

# Ep-CAM (AUA1): sc-53277

## 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 tumours. 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.

## CHROMOSOMAL LOCATION

Genetic locus: EPCAM (human) mapping to 2p21; Epcam (mouse) mapping to 17 E4.

## SOURCE

Ep-CAM (AUA1) is a mouse monoclonal antibody raised against LoVo cell line of human origin.

## PRODUCT

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

Ep-CAM (AUA1) is available conjugated to agarose (sc-53277 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53277 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53277 PE), fluorescein (sc-53277 FITC), Alexa Fluor® 488 (sc-53277 AF488), Alexa Fluor® 546 (sc-53277 AF546), Alexa Fluor® 594 (sc-53277 AF594) or Alexa Fluor® 647 (sc-53277 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53277 AF680) or Alexa Fluor® 790 (sc-53277 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

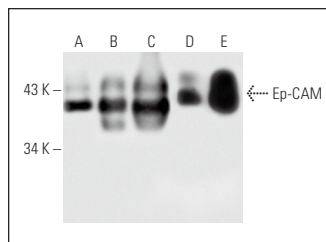
Ep-CAM (AUA1) is recommended for detection of Ep-CAM of mouse, rat and human origin by Western Blotting (non-reducing) (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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 siRNA (m): sc-43033, Ep-CAM shRNA Plasmid (h): sc-43032-SH, Ep-CAM shRNA Plasmid (m): sc-43033-SH, Ep-CAM shRNA (h) Lentiviral Particles: sc-43032-V and Ep-CAM shRNA (m) Lentiviral Particles: sc-43033-V.

Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, SHP-77 whole cell lysate: sc-364258 or Ca Ski whole cell lysate: sc-364360.

## DATA



Ep-CAM (AUA1): sc-53277. Western blot analysis of Ep-CAM expression in Ca Ski (A), Caco-2 (B), LS1034 (C) and SHP-77 (D) whole cell lysates and human prostate tumor tissue extract (E).

## SELECT PRODUCT CITATIONS

1. Sterzynska, K., et al. 2012. Analysis of the specificity and selectivity of anti-EpCAM antibodies in breast cancer cell lines. *Folia Histochem. Cytobiol.* 50: 534-541.
2. Zhu, C., et al. 2016. MicroRNA-183 promotes migration and invasion of CD133<sup>+</sup>/CD326<sup>+</sup> lung adenocarcinoma initiating cells via PTPN4 inhibition. *Tumour Biol.* 37: 11289-11297.
3. Kawahara, B., et al. 2020. Diminished viability of human ovarian cancer cells by antigen-specific delivery of carbon monoxide with a family of photoactivatable antibody-photoCORM conjugates. *Chem. Sci.* 11: 467-473.

## 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.

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