

## pan CEA (H-8): sc-48364



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.

## SOURCE

pan CEA (H-8) is a mouse monoclonal antibody raised against amino acids 35-334 mapping near the N-terminus of CEA of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

pan CEA (H-8) is available conjugated to agarose (sc-48364 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48364 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48364 PE), fluorescein (sc-48364 FITC), Alexa Fluor® 488 (sc-48364 AF488), Alexa Fluor® 546 (sc-48364 AF546), Alexa Fluor® 594 (sc-48364 AF594) or Alexa Fluor® 647 (sc-48364 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48364 AF680) or Alexa Fluor® 790 (sc-48364 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

pan CEA (H-8) is recommended for detection of pan CEA of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

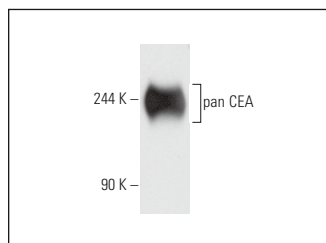
Molecular Weight of pan CEA: 80-200 kDa.

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

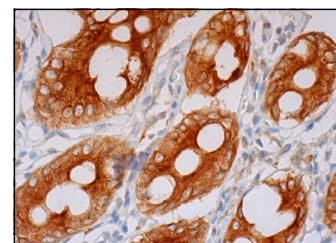
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



pan CEA (H-8): sc-48364. Western blot analysis of pan CEA expression in MCF7 whole cell lysate.



pan CEA (H-8): sc-48364. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic and membrane staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. SHI, Z., et al. 2010. The neuroprotective effect of Batch-2, an aqueous extract from cat's claw (*Uncaria tomentosa*) on 6-OHDA-induced SH-SY5Y cell damage. *Prog. Biochem. Biophys.* 37: 769-778.
2. Chang, H., et al. 2012. Synthesis and characterization of a new polymer-drug conjugate with pH-induced activity. *Polymer* 53: 3498-3507.
3. Yashiro, M., et al. 2021. Clinical difference between fibroblast growth factor receptor 2 subclass, type IIIb and type IIIc, in gastric cancer. *Sci. Rep.* 11: 4698.
4. Chu, Y.D., et al. 2023. Aldolase B-driven lactagenesis and CEACAM6 activation promote cell renewal and chemoresistance in colorectal cancer through the Warburg effect. *Cell Death Dis.* 14: 660.

## 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.

## PROTOCOLS

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