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CD44 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1231a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P16070
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	8E2F3
Isotype	IgG1
Calculated MW	81538
Description	CD44, also known as IN, LHRMIC4, CDW44, HCELL. It 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.
Immunogen	Purified recombinant fragment of human CD44 (628-699) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

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
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~N/A
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	CD44 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

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

References

1. Exp Mol Pathol. 2007 Dec;83(3):341-6. 2. Mol Cell Proteomics. 2008 Mar;7(3):499-508.

Images

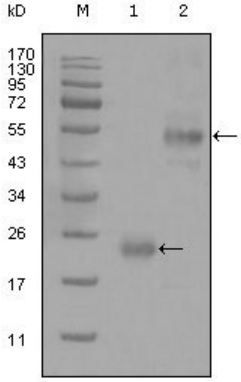


Figure 1: Western blot analysis using CD44 mouse mAb against truncated Trx-CD44 recombinant protein (1) and GST-CD44 (aa628-699) recombinant protein (2).

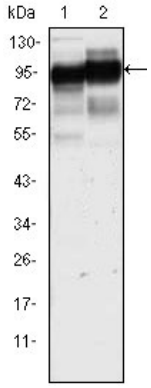


Figure 2: Western blot analysis using CD44 mouse mAb against Hela (1) and HUVE-12(2) cell lysate.

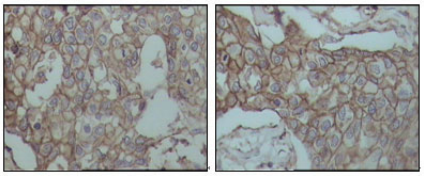


Figure 3: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissues, showing membrane localization with DAB staining using CD44 mouse mAb.

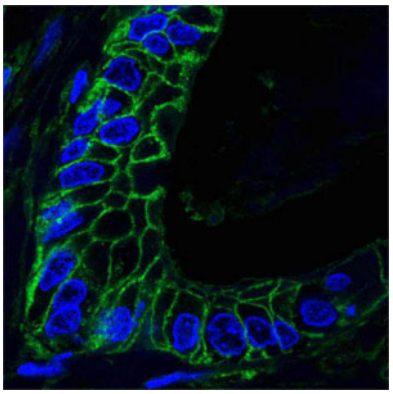


Figure 4: Confocal analysis of paraffin-embedded human lung cancer tissues using CD44 mouse mAb (green), showing membrane localization. Blue: DRAQ5 fluorescent DNA dye.

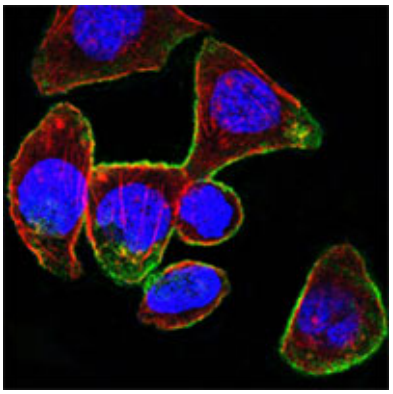


Figure 5: Confocal immunofluorescence analysis of PANC-1 cells using CD44 mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

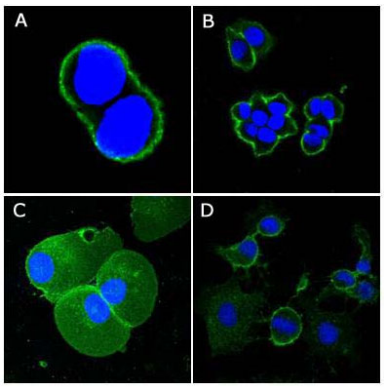
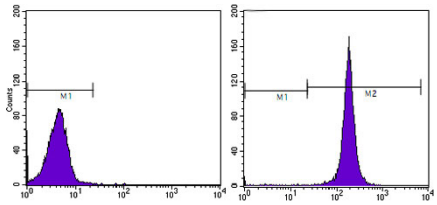


Figure 6: Confocal immunofluorescence analysis of methanol-fixed A431 (A), Hela (B), PANC-1 (C) and EC (D) cells using CD44 mouse mAb (green), showing membrane localization. Blue: DRAQ5 fluorescent DNA dye.

Figure 7: Flow cytometric analysis of Hela cells using CD44 mouse mAb (right) and negative control (left).



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