

Ep-CAM (KS1/4): sc-33687

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.

CHROMOSOMAL LOCATION

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

SOURCE

Ep-CAM (KS1/4) is a mouse monoclonal antibody raised against UCLA-P3 cells derived from a human adenocarcinoma of the lung.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ep-CAM (KS1/4) is available conjugated to either phycoerythrin (sc-33687 PE) or fluorescein (sc-33687 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Ep-CAM (KS1/4) is recommended for detection of signal peptide of the precursor Ep-CAM of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ 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.

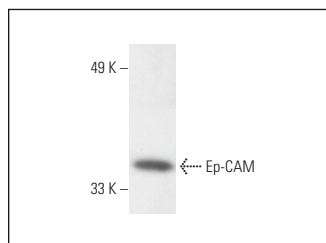
Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

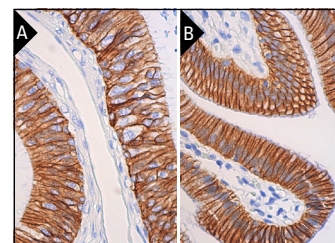
RECOMMENDED SUPPORT REAGENTS

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 (KS1/4): sc-33687. Western blot analysis of Ep-CAM expression in A-431 whole cell lysate.



Ep-CAM (KS1/4): sc-33687. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis (A) and human gall bladder (B) tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Wang, D.G., et al. 2014. Anti-tumor activity of the X-linked inhibitor of apoptosis (XIAP) inhibitor embelin in gastric cancer cells. *Mol. Cell. Biochem.* 386: 143-152.
2. Adams, S.R., et al. 2016. Multicolor electron microscopy for simultaneous visualization of multiple molecular species. *Cell Chem. Biol.* 23: 1417-1427.
3. Wang, D., et al. 2018. Antiproliferative effects of the CDK6 inhibitor PD0332991 and its effect on signaling networks in gastric cancer cells. *Int. J. Mol. Med.* 41: 2473-2484.
4. Huang, X., et al. 2019. Arrayed microfluidic chip for detection of circulating tumor cells and evaluation of drug potency. *Anal. Biochem.* 564-565: 64-71.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.