



pan CEA (HEA19): sc-73367

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. CEACAMS, such as CEACAM1, CEACAM7, CD66C, CD66D and CD66E, have diverse roles within the cell, including roles in the differentiation and arrangement of tissue three-dimensional structure, angiogenesis, apoptosis, tumor suppression, metastasis, and the modulation of innate and adaptive immune responses. The human CEACAM proteins are encoded by genes which are located within a 1.2 Mb cluster on the long arm of chromosome 19.

REFERENCES

1. Muenzner, P., et al. 2008. The CEACAM1 transmembrane domain, but not the cytoplasmic domain, directs internalization of human pathogens via membrane microdomains. *Cell. Microbiol.* 10: 1074-1092.
2. Skubitz, K.M. and Skubitz, A.P. 2008. Interdependency of CEACAM-1, -3, -6, and -8 induced human neutrophil adhesion to endothelial cells. *J. Transl. Med.* 6: 78.
3. Lee, H.S., et al. 2008. CEACAM1 dynamics during neisseria gonorrhoeae suppression of CD4⁺ T lymphocyte activation. *J. Immunol.* 180: 6827-6835.
4. Gaur, S., et al. 2008. Altered splicing of CEACAM1 in breast cancer: identification of regulatory sequences that control splicing of CEACAM1 into long or short cytoplasmic domain isoforms. *Mol. Cancer* 7: 46.
5. Slevogt, H., et al. 2008. CEACAM1 inhibits Toll-like receptor 2-triggered antibacterial responses of human pulmonary epithelial cells. *Nat. Immunol.* 9: 1270-1278.
6. Nittka, S., et al. 2008. The CEACAM1-mediated apoptosis pathway is activated by CEA and triggers dual cleavage of CEACAM1. *Oncogene* 27: 3721-3728.
7. Zalzal, H., et al. 2008. CEACAM1, a SOX9 direct transcriptional target identified in the colon epithelium. *Oncogene* 27: 7131-7138.
8. Callaghan, M.J., et al. 2008. Haplotypic diversity in human CEACAM genes: effects on susceptibility to meningococcal disease. *Genes Immun.* 9: 30-37.
9. Rahmoun, M., et al. 2009. Cytokine-induced CEACAM1 expression on keratinocytes is characteristic for psoriatic skin and contributes to a prolonged lifespan of neutrophils. *J. Invest. Dermatol.* 129: 671-681.

SOURCE

pan CEA (HEA19) is a mouse monoclonal antibody raised against Carcinoma cells of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

pan CEA (HEA19) is recommended for detection of a broad range of CEACAM family members of human origin by 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 pan CEA: 80-100 kDa.

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

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.