

Ep-CAM (0.N.276): sc-71059

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.

SOURCE

Ep-CAM (0.N.276) is a mouse monoclonal antibody raised against small cell lung carcinoma cell line HG9 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.

Ep-CAM (0.N.276) is available conjugated to either phycoerythrin (sc-71059 PE) or fluorescein (sc-71059 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Ep-CAM (0.N.276) is recommended for detection of Ep-CAM of 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 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: SW480 cell lysate: sc-2219, MCF7 whole cell lysate: sc-2206 or SK-BR-3 cell lysate: sc-2218.

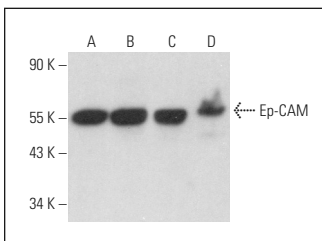
RECOMMENDED SUPPORT REAGENTS

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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Ep-CAM (0.N.276): sc-71059. Western blot analysis of Ep-CAM expression in MCF7 (A), SW480 (B), SK-BR-3 (C) and HeLa (D) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Maaser, K. and Borlak, J. 2008. A genome-wide expression analysis identifies a network of Ep-CAM-induced cell cycle regulators. *Br. J. Cancer* 99: 1635-1643.
2. Peeters, D.J., et al. 2013. Semiautomated isolation and molecular characterisation of single or highly purified tumour cells from CellSearch enriched blood samples using dielectrophoretic cell sorting. *Br. J. Cancer* 108: 1358-1367.
3. Reiner, A.T., et al. 2017. EV-associated MMP9 in high-grade serous ovarian cancer is preferentially localized to annexin V-binding EVs. *Dis. Markers* 2017: 9653194.
4. Deng, F. and Miller, J. 2019. A review on protein markers of exosome from different bio-resources and the antibodies used for characterization. *J. Histotechnol.* 42: 226-239.
5. Ji, W., et al. 2020. Efficacy of the CDK7 inhibitor on EMT-associated resistance to 3rd generation EGFR-TKIs in non-small cell lung cancer cell lines. *Cells* 9: 2596.
6. Jung, S., et al. 2021. Contribution of p53 in sensitivity to EGFR tyrosine kinase inhibitors in non-small cell lung cancer. *Sci. Rep.* 11: 19667.
7. Pang, Q.Y., et al. 2022. 3D genome organization in the epithelial-mesenchymal transition spectrum. *Genome Biol.* 23: 121.

RESEARCH USE

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



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.