

# pan CEA (D-19): sc-54287

## BACKGROUND

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

## 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.
- Skubitz, K., et al. 1995. CD66 family members are associated with tyrosine kinase activity in human neutrophils. *J. Immunol.* 155: 5382-5390.

## SOURCE

pan CEA (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CECAM5 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54287 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

pan CEA (D-19) is recommended for detection of a broad range of CECAM family members 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

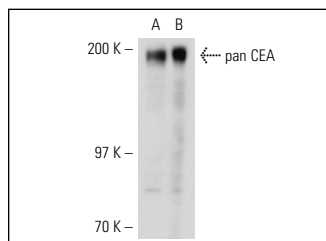
Molecular Weight of pan CEA: 80-200 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, MCF7 whole cell lysate: sc-2206 or T84 whole cell lysate: sc-364797.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



pan CEA (D-19): sc-54287. Western blot analysis of pan CEA expression in T84 (A) and LS1034 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Ray, S., et al. 2012. Establishment of human ultra-low passage colorectal cancer cell lines using spheroids from fresh surgical specimens suitable for *in vitro* and *in vivo* studies. *J. Cancer* 3: 196-206.

## RESEARCH USE

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


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Try **pan CEA (H-8): sc-48364** or **pan CEA (D-3): sc-55547**, our highly recommended monoclonal alternatives to pan CEA (D-19).