

HCAM (P3H9): sc-53505

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 hematopoiesis, 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.

REFERENCES

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3. Zhuo, L., Kanamori, A., Kannagi, R., Itano, N., Wu, J., Hamaguchi, M., Ishiguro, N. and Kimata, K. 2006. SHAP potentiates the CD44-mediated leukocyte adhesion to the hyaluronan substratum. *J. Biol. Chem.* 281: 20303-20314.
4. Sugahara, K.N., Hirata, T., Hayasaka, H., Stern, R., Murai, T. and Miyasaka, M. 2006. Tumor cells enhance their own CD44 cleavage and motility by generating hyaluronan fragments. *J. Biol. Chem.* 281: 5861-5868.
5. Mielgo, A., Brondani, V., Landmann, L., Glaser-Ruhm, A., Erb, P., Stupack, D. and Günther, U. 2007. The CD44 standard/ezrin complex regulates Fas-mediated apoptosis in Jurkat cells. *Apoptosis* 12: 2051-2061.
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CHROMOSOMAL LOCATION

Genetic locus: CD44 (human) mapping to 11p13.

SOURCE

HCAM (P3H9) is a mouse monoclonal antibody raised against HT-1080 fibrosarcoma cells of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HCAM (P3H9) is recommended for detection of HCAM (also designated CD44) of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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

Molecular Weight of HCAM: 90-95 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HL-60 whole cell lysate: sc-2209 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Song, Z., Yue, W., Wei, B., Wang, N., Li, T., Guan, L., Shi, S., Zeng, Q., Pei, X. and Chen, L. 2011. Sonic hedgehog pathway is essential for maintenance of cancer stem-like cells in human gastric cancer. *PLoS ONE* 6: e17687.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **HCAM (DF1485): sc-7297** for HCAM antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.