

# CEACAM5 (26/5/1): sc-59873

## 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.

## REFERENCES

- 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.
- Barnett, T., et al. 1988. Carcinoembryonic 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.
- Barnett, T.R., et al. 1989. Carcinoembryonic antigens: alternative splicing accounts for the multiple mRNAs that code for novel members of the carcinoembryonic antigen family. *J. Cell Biol.* 108: 267-276.
- 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.
- 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.
- Barnett, T.R., et al. 1993. Human biliary glycoprotein gene: characterization of a family of novel alternatively spliced RNAs and their expressed proteins. *Mol. Cell. Biol.* 13: 1273-1282.

## CHROMOSOMAL LOCATION

Genetic locus: CEACAM5 (human) mapping to 19q13.2.

## SOURCE

CEACAM5 (26/5/1) is a mouse monoclonal antibody raised against CEACAM5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CEACAM5 (26/5/1) is available conjugated to either phycoerythrin (sc-59873 PE) or fluorescein (sc-59873 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## RESEARCH USE

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

## APPLICATIONS

CEACAM5 (26/5/1) is recommended for detection of CEACAM5 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 10<sup>6</sup> cells); non cross-reactive with CEACAM 1, 3, 4, 6, 7, and 8 or CD66f.

Suitable for use as control antibody for CEACAM5 siRNA (h): sc-72070, CEACAM5 shRNA Plasmid (h): sc-72070-SH and CEACAM5 shRNA (h) Lentiviral Particles: sc-72070-V.

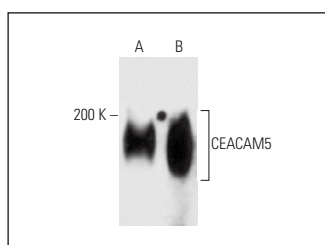
Molecular Weight of CEACAM5: 180-200 kDa.

Positive Controls: T84 whole cell lysate: sc-364797, MCF7 whole cell lysate: sc-2206 or COLO 205 whole cell lysate: sc-364177.

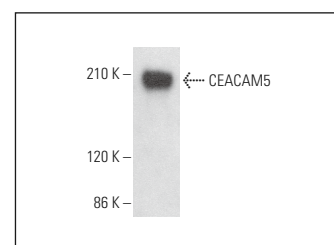
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CEACAM5 (26/5/1): sc-59873. Western blot analysis of CEACAM5 expression in LS1034 whole cell lysate under reducing (A) and non-reducing (B) conditions.



CEACAM5 (26/5/1): sc-59873. Western blot analysis of CEACAM5 expression in COLO 205 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Bae, M.Y., et al. 2009. Protective anti-tumour immune responses by murine dendritic cells pulsed with recombinant Tat-carcinoembryonic antigen derived from *Escherichia coli*. *Clin. Exp. Immunol.* 157: 128-138.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.