

HCAM (OX50): sc-53069

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. 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.
- 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.
- Zhuo, L., et al. 2006. SHAP potentiates the CD44-mediated leukocyte adhesion to the hyaluronan substratum. *J. Biol. Chem.* 281: 20303-20314.
- 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.
- 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 (mouse) mapping to 2 E2.

SOURCE

HCAM (OX50) is a mouse monoclonal antibody raised against T cell blasts of rat 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.

HCAM (OX50) is available conjugated to either phycoerythrin (sc-53069 PE) or fluorescein (sc-53069 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

HCAM (OX50) is recommended for detection of HCAM of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

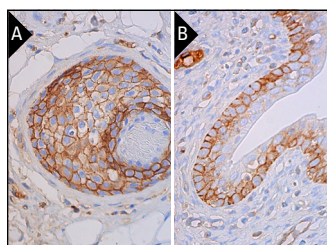
Suitable for use as control antibody for HCAM siRNA (m): sc-35534, HCAM shRNA Plasmid (m): sc-35534-SH and HCAM shRNA (m) Lentiviral Particles: sc-35534-V.

Molecular Weight of HCAM: 90-95 kDa.

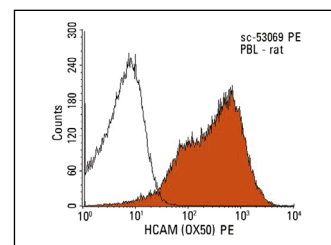
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



HCAM (OX50): sc-53069. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat skin tissue showing membrane and cytoplasmic staining of squamous epithelial cells (A) and rat pre-menopausal uterus tissue showing membrane and cytoplasmic staining of epithelial cells (B).



HCAM (OX50): sc-53069. Indirect FCM analysis of rat peripheral blood leukocytes stained with HCAM (OX50), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG₁: sc-3877.

SELECT PRODUCT CITATIONS

- Gan, L., et al. 2013. Hyaluronan-modified core-shell liponanoparticles targeting CD44-positive retinal pigment epithelium cells via intravitreal injection. *Biomaterials* 34: 5978-5987.
- Gasparotto, V.P., et al. 2014. A new fibrin sealant as a three-dimensional scaffold candidate for mesenchymal stem cells. *Stem Cell Res. Ther.* 5: 78.
- Ye, C., et al. 2020. MAD2B contributes to parietal epithelial cell activation and crescentic glomerulonephritis via Skp2. *Am. J. Physiol. Renal Physiol.* E-published.

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.