

HCAM (156-3C11): sc-59909

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

- McVoy, L.A., et al. 2005. CD44 and annexin A2 mediate the C5a chemotactic cofactor function of the vitamin D binding protein. *J. Immunol.* 175: 4754-4760.
- Hanley, W.D., et al. 2006. Variant isoforms of CD44 are P- and L-selectin ligands on colon carcinoma cells. *FASEB J.* 20: 337-339.
- Sugahara, K.N., et al. 2006. Tumor cells enhance their own CD44 cleavage and motility by generating hyaluronan fragments. *J. Biol. Chem.* 281: 5861-5868.
- Zhuo, L., et al. 2006. SHAP potentiates the CD44-mediated leukocyte adhesion to the hyaluronan substratum. *J. Biol. Chem.* 281: 20303-20314.
- Mielgo, A., et al. 2007. The CD44 standard/ezrin complex regulates Fas-mediated apoptosis in Jurkat cells. *Apoptosis* 12: 2051-2061.
- Singleton, P.A., et al. 2007. CD44 regulates hepatocyte growth factor-mediated vascular integrity. Role of c-Met, Tiam1/Rac1, dynamin 2, and cortactin. *J. Biol. Chem.* 282: 30643-30657.
- Desai, B., et al. 2007. Mechanisms of osteopontin and CD44 as metastatic principles in prostate cancer cells. *Mol. Cancer* 6: 18.

CHROMOSOMAL LOCATION

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

SOURCE

HCAM (156-3C11) is a mouse monoclonal antibody raised against stimulated leukocytes of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

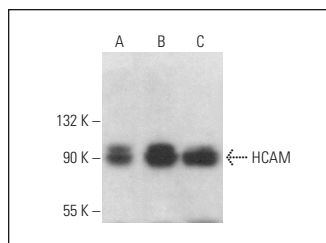
HCAM (156-3C11) is recommended for detection of HCAM of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (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.

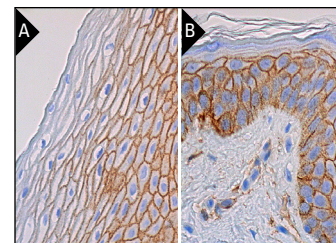
Molecular Weight of HCAM: 90-95 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HUV-EC-C whole cell lysate: sc-364180 or HeLa whole cell lysate: sc-2200.

DATA



HCAM (156-3C11): sc-59909. Western blot analysis of HCAM expression in HeLa (A), HUV-EC-C (B) and CCRF-CEM (C) whole cell lysates.



HCAM (156-3C11): sc-59909. Immunoperoxidase staining of formalin fixed, paraffin-embedded human uterine cervix tissue showing membrane staining of squamous epithelial cells (A) and human skin tissue showing membrane staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes (B).

SELECT PRODUCT CITATIONS

- Klagas, I., et al. 2009. Decreased hyaluronan in airway smooth muscle cells from patients with asthma and COPD. *Eur. Respir. J.* 34: 616-628.
- Li, Y., et al. 2015. Slug contributes to cancer progression by direct regulation of ERα signaling pathway. *Int. J. Oncol.* 46: 1461-1472.

STORAGE

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

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, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.