

Ep-CAM (323/A3): sc-73491

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.

CHROMOSOMAL LOCATION

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

SOURCE

Ep-CAM (323/A3) is a mouse monoclonal antibody raised against MCF-7 human breast cancer cells of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

Ep-CAM (323/A3) is recommended for detection of Ep-CAM of mouse, rat and 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); may cross-react with most epithelial cells and carcinomas.

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.

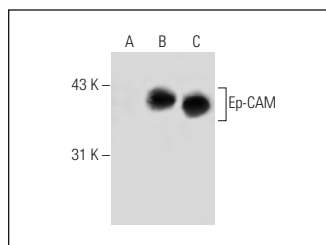
Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: Ep-CAM (h2): 293T Lysate: sc-159491, MCF7 whole cell lysate: sc-2206 or Hep G2 cell lysate: sc-2227.

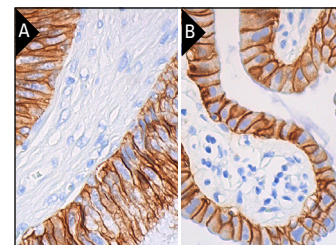
RECOMMENDED SUPPORT REAGENTS

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 (323/A3): sc-73491. 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 (323/A3): sc-73491. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Taylor, D.D., et al. 2010. Characterization of humoral responses of ovarian cancer patients: antibody subclasses and antigenic components. *Gynecol. Oncol.* 116: 213-221.
- Santesteban, O.J., et al. 2012. Assessment of molecular interactions through magnetic relaxation. *Angew. Chem. Int. Ed Engl.* 51: 6728-6732.
- Morone, S., et al. 2012. Overexpression of CD157 contributes to epithelial ovarian cancer progression by promoting mesenchymal differentiation. *PLoS ONE* 7: e43649.
- Li, Y., et al. 2016. Epithelial cell adhesion molecule in human hepatocellular carcinoma cell lines: a target of chemoresistance. *BMC Cancer* 16: 228.
- Alysandratos, K.D., et al. 2021. Patient-specific iPSCs carrying an SFTPC mutation reveal the intrinsic alveolar epithelial dysfunction at the inception of interstitial lung disease. *Cell Rep.* 36: 109636.



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.