

# Anti-CD44 Antibody [A7-1]

## EM010805



<b>Product Type:</b>	Mouse monoclonal IgM, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	WB, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 81 kDa
<b>Clone number:</b>	A7-1

**Description:** The CD44 antigen is a cell-surface glycoprotein involved in cell-cell interactions, cell adhesion and migration. In humans, the CD44 antigen is encoded by the CD44 gene on chromosome 11. CD44 has been referred to as HCAM (homing cell adhesion molecule), Pgp-1 (phagocytic glycoprotein-1), Hermes antigen, lymphocyte homing receptor, ECM-III, and HUTCH-1. CD44 participates in a wide variety of cellular functions including lymphocyte activation, recirculation and homing, hematopoiesis, and tumor metastasis. CD44 is a receptor for hyaluronic acid and can also interact with other ligands, such as osteopontin, collagens, and matrix metalloproteinases (MMPs). CD44 function is controlled by its posttranslational modifications. One critical modification involves discrete sialofucosylations rendering the selectin-binding glycoform of CD44 called HCELL (for Hematopoietic Cell E-selectin/L-selectin Ligand). 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. Splice variants of CD44 on colon cancer cells display sialofucosylated HCELL glycoforms that serve as P-, L-, and E-selectin ligands and fibrin, but not fibrinogen, receptors under hemodynamic flow conditions pertinent to the process of cancer metastasis. CD44 gene transcription is at least in part activated by beta-catenin and Wnt signalling (also linked to tumour development).

<b>Immunogen:</b>	Synthetic peptide within human CD44 aa 100-200.
<b>Positive control:</b>	HUVEC cell lysate, HL-60 cell lysate, Hela cell lysate, SKOV-3 cell lysate, human tonsil tissue, human colon carcinoma tissue, Hela.
<b>Subcellular location:</b>	Cell membrane
<b>Database links:</b>	SwissProt: P16070 Human
<b>Recommended Dilutions:</b>	
<b>WB</b>	1:500-1:1,000
<b>IHC-P</b>	1:200
<b>FC</b>	1:100-1:200
<b>Storage Buffer:</b>	1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
<b>Storage Instruction:</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.
<b>Purity:</b>	Immunogen affinity purified.

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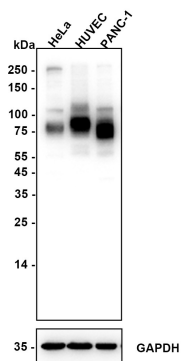
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## Images



**Fig1:** Western blot analysis of CD44 on different lysates with Mouse anti-CD44 antibody (EM010805) at 1/2,000 dilution.

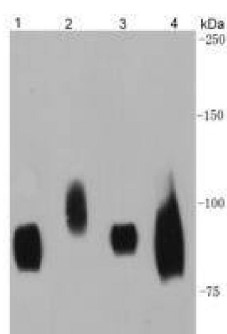
Lane 1: HeLa cell lysate  
Lane 2: HUVEC cell lysate  
Lane 3: PANC-1 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 81 kDa  
Observed band size: 81 kDa

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

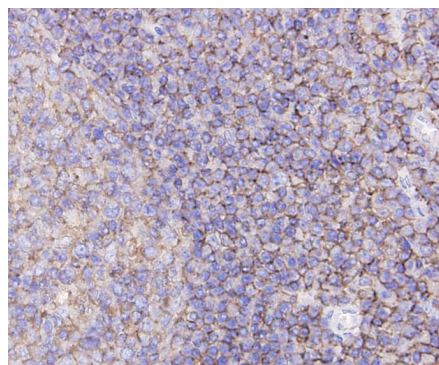
Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (EM010805) at 1/50,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.



**Fig2:** Western blot analysis of CD44 on different lysates using anti-CD44 antibody at 1/500 dilution.

**Positive control:**

Lane 1: HUVEC cell lysate  
Lane 2: HL-60 cell lysate  
Lane 3: Hela cell lysate  
Lane 4: SKOV-3 cell lysate



**Fig3:** Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-CD44 antibody. Counter stained with hematoxylin.

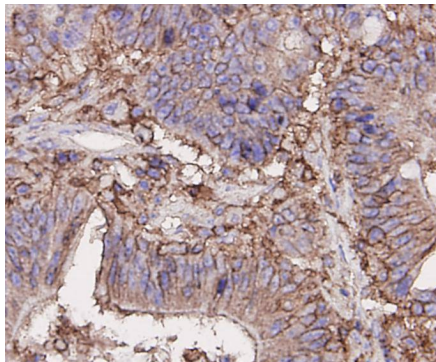
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**Fig4:** Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue using anti-CD44 antibody. Counter stained with hematoxylin.

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

### Background References

1. "Correlation of CD44v6 expression with ovarian cancer progression and recurrence." Shi J et al. BMC Cancer 13:182 (2013).
2. "Ligand-induced structural changes of the CD44 hyaluronan-binding domain revealed by NMR." Takeda M., Ogino S., Umemoto R., Sakakura M., Kajiwara M., Sugahara K.N., Hayasaka H., Miyasaka M., Terasawa H., Shimada I.J. Biol. Chem. 281:40089-40095(2006)
3. "Structure of the regulatory hyaluronan binding domain in the inflammatory leukocyte homing receptor CD44." Teriete P., Banerji S., Noble M., Blundell C.D., Wright A.J., Pickford A.R., Lowe E., Mahoney D.J., Tammi M.I., Kahmann J.D., Campbell I.D., Day A.J., Jackson D.G. Mol. Cell 13:483-496(2004)

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