SANTA CRUZ BIOTECHNOLOGY, INC.

Ep-CAM (C-10): sc-25308

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.

CHROMOSOMAL LOCATION

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

SOURCE

Ep-CAM (C-10) is a mouse monoclonal antibody raised against amino acids 24-93 of Ep-CAM of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ep-CAM (C-10) is available conjugated to agarose (sc-25308 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-25308 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25308 PE), fluorescein (sc-25308 FITC), Alexa Fluor® 488 (sc-25308 AF488), Alexa Fluor® 546 (sc-25308 AF546), Alexa Fluor® 594 (sc-25308 AF594) or Alexa Fluor® 647 (sc-25308 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25308 AF680) or Alexa Fluor® 790 (sc-25308 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Ep-CAM (C-10) is recommended for detection of Ep-CAM of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

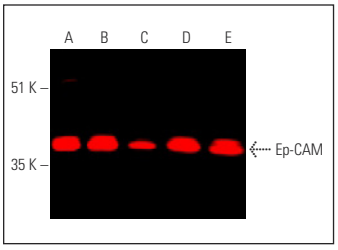
Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: Ca Ski whole cell lysate: sc-364360, A-431 whole cell lysate: sc-2201 or MCF7 whole cell lysate: sc-2206.

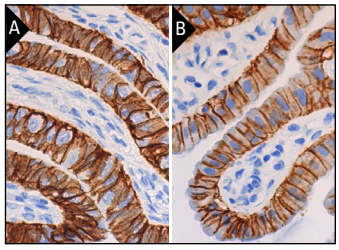
STORAGE

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

DATA



Ep-CAM (C-10): sc-25308. Near-infrared western blot analysis of Ep-CAM expression in A-431 (**A**), MCF7 (**B**), Ca Ski (**C**), SW480 (**D**) and SK-BR-3 (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



Ep-CAM (C-10): sc-25308. 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 gall bladder tissue showing membrane staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Liu, L., et al. 2007. Immunohistochemical analysis of chromophobe renal cell carcinoma, renal oncocytoma, and clear cell carcinoma: an optimal and practical panel for differential diagnosis. Arch. Pathol. Lab. Med. 131: 1290-1297.
2. Even-Desrumeaux, K., et al. 2014. Masked selection: a straightforward and flexible approach for the selection of binders against specific epitopes and differentially expressed proteins by phage display. Mol. Cell. Proteomics 13: 653-665.
3. Thieme, R., et al. 2015. Analysis of α2 macroglobulin from the long-lived and cancer-resistant naked mole-fat and human plasma. PLoS ONE 10: e0130470.
4. Nicolazzo, C., et al. 2016. Monitoring PD-L1 positive circulating tumor cells in non-small cell lung cancer patients treated with the PD-1 inhibitor Nivolumab. Sci. Rep. 6: 31726.
5. Wu, J., et al. 2017. Interspecies chimerism with mammalian pluripotent stem cells. Cell 168: 473-486.
6. Shin, H.Y., et al. 2018. Establishment of five immortalized human ovarian surface epithelial cell lines via SV40 T antigen or HPV E6/E7 expression. PLoS ONE 13: e0205297.
7. Ishibashi, R., et al. 2019. Detection of circulating colorectal cancer cells by a custom microfluid system before and after endoscopic metallic stent placement. Oncol. Lett. 18: 6397-6404.
8. Rizzo, M.I., et al. 2020. Detection of circulating tumor cells in patients with laryngeal cancer using ScreenCell: comparative pre- and post-operative analysis and association with prognosis. Oncol. Lett. 19: 4183-4188.

RESEARCH USE

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