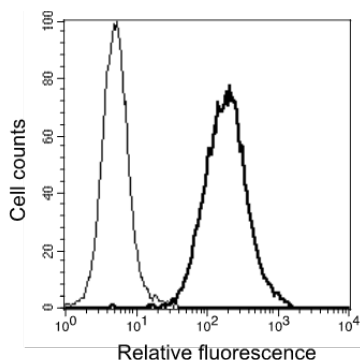


DESCRIPTION

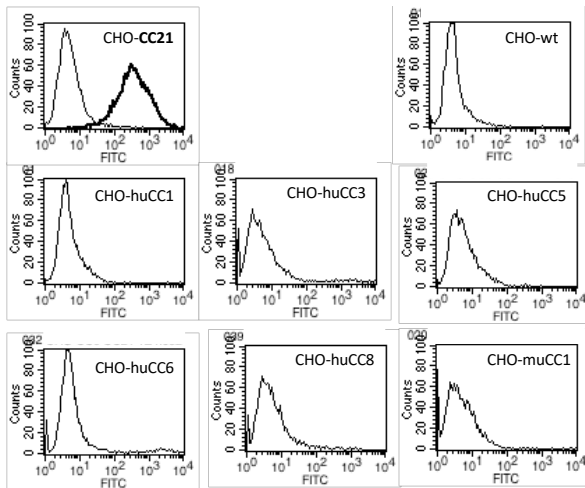
Clone name	1E4
Applications	Flow Cytometry, ELISA, IHC, IP, WB
Clonality & host & isotype	Monoclonal mouse IgG1/kappa
Immunogen	recombinant CEACAM21-huFc produced in HEK293 cells
Molecular weight of target	32 kDa, transmembrane anchored glycoprotein. Upon cleavage of the leader peptide, the calculated MW of mature human CEACAM21 is 29 kDa.
Recommended concentration	2–10 µg/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/NS1/1-Ag4.1
Target	Carcinoembryonic antigen-related cell adhesion molecule 21 (CEACAM21) is a member of the CEA gene family and thus part of the immunoglobulin (Ig) superfamily. The CEACAM21 gene is located on chromosome 19. The mature protein is highly glycosylated and contains a single IgV-like domain, common to all members of the CEACAM family, followed by one IgC2-like domain. It is anchored in the membrane through a transmembrane domain. CEACAM21 overexpression promote prostate cancer cell growth. Moreover, it is highly expressed in prostate cancer tumor as compared to normal tissue (1). Furthermore, it was found to be significantly overexpressed in immune active tissue in the tumor microenvironment in human high-grade serous ovarian cancer (2).
UniProt ID	Q3KPIO

IMAGE DATA



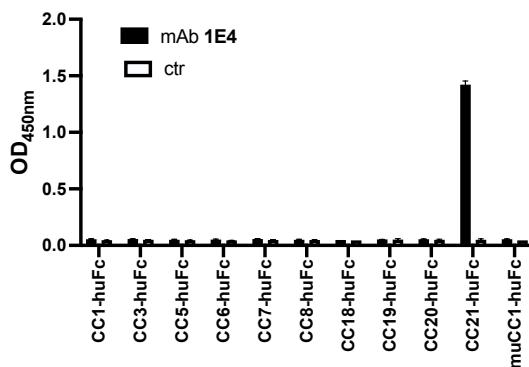
Flow Cytometry analysis of mAb 1E4

Flow cytometry histogram: CHO-CEACAM21 transfectants were stained with purified mAb **1E4** (thick line) or isotype control (thin line), followed by goat anti mouse FITC and analyzed by flow cytometer. Dead cells were discriminated by staining with propidium iodide (PI) and excluded from the analysis.



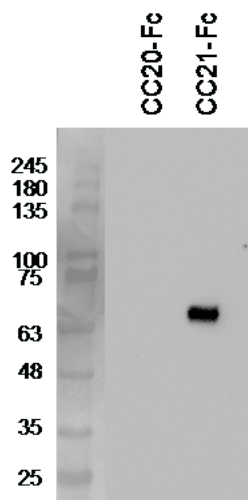
Flow Cytometry analysis for cross-reactivity

Binding of mAb **1E4** was only observed against CHO cells expressing CEACAM21; and no cross-reactivity was detected against non-transfected CHO cells (CHO-wt), or CHO cells expressing human CEACAM1, 3, 5, 6, 8 or murine CEACAM1.



Indirect Enzyme-Linked Immunosorbent Assay (ELISA)

Indicated CEACAM-huFc antigens were coated onto wells. After blocking with 2% Milk-PBS, mAb **1E4** (8 µg/ml; black bars) or T-PBS (white bars) was incubated with the antigens. After washing, HRP-coupled goat anti mouse antibody was incubated and visualized by TMB detection.



Western Blotting Analysis

Recombinant CEACAM20-Fc and CEACAM21-Fc were separated under reducing condition in a 7% Tricine gel, blotted on a nitrocellulose membrane and after blocking with milk-PBS, incubated with 2 µg/ml mAb **1E4** diluted in blocking buffer overnight at 4°C. Subsequently, membrane was washed twice, incubated with HRP-coupled goat anti mouse antibody, washed and visualized by ECL detection.

The calculated MW of the CEACAM21-huFc is 49 kDa. There are three potential NxT/S glycosylation sites on the CEACAM21 domain, which could be an explanation for the higher apparent MW.

REFERENCE

(1) Han ZW, et al. **The old CEACAMs find their new role in tumor immunotherapy.** Invest New Drugs. 2020 Dec;38(6):1888-1898. Erratum in: Invest New Drugs. 2020 Jun 2. PMID: 32488569

(2) Kreuzinger et al. **A Complex Network of Tumor Microenvironment in Human High-Grade Serous Ovarian Cancer.** Clin Cancer Res. 2017 Dec 15;23(24):7621-7632. PMID: 28972047