SANTA CRUZ BIOTECHNOLOGY, INC.

# HCAM (P1G12): sc-53503

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*The Power to Question*

## 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 varients 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 varient in tumor progression.

## REFERENCES


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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/Rac1, 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.
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## CHROMOSOMAL LOCATION

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

## SOURCE

HCAM (P1G12) is a mouse monoclonal antibody raised against HT-1080 fibrosarcoma cells of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HCAM (P1G12) 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)] 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.

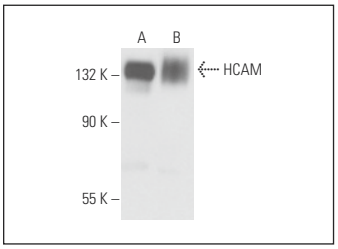
Molecular Weight of HCAM: 90-95 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, 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) 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 (P1G12): sc-53503. Western blot analysis of HCAM expression in AML-193 (**A**) and HL-60 (**B**) whole cell lysates under non reducing conditions.

## 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.

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.