SANTA CRUZ BIOTECHNOLOGY, INC.

pan CEA (N-19): sc-8223

SANTA CRUZ BIOTECHNOLOGY
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. 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. Zalzali, H., et al. 2008. CEACAM1, a SOX9 direct transcriptional target identified in the colon epithelium. Oncogene 27: 7131-7138.

SOURCE

pan CEA (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CEACAM1 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-8223 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 (N-19) is recommended for detection of a broad range of CEACAM family members of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

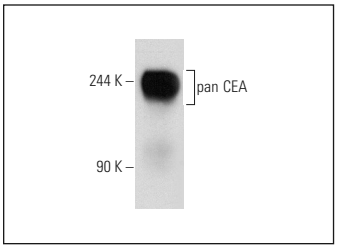
Molecular Weight of pan CEA: 80-200 kDa.

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.

DATA



pan CEA (N-19): sc-8223. Western blot analysis of pan CEA expression in MCF7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Gattenlohner, S., et al. 2003. NCAM(CD56) and RUNX1(AML1) are upregulated in human ischemic cardiomyopathy and a rat model of chronic cardiac ischemia. Am. J. Pathol. 163: 1081-1090.
2. Edwards, J.L., et al. 2003. Gonococcal phospholipase D modulates the expression and function of complement receptor 3 in primary cervical epithelial cells. Infect. Immun. 71: 6381-6391.

RESEARCH USE

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

PROTOCOLS

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