

Ep-CAM (EBA-1): sc-66020



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 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 is 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 (EBA-1) is a mouse monoclonal antibody raised against macromolecular aggregates containing breast carcinoma-associated mucin BCA-225 of human origin.

PRODUCT

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

Ep-CAM (EBA-1) is available conjugated to agarose (sc-66020 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-66020 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-66020 PE), fluorescein (sc-66020 FITC), Alexa Fluor® 488 (sc-66020 AF488), Alexa Fluor® 546 (sc-66020 AF546), Alexa Fluor® 594 (sc-66020 AF594) or Alexa Fluor® 647 (sc-66020 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-66020 AF680) or Alexa Fluor® 790 (sc-66020 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Ep-CAM (EBA-1) 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), 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 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.

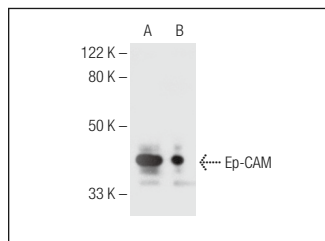
Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

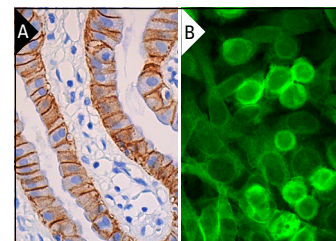
STORAGE

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

DATA



Ep-CAM (EBA-1): sc-66020. Western blot analysis of Ep-CAM expression in MCF7 (A) and A-431 (B) whole cell lysates.



Ep-CAM (EBA-1): sc-66020. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane staining of glandular cells (A). Ep-CAM (EBA-1) Alexa Fluor® 488: sc-66020 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (B).

SELECT PRODUCT CITATIONS

- Tolosa, L., et al. 2011. Steatotic liver: a suitable source for the isolation of hepatic progenitor cells. *Liver Int.* 31: 1231-1238.
- Hattoum, A., et al. 2013. Expression of hepatocyte epidermal growth factor receptor, FAS and glypican 3 in EpCAM-positive regenerative clusters of hepatocytes, cholangiocytes, and progenitor cells in human liver failure. *Hum. Pathol.* 44: 743-749.
- Wang, J., et al. 2014. Symmetrical and asymmetrical division analysis provides evidence for a hierarchy of prostate epithelial cell lineages. *Nat. Commun.* 5: 4758.
- Wang, J., et al. 2015. Bone mesenchymal stem cells overexpressing FGF4 contribute to liver regeneration in an animal model of liver cirrhosis. *Int. J. Clin. Exp. Med.* 8: 12774-12782.
- Hashimoto, M., et al. 2017. Viability of airborne tumor cells during excision by ultrasonic device. *Surg. Res. Pract.* 2017: 4907576.
- Wei, Y., et al. 2018. High expression of MAGE-A9 contributes to stemness and malignancy of human hepatocellular carcinoma. *Int. J. Oncol.* 52: 219-230.
- Hernández-Camarero, P., et al. 2019. Pancreatic (pro)enzymes treatment suppresses BXPC-3 pancreatic cancer stem cell subpopulation and impairs tumour engrafting. *Sci. Rep.* 9: 11359.
- Erlangga, Z., et al. 2019. Potent antitumor activity of liposomal irinotecan in an organoid- and CRISPR-Cas9-based murine model of gallbladder cancer. *Cancers* 11: 1904.

RESEARCH USE

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