

# Ep-CAM (6D376): sc-71058

## 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

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 (6D376) is a mouse monoclonal antibody raised against small cell lung carcinoma cell line HG9 of human origin.

## 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.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as phycoerythrin (sc-71058 PE) or fluorescein (sc-71058 FITC) conjugates for flow cytometry, 100 tests.

## APPLICATIONS

Ep-CAM (6D376) 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 flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

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.

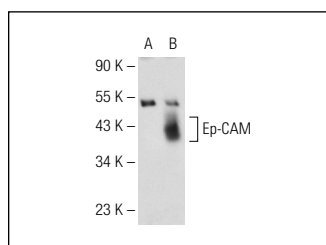
Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: Ep-CAM (h): 293T Lysate: sc-159303, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

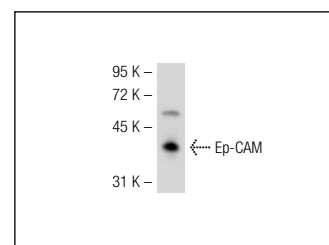
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Ep-CAM (6D376): sc-71058. Western blot analysis of Ep-CAM expression in non-transfected: sc-117752 (A) and human Ep-CAM transfected: sc-159303 (B) 293T whole cell lysates.



Ep-CAM (6D376): sc-71058. Western blot analysis of Ep-CAM expression in MCF7 whole cell lysate.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.