

# Ep-CAM (Ber-EP4): sc-59784

## 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 2 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.
- Trebak, M., et al. 2001. Oligomeric state of the colon carcinoma-associated glycoprotein GA733-2 (Ep-CAM/EGP40) and its role in GA733-mediated homotypic cell-cell adhesion. *J. Biol. Chem.* 276: 2299-2309.

## CHROMOSOMAL LOCATION

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

## SOURCE

Ep-CAM (Ber-EP4) is a mouse monoclonal antibody raised against MCF-7 human breast carcinoma cell line of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 250  $\mu$ l culture supernatant containing IgG<sub>1</sub> with < 0.1% sodium azide.

## APPLICATIONS

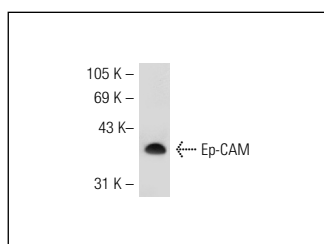
Ep-CAM (Ber-EP4) is recommended for detection of Ep-CAM of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [1-2  $\mu$ l per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

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: MCF7 whole cell lysate: sc-2206, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

## DATA



Ep-CAM (Ber-EP4): sc-59784. Western blot analysis of Ep-CAM expression in MCF7 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Pituch-Noworolska, A., et al. 2007. Immunophenotype of isolated tumour cells in the blood, bone marrow and lymph nodes of patients with gastric cancer. *Pol. J. Pathol.* 58: 93-97.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## PROTOCOLS

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