splicing is the basis for the structural and functional diversity of this protein, and may be related to tumor metastasis.

CD44 Antibody - References

?da Cunha, C.B., et al. Lab. Invest. 90(11):1604-1614(2010) ?Somasunderam, A., et al. Biochemistry 49(42):9106-9112(2010) ?Wolny, P.M., et al. J. Biol. Chem. 285(39):30170-30180(2010) ?Ryckman, K.K., et al. PLoS ONE 5 (8), E12273 (2010) : ?Scartozzi, M., et al. Anal. Quant. Cytol. Histol. 31(6):417-423(2009)

CD44 Antibody - Citations

- [Functional binding of E-selectin to its ligands is enhanced by structural features beyond its lectin domain](#)
- [Role of syndecan-1 and exogenous heparin in hepatoma sphere formation.](#)
- [All-trans retinoic acids induce differentiation and sensitize a radioresistant breast cancer cells to chemotherapy.](#)
- [Human developmental chondrogenesis as a basis for engineering chondrocytes from pluripotent stem cells.](#)