

CEACAM1 (E-1): sc-166453



The Power to Question

BACKGROUND

Carcinoembryonic antigen (CEA) is one of the most commonly used tumor markers in serum immunoassay determinations of carcinoma. Members of the CEACAM (carcinoembryonic antigen-related cell adhesion molecule) family contain a single N domain, with structural homology to the immunoglobulin variable domains, followed by a variable number of immunoglobulin constant-like A and/or B domains. CEACAM1 (carcinoembryonic antigen-related cell adhesion molecule 1), also known as BGP or BGP1, is a 526 amino acid protein that exists as seven alternatively spliced isoforms, some of which localize to the cell membranes, while others are secreted. One of several members of the CEACAM family, CEACAM1 contains one Ig-like V-type domain and three Ig-like C2-type domains and is thought to play a role in a variety of cellular activities, including angiogenesis, apoptosis, arrangement of tissue three-dimensional structure and modulation of innate and adaptive immune responses. Additionally, CEACAM1 is underexpressed in colorectal cancers, suggesting a role in tumor suppression.

CHROMOSOMAL LOCATION

Genetic locus: CEACAM1 (human) mapping to 19q13.2.

SOURCE

CEACAM1 (E-1) is a mouse monoclonal antibody raised against amino acids 391-526 mapping at the C-terminus of CEACAM1 of human origin.

PRODUCT

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

CEACAM1 (E-1) is available conjugated to agarose (sc-166453 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166453 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166453 PE), fluorescein (sc-166453 FITC), Alexa Fluor® 488 (sc-166453 AF488), Alexa Fluor® 546 (sc-166453 AF546), Alexa Fluor® 594 (sc-166453 AF594) or Alexa Fluor® 647 (sc-166453 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166453 AF680) or Alexa Fluor® 790 (sc-166453 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CEACAM1 (E-1) is recommended for detection of CEACAM1 of human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CEACAM1 siRNA (h): sc-29845, CEACAM1 shRNA Plasmid (h): sc-29845-SH and CEACAM1 shRNA (h) Lentiviral Particles: sc-29845-V.

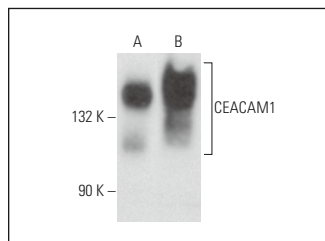
Molecular Weight of CEACAM1 isoforms: 90-180 kDa.

Positive Controls: T84 whole cell lysate: sc-364797, Hep G2 cell lysate: sc-2227 or COLO 205 whole cell lysate: sc-364177.

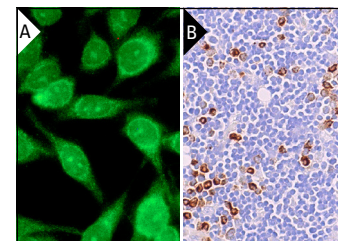
STORAGE

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

DATA



CEACAM1 (E-1): sc-166453. Western blot analysis of CEACAM1 expression in Hep G2 (A) and COLO 205 (B) whole cell lysates.



CEACAM1 (E-1): sc-166453. Immunofluorescence staining of methanol-fixed HeLa cells showing intracellular localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fetal thymus tissue showing cytoplasmic staining of subset of cortical cells (B).

SELECT PRODUCT CITATIONS

- Hayashi, S., et al. 2020. Cell-dependent regulation of vasculogenic mimicry by carcinoembryonic antigen cell adhesion molecule 1 (CEACAM1). *Biochem. Biophys. Rep.* 21: 100734.
- Nelli, R.K., et al. 2021. The betacoronavirus PHEV replicates and disrupts the respiratory epithelia and upregulates key pattern recognition receptor genes and downstream mediators, including IL-8 and IFN-λ. *mSphere* 6: e0082021.
- Cavallucci, V., et al. 2022. Proinflammatory and cancer-promoting pathobiont *Fusobacterium nucleatum* directly targets colorectal cancer stem cells. *Biomolecules* 12: 1256.
- Nelli, R.K., et al. 2022. Distribution of coronavirus receptors in the swine respiratory and intestinal tract. *Vet. Sci.* 9: 500.
- Zhang, L., et al. 2023. A p53/LINC00324 positive feedback loop suppresses tumor growth by counteracting SET-mediated transcriptional repression. *Cell Rep.* 42: 112833.

RESEARCH USE

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

PROTOCOLS

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

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