SANTA CRUZ BIOTECHNOLOGY, INC.

Ep-CAM (A-20): sc-23788

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

Ep-CAM (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Ep-CAM of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-23788 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 (A-20) is recommended for detection of precursor and mature 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

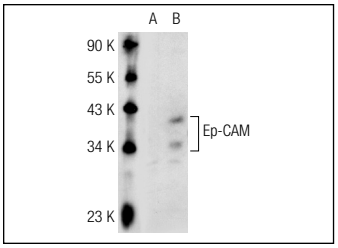
Ep-CAM (A-20) is also recommended for detection of precursor and mature Ep-CAM in additional species, including equine, canine, bovine and porcine.

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.

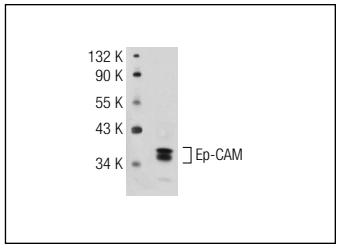
Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: Ep-CAM (h3): 293T Lysate: sc-113013, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

DATA



Ep-CAM (A-20): sc-23788. Western blot analysis of Ep-CAM expression in non-transfected: sc-117752 (**A**) and human Ep-CAM transfected: sc-113013 (**B**) 293T whole cell lysate.



Ep-CAM (A-20): sc-23788. Western blot analysis of Ep-CAM expression in MCF7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Slanchev, K., et al. 2009. The epithelial cell adhesion molecule EpCAM is required for epithelial morphogenesis and integrity during zebrafish epiboly and skin development. PLoS Genet. 5: e1000563.
2. Sordi, V., et al. 2010. Mesenchymal cells appearing in pancreatic tissue culture are bone marrow-derived stem cells with the capacity to improve transplanted islet function. Stem Cells 28: 140-151.
3. Lei, Z., et al. 2012. EpCAM contributes to formation of functional tight junction in the intestinal epithelium by recruiting claudin proteins. Dev. Biol. 371: 136-145.