

CEACAM1/3/6 (YTH71.3): sc-59898

BACKGROUND

The CD66 (carcinoembryonic antigen, CEA, biliary glycoprotein I, BGP-1, CECAM) immunoglobulin superfamily of genes encode cell adhesion proteins, which are expressed at higher levels in tumorous tissues than in normal tissues. CD66 mRNA is strongly expressed in primary colon tumors and, to a lesser extent, in normal colonic tissue. 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 19q13.1-q13.2. 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. CD66 isoforms mediate homotypic and heterotypic intercellular adhesion events independently of cell type.

REFERENCES

1. Zimmermann, W., et al. 1987. Isolation and characterization of cDNA clones encoding the human carcinoembryonic antigen reveal a highly conserved repeating structure. *Proc. Natl. Acad. Sci. USA* 84: 2960-2964.
2. Barnett, T., et al. 1988. Carcino-embryonic antigen family: characterization of cDNAs coding for NCA and CEA and suggestion of nonrandom sequence variation in their conserved loop-domains. *Genomics* 3: 59-66.
3. Barnett, T.R., et al. 1989. Carcino-embryonic antigens: alternative splicing accounts for the multiple mRNAs that code for novel members of the carcinoembryonic antigen family. *J. Cell Biol.* 108: 267-276.
4. Schrewe, H., et al. 1990. Cloning of the complete gene for carcinoembryonic antigen: analysis of its promoter indicates a region conveying cell type-specific expression. *Mol. Cell. Biol.* 10: 2738-2748.
5. Tynan, K., et al. 1992. Assembly and analysis of cosmid contigs in the CEA-gene family region of human chromosome 19. *Nucleic Acids Res.* 20: 1629-1636.

CHROMOSOMAL LOCATION

Genetic locus: CEACAM1/CEACAM3/CEACAM6 (human) mapping to 19q13.2.

SOURCE

CEACAM1/3/6 (YTH71.3) is a rat monoclonal antibody raised against lymphocytes of human origin.

PRODUCT

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

CEACAM1/3/6 (YTH71.3) is available conjugated to either phycoerythrin (sc-59898 PE), fluorescein (sc-59898 FITC), Alexa Fluor[®] 488 (sc-59898 AF488), Alexa Fluor[®] 546 (sc-59898 AF546), Alexa Fluor[®] 594 (sc-59898 AF594) or Alexa Fluor[®] 647 (sc-59898 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-59898 AF680) or Alexa Fluor[®] 790 (sc-59898 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CEACAM1/3/6 (YTH71.3) is recommended for detection of CEACAM3, and transfectants containing CEACAM1, CEACAM3 and CEACAM6 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 flow cytometry (1 µg per 1 x 10⁶ cells).

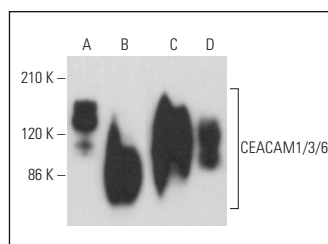
Molecular Weight of CEACAM1: 160 kDa.

Molecular Weight of CEACAM3: 90 kDa.

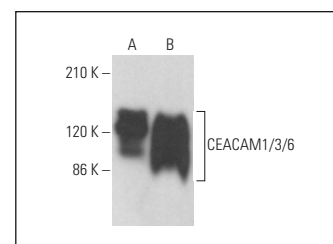
Molecular Weight of CEACAM6: 30 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A549 cell lysate: sc-2413 or human kidney extract: sc-363764.

DATA



CEACAM1/3/6 (YTH71.3): sc-59898. Western blot analysis of CEACAM1/3/6 expression in Hep G2 (A), A549 (B) and HT-29 (C) whole cell lysates and human kidney tissue extract (D).



CEACAM1/3/6 (YTH71.3): sc-59898. Western blot analysis of CEACAM1/3/6 expression in Hep G2 (A) and BXP-3 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Shibaguchi, H., et al. 2012. Enhancement of the antitumor effect on combination therapy of an anticancer drug and its antibody against carcinoembryonic antigen. *Chemotherapy* 58: 110-117.
2. Stein, D.C., et al. 2015. Expression of opacity proteins interferes with the transmigration of *Neisseria gonorrhoeae* across polarized epithelial cells. *PLoS ONE* 10: e0134342.
3. Wu, C.T., et al. 2022. *In vitro* analysis of matched isolates from localized and disseminated gonococcal infections suggests that opa expression impacts clinical outcome. *Pathogens* 11: 217.
4. Dissanayake, E., et al. 2023. Rhinovirus increases *Moraxella catarrhalis* adhesion to the respiratory epithelium. *Front. Cell. Infect. Microbiol.* 12: 1060748.

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.