Leuko Com

anti human CEACAM5/8 (CD66e/b)

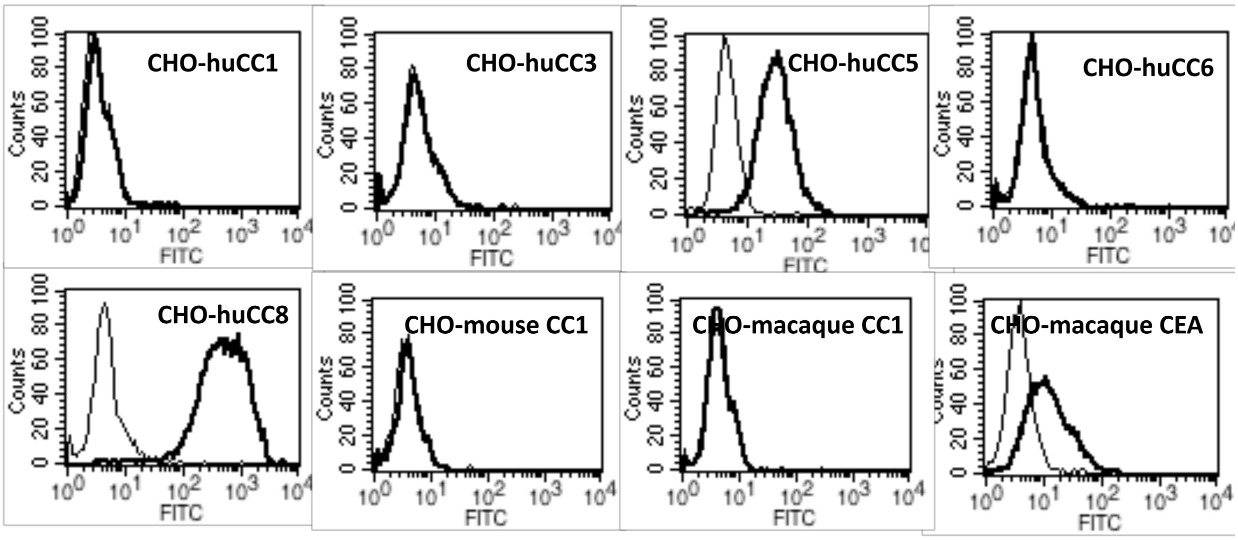
monoclonal antibody

mouse IgG1; **clone P1-1F-9D**

DESCRIPTION

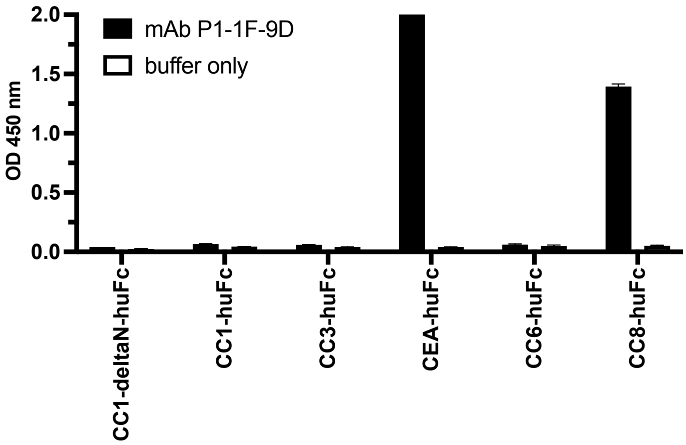
Clone name	P1-1F-9D
Applications	Flow Cytometry, ELISA, IF, IP, WB
Clonality & host & isotype	Monoclonal mouse IgG1/kappa
Immunogen	Supernatant of a CEA-expressing human cell-line
Target molecular weight	180 kDa (huCEACAM5); 38 kDa (huCEACAM8)
Recommended concentration	2–10µg/ml
Concentration	mg/ml (lot specific)
Formulation	PBS (pH 7.3), cell culture grade
Purification	purified from cell culture supernatant (ISF-1 Media) by affinity chromatography (protein G)
Storage	Shipped at -20°C or with ice packs, upon delivery store at -20°C. Dilute in PBS (pH7.3) if necessary. Stable for 12 months from date of receipt. Avoid repeated freeze-thaws.
Conjugation	unconjugated
Mouse Strain	Balb/c
Fusion partner	P3/NS1/-Ag4.1
Target	CEA (also known as CEACAM5 and CD66e) is one of twelve members of the CEACAM family (1). CEA forms homodimers, is highly glycosylated and membrane associated by a GPI anchor. It is expressed in normal inner epithelium of the intestinal tract and bronchial epithelial cells (2). It can be found in adenocarcinomas of epithelial cells of the digestive tract and in adenocarcinomas of fetal colon cells. As reliable tumor marker its soluble version can be found in sera of diverse cancer patients. Thus, CEA is used as a tumor marker for a number of malignant tumors, in particular for colon cancer, pancreatic carcinoma, breast carcinoma and lung adenocarcinoma (3). Cells that produce CEA incorporate this glycoprotein on their cell membrane and also release it into the blood. The marker can thus be detected both on cells and in body fluids. Due to its low specificity, this tumor marker is only of limited use as an early detection marker, but it is of great importance in tumor follow-up care.
UniProt ID	CEACAM5: P06731, CD66e CEACAM8: P31997, CD67

IMAGE DATA



Flow Cytometry analysis of mAb P1-1F-9D

250,000 **CHO** cells transfected with indicated human CEACAM plasmids were stained using 10 µg/ml of the **mAb P1-1F-9D,** followed by FITC-conjugated goat anti mouse IgG. Isotype matched control mAb was used as a negative control (thin line). Binding could be detected against human CEACAM5 and human CEACAM8, as well a slight cross-reactivity against macaque CEACAM5.

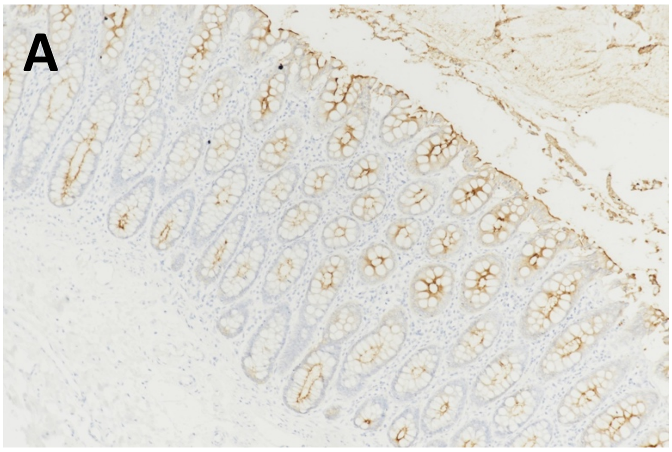


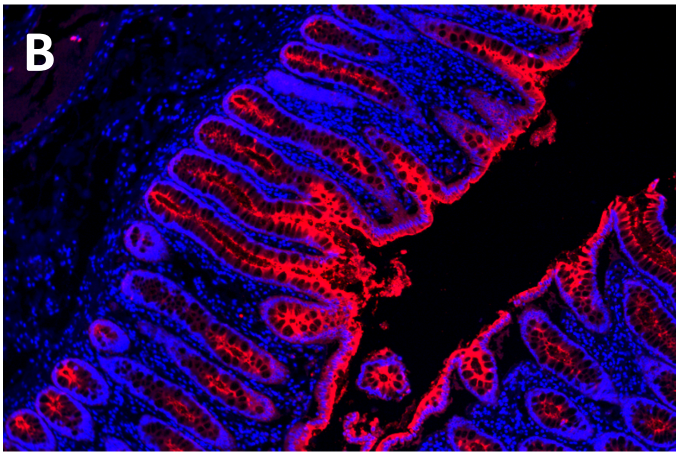
Indirect Enzyme-Linked Immunosorbent Assay (ELISA):

Indicated CEACAM-huFc antigens were coated onto wells. After blocking with 1% PBS-BSA, mAb **P1-1F-9D** (5 µg/ml) was incubated with the antigens. After washing, HRP-coupled goat anti mouse-IgG was incubated and binding visualized by TMB detection.

mAb **P1-1F-9D** binds to human CEACAM5 and CEACAM8.

No binding was observed against human CEACAM1, CEACAM3 and CEACAM6.





Immunohistochemistry Analysis

Deparaffinized paraffin-embedded, normal colon-tissue was blocked with 1% BSA/PBS. Sections were incubated overnight at 4°C with the monoclonal antibody clone **P1-1F-9D** or isotype-matched IgG1 mAb (10 µg/ml) as a negative control.

For bright field detection **(A)**, sections were incubated with biotinylated rabbit anti-mouse secondary Ab (Dako, Germany), followed by treatment with VECTASTAIN ABC reagent (Vector Laboratories, USA) and counterstained with hematoxylin. For immunofluorescence staining **(B)**, incubation occurred with biotinylated rabbit anti-mouse secondary Ab (Dako) followed by Cy-3-(IF) coupled streptavidin (Jackson ImmunoResearch Lab Inc., PA), and counterstained with DAPI.

REFERENCE

(1) Han et al. **The old CEACAMs find their new role in tumor immunotherapy.** Review**,** Invest New Drugs 2020 Dec;38(6):1888-1898. PMID: 32488569

(2) Klaile E., et al. **Carcinoembryonic antigen (CEA)-related cell adhesion molecules are co-expressed in the human lung and their expression can be modulated in bronchial epithelial cells by non-typable Haemophilus influenzae, Moraxella catarrhalis, TLR3, and type I and II interferons** (2013). Respir. Res. 14:85 PMID: 23941132

(3) Abdul-Wahid et al. **A focused immune response targeting the homotypic binding domain of the carcinoembryonic antigen blocks the establishment of tumor foci in vivo.** Int. J. Cancer: 131, 2839–2851 (2012). PMID: 22495743