SANTA CRUZ BIOTECHNOLOGY, INC.

CEACAM5 (CI-P83-1): sc-23928

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

The CD66 (carcinoembryonic antigen, CEA, biliary glycoprotein I, BGP-1, CEACAM) immunoglobulin superfamily of genes encode cell adhesion proteins, which are expressed at higher levels in tumorous tissues than in normal tissues. The human CD66 gene family is a diverse set of glycoproteins of epithelial and hematopoietic lineage that comprises 29 genes, which map to chromosome position 19q13.2. CD66A, CD66B, CD66C, CD66D, CD66E and CD66F are the best characterized CD66 antigens, and CD66A-D expression upregulates on the surface of granulocytes upon stimulation. Certain CD66 family members mediate homotypic and heterotypic intercellular adhesion events. CD66E, also known as CEA, is a well known tumor marker and a heavily glycosylated GPI-linked cell surface molecule.

CHROMOSOMAL LOCATION

Genetic locus: CEACAM5 (human) mapping to 19q13.2, Ceacam5 (mouse) mapping to 7 A2.

SOURCE

CEACAM5 (CI-P83-1) is a mouse monoclonal antibody raised against CEACAM5 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.

CEACAM5 (CI-P83-1) is available conjugated to agarose (sc-23928 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23928 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23928 PE), fluorescein (sc-23928 FITC), Alexa Fluor® 488 (sc-23928 AF488), Alexa Fluor® 546 (sc-23928 AF546), Alexa Fluor® 594 (sc-23928 AF594) or Alexa Fluor® 647 (sc-23928 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23928 AF680) or Alexa Fluor® 790 (sc-23928 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CEACAM5 (CI-P83-1) is recommended for detection of CEACAM5 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 10^6 cells); non cross-reactive with CD66c, CD66a or granulocytes.

Suitable for use as control antibody for CEACAM5 siRNA (h): sc-72070, CEACAM5 siRNA (m): sc-142256, CEACAM5 shRNA Plasmid (h): sc-72070-SH, CEACAM5 shRNA Plasmid (m): sc-142256-SH, CEACAM5 shRNA (h) Lentiviral Particles: sc-72070-V and CEACAM5 shRNA (m) Lentiviral Particles: sc-142256-V.
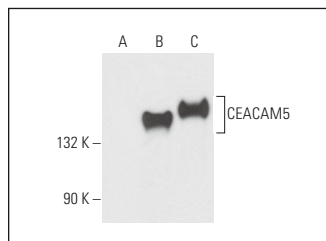
Molecular Weight of CEACAM5: 180-200 kDa.

Positive Controls: T84 whole cell lysate: sc-364797, MCF7 whole cell lysate: sc-2206 or CEACAM5 (h2): 293T Lysate: sc-170027.
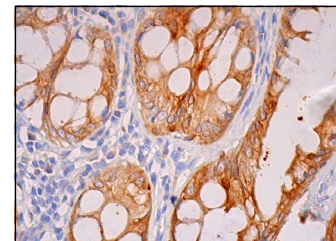
STORAGE

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

DATA

CEACAM5 (CI-P83-1): sc-23928. Western blot analysis of CEACAM5 expression in non-transfected 293T: sc-117752 (**A**), human CEACAM5 transfected 293T: sc-170027 (**B**) and T84 (**C**) whole cell lysates.

CEACAM5 (CI-P83-1): sc-23928. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Ren, Y.R., et al. 2012. Unbiased discovery of interactions at a control locus driving expression of the cancer-specific therapeutic and diagnostic target, mesothelin. J. Proteome Res. 11: 5301-5310.

2. Boogerd, L., et al. 2017. Correlation between preoperative serum carcinoembryonic antigen levels and expression on pancreatic and rectal cancer tissue. Biomark. Cancer 9: 1179299X17710016.

3. Chattopadhyay, R., et al. 2018. Resolvin D1 blocks H$_2$O$_2$-mediated inhibitory crosstalk between SHP2 and PP2A and suppresses endothelial-monocyte interactions. Free Radic. Biol. Med. 117: 119-131.

4. Buzzelli, J.N., et al. 2018. Colorectal cancer liver metastases organoids retain characteristics of original tumor and acquire chemotherapy resistance. Stem Cell Res. 27: 109-120.

5. Boogerd, L.S., et al. 2018. Biomarker expression in rectal cancer tissue before and after neoadjuvant therapy. Onco Targets Ther. 11: 1655-1664.

6. Waaijer, S.J.H., et al. 2018. Molecular imaging of radiolabeled bispecific T-cell engager ^{89}Zr-AMG211 targeting CEA-positive tumors. Clin. Cancer Res. 24: 4988-4996.

7. Ashley, N., et al. 2019. Cellular polarity modulates drug resistance in primary colorectal cancers via orientation of the multidrug resistance protein ABCB1. J. Pathol. 247: 293-304.

8. Linders, D., et al. 2021. CEA, EpCAM, αvβ6 and uPAR expression in rectal cancer patients with a pathological complete response after neoadjuvant therapy. Diagnostics 11: 516.

9. Kerns, J.S., et al. 2023. Safety profiling of tumor-targeted T cell-bispecific antibodies with alveolus lung- and colon-on-chip. Bio Protoc. 13: e4579.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA