SANTA CRUZ BIOTECHNOLOGY, INC.

Ep-CAM (G8.8): sc-53532

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 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 tumours. 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 (mouse) mapping to 17 E4.

SOURCE

Ep-CAM (G8.8) is a rat monoclonal antibody raised against the TE-71 medullary thymic epithelial cell line of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ep-CAM (G8.8) is available conjugated to agarose (sc-53532 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53532 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53532 PE), fluorescein (sc-53532 FITC), Alexa Fluor® 488 (sc-53532 AF488), Alexa Fluor® 546 (sc-53532 AF546), Alexa Fluor® 594 (sc-53532 AF594) or Alexa Fluor® 647 (sc-53532 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53532 AF680) or Alexa Fluor® 790 (sc-53532 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Ep-CAM (G8.8) is recommended for detection of Ep-CAM of mouse 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 (m): sc-43033, Ep-CAM shRNA Plasmid (m): sc-43033-SH and Ep-CAM shRNA (m) Lentiviral Particles: sc-43033-V.

Molecular Weight of Ep-CAM: 40 kDa.

Positive Controls: mouse kidney extract: sc-2255 or mouse lymph node extract: sc-364243.

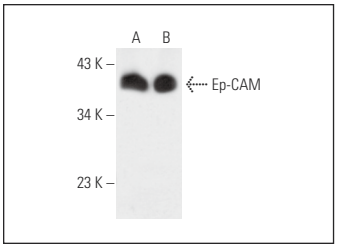
STORAGE

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

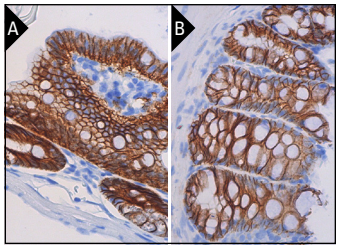
RESEARCH USE

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

DATA



Ep-CAM (G8.8): sc-53532. Western blot analysis of Ep-CAM expression in mouse kidney (**A**) and mouse lymph node (**B**) tissue extracts under non-reducing conditions.



Ep-CAM (G8.8): sc-53532. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse small intestine tissue showing membrane staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse colon tissue showing membrane staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Osada, M., et al. 2010. DKK1 mediated inhibition of Wnt signaling in postnatal mice leads to loss of TEC progenitors and thymic degeneration. PLoS ONE 5: e9062.
2. Amos-Landgraf, J.M., et al. 2014. Sex disparity in colonic adenomagenesis involves promotion by male hormones, not protection by female hormones. Proc. Natl. Acad. Sci. USA 111: 16514-16519.
3. Wang, C., et al. 2017. Interleukin-22 drives nitric oxide-dependent DNA damage and dysplasia in a murine model of colitis-associated cancer. Mucosal Immunol. 10: 1504-1517.
4. Janardhan, K.S., et al. 2018. Immunohistochemistry in investigative and toxicologic pathology. Toxicol. Pathol. 46: 488-510.
5. Yang, H., et al. 2019. A novel mouse model of enteric *Vibrio parahaemolyticus* infection reveals that the type III secretion system 2 effector VopC plays a key role in tissue invasion and gastroenteritis. mBio 10: e02608-19.
6. Liang, W., et al. 2020. FAM3D is essential for colon homeostasis and host defense against inflammation associated carcinogenesis. Nat. Commun. 11: 5912.
7. Lin, H., et al. 2021. Hyperpolyploidization of hepatocyte initiates preneoplastic lesion formation in the liver. Nat. Commun. 12: 645.
8. Jasso, G.J., et al. 2022. Colon stroma mediates an inflammation-driven fibroblastic response controlling matrix remodeling and healing. PLoS Biol. 20: e3001532.

PROTOCOLS

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