

HCAM (IRAWB 14.4): sc-65876

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

1. McVoy, L.A. and Kew, R.R. 2005. CD44 and Annexin A2 mediate the C5a chemotactic cofactor function of the vitamin D binding protein. *J. Immunol.* 175: 4754-4760.
2. 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.
3. 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.
4. Zhuo, L., et al. 2006. SHAP potentiates the CD44-mediated leukocyte adhesion to the hyaluronan substratum. *J. Biol. Chem.* 281: 20303-20314.
5. Mielgo, A., et al. 2007. The CD44 standard/Ezrin complex regulates FAS-mediated apoptosis in Jurkat cells. *Apoptosis* 12: 2051-2061.
6. Singleton, P.A., et al. 2007. CD44 regulates hepatocyte growth factor-mediated vascular integrity. Role of c-Met, Tiam1/Rac 1, Dynamin 2, and Cortactin. *J. Biol. Chem.* 282: 30643-30657.
7. Desai, B., et al. 2007. Mechanisms of osteopontin and CD44 as metastatic principles in prostate cancer cells. *Mol. Cancer* 6: 18.
8. Golshani, R., et al. 2008. Hyaluronic acid synthase-1 expression regulates bladder cancer growth, invasion and angiogenesis through CD44. *Cancer Res.* 68: 483-491.
9. Abecassis, I., et al. 2008. Re-expression of DNA methylation-silenced CD44 gene in a resistant NB4 cell line: rescue of CD44-dependent cell death by cAMP. *Leukemia* 22: 511-520.

CHROMOSOMAL LOCATION

Genetic locus: Cd44 (mouse) mapping to 2 E2.

SOURCE

HCAM (IRAWB 14.4) is a rat monoclonal antibody raised against an HA-binding variant of a T-cell line derived from a spontaneous tumor of mouse origin.

PRODUCT

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

HCAM (IRAWB 14.4) is available conjugated to either phycoerythrin (sc-65876 PE) or fluorescein (sc-65876 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

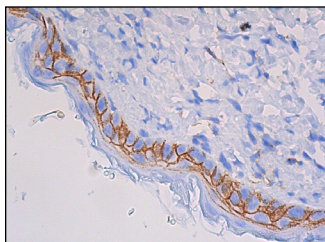
APPLICATIONS

HCAM (IRAWB 14.4) is recommended for detection of HCAM of mouse origin by immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

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

Molecular Weight of HCAM: 90-95 kDa.

DATA



HCAM (IRAWB 14.4): sc-65876. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse skin tissue showing membrane staining of epidermal cells.

SELECT PRODUCT CITATIONS

1. Hu, Y., et al. 2019. Fasudil may induce the differentiation of bone marrow mesenchymal stem cells into neuron-like cells via the Wnt/β-catenin pathway. *Mol. Med. Rep.* 19: 3095-3104.

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.



See **HCAM (DF1485): sc-7297** for HCAM antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.