SANTA CRUZ BIOTECHNOLOGY, INC.

Ep-CAM (5F209): sc-71057

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The epithelial cell adhesion molecule Ep-CAM, which is also designated tumor-associated calcium signal transducer 1 and MK-1, is a monomeric membrane glycoprotein that is expressed in most normal human epithelium and in most carcinomas. The human Ep-CAM gene encodes a 314 amino acid protein that is expressed as two forms, a major form and a minor form, which are reduced upon treatment with the amino-glycosylation inhibitor tunicamycin. Ep-CAM is overexpressed in a variety of carcinomas and is, therefore, a potential target for the visualization and therapy of human solid tumors. Ep-CAM contains an extracellular domain containing two epidermal growth factor-like repeats, followed by a cysteine poor region, which are necessary for the adhesion properties of the molecule.

REFERENCES

1. Farr, A., et al. 1991. Epithelial heterogeneity in the murine thymus: a cell surface glycoprotein expressed by subcapsular and medullary epithelium. J. Histochem. Cytochem. 39: 645-653.
2. Bergsagel, P.L., et al. 1992. A murine cDNA encodes a pan-epithelial glycoprotein that is also expressed on plasma cells. J. Immunol. 148: 590-596.
3. Bjork, P., et al. 1993. Isolation, partial characterization, and molecular cloning of a human colon adenocarcinoma cell-surface glycoprotein recognized by the C215 mouse monoclonal antibody. J. Biol. Chem. 268: 24232-24241.
4. Nelson, A.J., et al. 1996. The murine homolog of human Ep-CAM, a homotypic adhesion molecule, is expressed by thymocytes and thymic epithelial cells. Eur. J. Immunol. 26: 401-408.
5. Litvinov, S.V., et al. 1997. Epithelial cell adhesion molecule (Ep-CAM) modulates cell-cell interactions mediated by classic cadherins. J. Cell Biol. 139: 1337-1348.
6. Tomita, Y., et al. 2000. Molecular identification of a human carcinoma-associated glycoprotein antigen recognized by mouse monoclonal antibody FU-MK-1. J. Cancer Res. 91: 231-238.
7. Taguchi, N., et al. 2000. Abnormal thymic expression of epithelial cell adhesion molecule (EP-CAM) in New Zealand Black (NZB) mice. J. Autoimmun. 13: 393-404.

CHROMOSOMAL LOCATION

Genetic locus: TACSTD1 (human) mapping to 2p21.

SOURCE

Ep-CAM (5F209) is a mouse monoclonal antibody raised against HT29 carcinoma cell line 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.

RESEARCH USE

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

APPLICATIONS

Ep-CAM (5F209) is recommended for detection of Ep-CAM 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 Ep-CAM siRNA (h): sc-43032, Ep-CAM shRNA Plasmid (h): sc-43032-SH and Ep-CAM shRNA (h) Lentiviral Particles: sc-43032-V.

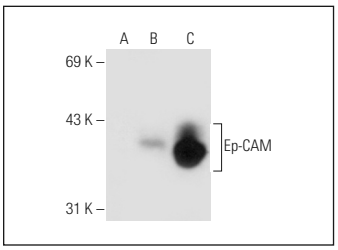
Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: Ep-CAM (h2): 293T Lysate: sc-159491, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

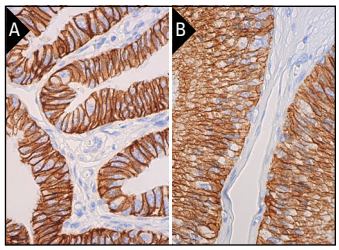
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Ep-CAM (5F209): sc-71057. Western blot analysis of Ep-CAM expression in non-transfected 293T: sc-117752 (**A**), human Ep-CAM transfected 293T: sc-159491 (**B**) and MCF7 (**C**) whole cell lysates.



Ep-CAM (5F209): sc-71057. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue (**A**) and human epididymis tissue (**B**) showing membrane staining of glandular cells.

STORAGE

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

CONJUGATES

See **Ep-CAM (C-10): sc-25308** for Ep-CAM antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.