

HCAM (BU52): sc-65265

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.

CHROMOSOMAL LOCATION

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

SOURCE

HCAM (BU52) is a mouse monoclonal antibody raised against peripheral myeloma 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.

HCAM (BU52) is available conjugated to either phycoerythrin (sc-65265 PE) or fluorescein (sc-65265 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

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.

APPLICATIONS

HCAM (BU52) 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 flow cytometry (1 µg per 1 x 10⁶ cells).

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.

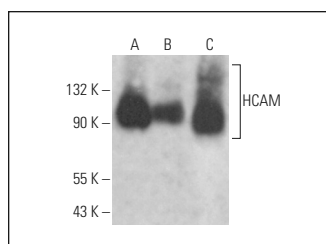
Molecular Weight of HCAM: 90-95 kDa.

Positive Controls: U-937 cell lysate: sc-2239, MCF7 whole cell lysate: sc-2206 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

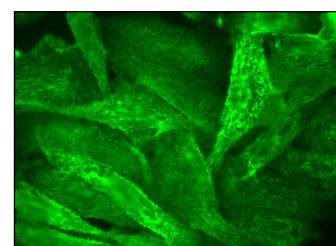
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



HCAM (BU52): sc-65265. Western blot analysis of HCAM expression in HUVEC-C (A), NTERA-2 cl.D1 (B) and MCF7 (C) whole cell lysates.



HCAM (BU52) FITC: sc-65265 FITC. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane localization. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

- Li, M., et al. 2014. Stem cell-like circulating tumor cells indicate poor prognosis in gastric cancer. *Biomed Res. Int.* 2014: 981261.
- Ceppi, P., et al. 2014. CD95 and CD95L promote and protect cancer stem cells. *Nat. Commun.* 5: 5238.
- Li, E., et al. 2017. Long noncoding RNA HOTAIR promotes the proliferation and metastasis of osteosarcoma cells through the Akt/mTOR signaling pathway. *Exp. Ther. Med.* 14: 5321-5328.
- Wang, L., et al. 2017. Delta/Notch-like epidermal growth factor-related receptor (DNER) orchestrates stemness and cancer progression in prostate cancer. *Am. J. Transl. Res.* 9: 5031-5039.
- Ju, H., et al. 2017. Impact of environmental pollutant cadmium on the establishment of a cancer stem cell population in breast and hepatic cancer. *ACS Omega* 2: 563-572.
- Peng, C., et al. 2018. Response of hPDLSCs on 3D printed PCL/PLGA composite scaffolds *in vitro*. *Mol. Med. Rep.* 18: 1335-1344.
- Patil, S., et al. 2019. Culture and characterization of human dental pulp-derived stem cells as limbal stem cells for corneal damage repair. *Mol. Med. Rep.* 20: 4688-4694.

CONJUGATES

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