

# HCAM (H-300): sc-7946

## BACKGROUND

Cell adhesion molecules (CAMs) are a family of closely related, cell surface glycoproteins that are involved in cell-cell interactions and are thought to play an important role in embryogenesis and development. HCAM, also known as CD44, LHR, MDU2, MDU3, MIC4, Pgp1, HCELL, MUTCH-I or ECMR-III, is a 742 amino acid single-pass type I membrane protein that is involved in hema-topoiesis, lymphocyte activation and tumor metastasis. Functioning as a receptor for hyaluronic acid (HA) and interacting with ligands such as osteopontin (OPN), HCAM mediates both cell-cell and cell-matrix interactions, thereby playing an essential role in cell adhesion and cell migration. HCAM contains one Link domain and, due to alternative splicing events, is expressed as multiple isoforms, some of which are designated CD44R, CDw44, CD44S, CD44H (hematopoietic) and CD44E (epithelial). While most of the HCAM splice variants are expressed in tissues throughout the body, one specific isoform, namely CD44H, is expressed at high levels in cancer tissue, suggesting an important role for the CD44H splice variant in tumor progression.

## CHROMOSOMAL LOCATION

Genetic locus: CD44 (human) mapping to 11p13; Cd44 (mouse) mapping to 2 E2.

## SOURCE

HCAM (H-300) is a rabbit polyclonal antibody raised against amino acids 21-320 of HCAM of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HCAM (H-300) is recommended for detection of HCAM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HCAM siRNA (h): sc-29342, HCAM siRNA (m): sc-35534, HCAM shRNA Plasmid (h): sc-29342-SH, HCAM shRNA Plasmid (m): sc-35534-SH, HCAM shRNA (h) Lentiviral Particles: sc-29342-V and HCAM shRNA (m) Lentiviral Particles: sc-35534-V.

Molecular Weight of HCAM: 90-95 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-937 cell lysate: sc-2239 or HUV-EC-C whole cell lysate: sc-364180.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

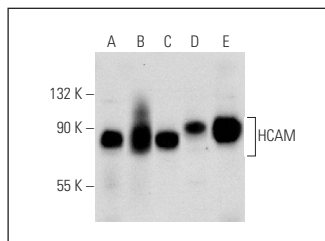
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

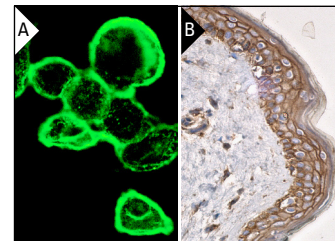
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



HCAM (H-300): sc-7946. Western blot analysis of HCAM expression in HUV-EC-C (A), human PBL (B), HeLa (C), U-937 (D) and WI 38 (E) whole cell lysates.



HCAM (H-300): sc-7946. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing membrane staining of epidermal cells (B).

## SELECT PRODUCT CITATIONS

1. Tysnes, B.B., et al. 2001. Bromelain reversibly inhibits invasive properties of glioma cells. *Neoplasia* 3: 469-479.
2. Hsin, Y.H., et al. 2006. Effect of aristolochic acid on intracellular calcium concentration and its links with apoptosis in renal tubular cells. *Apoptosis* 11: 2167-2177.
3. Cohen, M., et al. 2006. Dynamic study of the transition from hyaluronan- to integrin-mediated adhesion in chondrocytes. *EMBO J.* 25: 302-311.
4. Maaser, K., et al. 2008. A genome-wide expression analysis identifies a network of EpCAM-induced cell cycle regulators. *Br. J. Cancer* 99: 1635-1643.
5. Ghannam, A., et al. 2008. High-density rafts preferentially host the complement activator measles virus F glycoprotein but not the regulators of complement activation. *Mol. Immunol.* 45: 3036-3044.
6. Fujiwara, T., et al. 2008. Hyaluronan-CD44 pathway regulates orientation of mitotic spindle in normal epithelial cells. *Genes Cells* 13: 759-770.
7. Das, S., et al. 2009. The hedgehog pathway transcription factor GLI1 promotes malignant behavior of cancer cells by up-regulating osteopontin. *J. Biol. Chem.* 284: 22888-22897.
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9. Ren, K., et al. 2010. Manipulation of the adhesive behaviour of skeletal muscle cells on soft and stiff polyelectrolyte multilayers. *Acta Biomater.* 6: 4238-4248.
10. Mi, Z., et al. 2011. Osteopontin promotes CCL5-mesenchymal stromal cell-mediated breast cancer metastasis. *Carcinogenesis* 32: 477-487.
11. Luo, X., et al. 2011. Osteopontin stimulates preneoplastic cellular proliferation through activation of the MAPK pathway. *Mol. Cancer Res.* 9: 1018-1029.