Leuko Com

anti macaque CEACAM1
monoclonal antibody
mouse IgG1; c**lone 7D-2/12**

DESCRIPTION

Clone name	7D-2/12
Applications	Flow Cytometry, ELISA, IF, IP, WB
Clonality & nost & isotype	Monoclonal mouse IgG1/kappa
Immunogen	recombinant macaque-CEACAM1-Fc
Target molecular weight	calculated: 54 kDa, 100-130 kDa TM-anchored glycoprotein, also soluble variants
Working 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	The carcinoembryonic antigen (CEA) gene family belongs to the immunoglobulin (Ig) gene superfamily, constisting of 35 genes of which 21 are protein encoding (1). **CEACAM1** (CD66a) is a co-modulator of various receptors, like B-cell, T-cell, EGF-, Insulin-, VEGF-, G-CSR-receptors. CEACAM1 induces B-cell survival and is essential for the resolution of viral infection via protective antiviral antibody production (2,3). It is expressed on neutrophils, activated NK cells, bile duct, colonic epithelial cells, and endothelial cells. It engages in homotypic adhesion and heterotypic adhesion with CEACAM-3/CD66d and CEACAM-6/CD66c. CEACAM1, as opposed to CEACAM3, acts as a tumor suppressor, shown to inhibit the growth of prostate, colon, and breast tumors. The ITIM present in the cytoplasmatic domain could presumably account for CEACAM1's tumor suppressive properties. CEACAM5, 7 and 8 appeared for the first time in the common ancestor of the New World monkeys, whereas **CEACAM1** ,3 ,4 and 6 arose later in the Old World monkeys (4).
UniProt ID	A0A1D5QNP0

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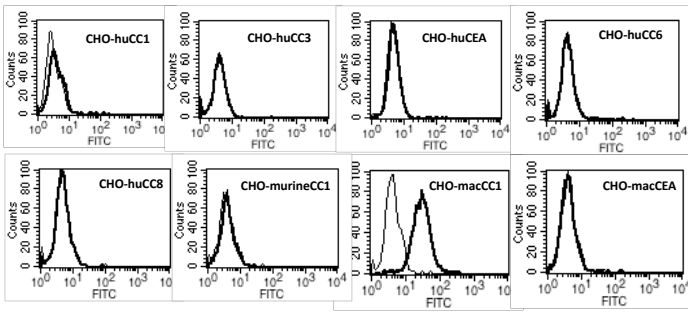
IMAGE DATA



Flow Cytometry analysis

200 000 CHO cells transfected with the indicated CEACAM-plasmids were stained either with the **mAb 7D-2/12** (bold line) or with the murine isotype control mAb (dashed line) at 20 µg/ml (130 nM). Detection occurred with an FITC-conjugated anti-mouse IgG. As further negative control, cells were incubated with the detection antibody only (dotted line).

Staining could only be detected against the CHO-cell line transfected with the macaque CEACAM1.

REFERENCE

(1) Hammarstrom et al. **The carcinoembryonic antigen (CEA) family: structures, suggested functions and expression in normal and malignant tissues.** Semin Cancer Biol 1999. 9:67–81. PMID: 10202129

(2) Khairnar et al. **CEACAM1 promotes CD8^{+} T cell responses and improves control of a chronic viral infection.** Nat Commun. 2018 Jul 2;9(1):2561. PMID: 29967450

(3) Khairnar et al. **CEACAM1 induces B-cell survival and is essential for protective antiviral antibody production** Nat Commun. 2015 Feb 18:6:6217. PMID: 25692415

(4) Pavlopoulou and Scorilas: **A Comprehensive Phylogenetic and Structural Analysis of the Carcinoembryonic Antigen (CEA) Gene Family Genome** 2014 Biol. Evol. 6(6):1314–1326. PMID: 24858421

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