

Ep-CAM (HEA125): sc-59906

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 (HEA125) is a mouse monoclonal antibody raised against the HT29 carcinoma cell line 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 (HEA125) is available conjugated to agarose (sc-59906 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59906 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59906 PE), fluorescein (sc-59906 FITC), Alexa Fluor[®] 488 (sc-59906 AF488), Alexa Fluor[®] 546 (sc-59906 AF546), Alexa Fluor[®] 594 (sc-59906 AF594) or Alexa Fluor[®] 647 (sc-59906 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-59906 AF680) or Alexa Fluor[®] 790 (sc-59906 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Ep-CAM (HEA125) 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

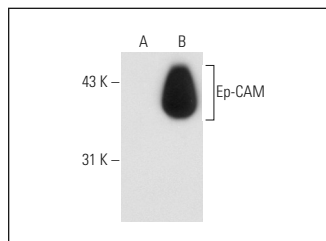
RESEARCH USE

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

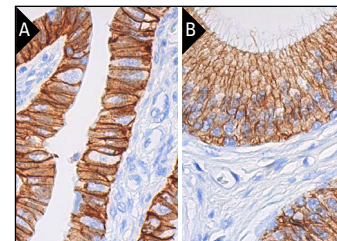
STORAGE

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

DATA



Ep-CAM (HEA125): sc-59906. Western blot analysis of Ep-CAM expression in non-transfected: sc-117752 (A) and human Ep-CAM transfected: sc-113013 (B) 293T whole cell lysates.



Ep-CAM (HEA125): sc-59906 Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing membrane and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Hoshino, A., et al. 2015. Tumour exosome integrins determine organotropic metastasis. *Nature* 527: 329-335.
- Ohnaga, T., et al. 2016. Capture of esophageal and breast cancer cells with polymeric microfluidic devices for CTC isolation. *Mol. Clin. Oncol.* 4: 599-602.
- Chikaishi, Y., et al. 2017. EpCAM-independent capture of circulating tumor cells with a "universal CTC-chip". *Oncol. Rep.* 37: 77-82.
- Ohnaga, T., et al. 2018. Highly efficient capture of cancer cells expressing EGFR by microfluidic methods based on antigen-antibody association. *Sci. Rep.* 8: 12005.
- Yoneda, K., et al. 2018. Capture of mesothelioma cells with "universal" CTC-chip. *Oncol. Lett.* 15: 2635-2640.
- Kure, K., et al. 2020. Using the polymeric circulating tumor cell chip to capture circulating tumor cells in blood samples of patients with colorectal cancer. *Oncol. Lett.* 19: 2286-2294.
- Jeong, S.Y., et al. 2021. Establishment of functional epithelial organoids from human lacrimal glands. *Stem Cell Res. Ther.* 12: 247.
- Rajagopalan, A., et al. 2021. SeqStain is an efficient method for multiplexed, spatialomic profiling of human and murine tissues. *Cell Rep. Methods* 1: 100006.
- Kanayama, M., et al. 2022. Prognostic impact of circulating tumor cells detected with the microfluidic "universal CTC-chip" for primary lung cancer. *Cancer Sci.* 113: 1028-1037.

PROTOCOLS

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