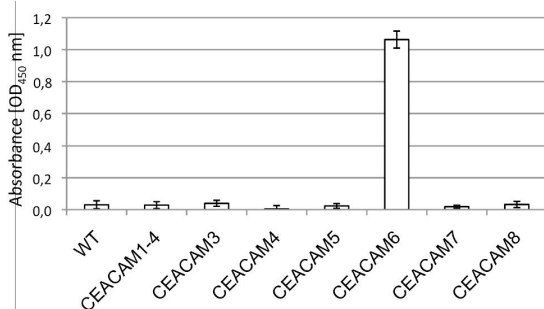


DESCRIPTION

Clone name	1H7-4B
Applications	Flow Cytometry, ELISA, IHC, WB
Clonality & host & isotype	Monoclonal mouse IgG1/kappa
Immunogen	pure human CEACAM 6-huFc
Molecular weight of target	90 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	CEACAM6, also known as CD66c, is an approximately 90 kDa GPI-anchored glycoprotein in the CEACAM family. It consists of three immunoglobulin superfamily domains and is membrane associated by a GPI anchor. CEACAM6 is expressed in epithelial cells of the fetal and adult gastrointestinal tract, epithelia of glandular tissues, squamous epithelial cell of the tongue, esophagus and cervix as well as on granulocytes (1). CEACAM6 can serve as a <i>Candida albicans</i> receptor on human neutrophils. CEACAM6-receptor ligation by the mAb 1H7-4B leads to enhanced <i>Candida</i> -induced neutrophil apoptosis and increased long-term IL-1β/IL-6 release (2). Microvesicles secreted by human epithelial tumor cells contain CEACAM1/5 as well as CEACAM6 (3).

UniProt ID P40199

IMAGE DATA

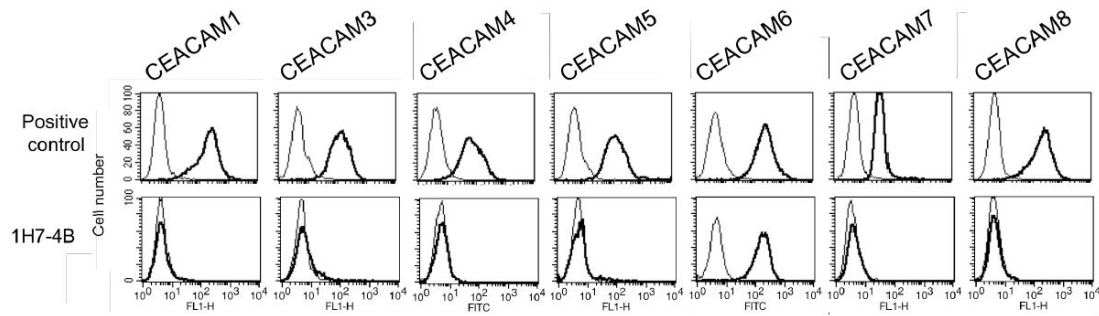


Enzyme-Linked Immunosorbent Assay (ELISA)

Sandwich ELISA-analysis of CEACAM overexpression lysates by usage of the mAb **1H7-4B** as a primary detection antibody. Representative lot data.

Sole human CEACAM 6 antigen was detected in lysates of CHO-cells transfected with indicated CEACAMs using mAb 1H7-4B (20 µg/ml), followed by HRP-coupled goat anti-mouse IgG. TMB was used for visualizing binding and measured by an ELISA reader at 450 nm.

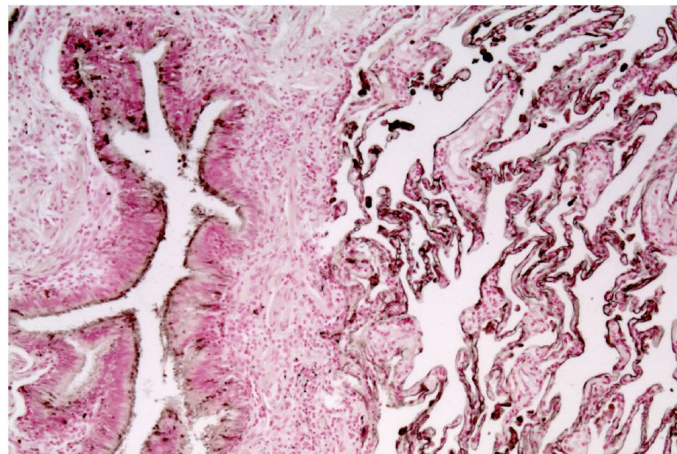
Note: there was also no binding against rat CEACAM1 as well as murine CEACAM1 and murine CEACAM2 (data not shown).



Flow Cytometry analysis for cross-reactivity

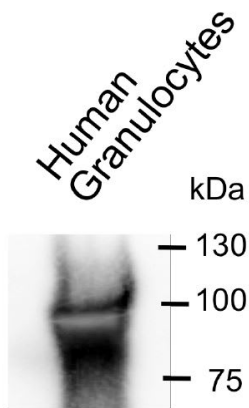
250,000 CHO cells transfected with indicated human CEACAM plasmids were stained (10 µg/ml) with a corresponding positive control antibody (upper panel), or with mAb **1H7-4B** (lower panel), followed by a FITC-conjugated goat anti mouse IgG. An isotype-matched control mAb was used as a negative control (thin line).

Binding of mAb **1H7-4B** was only observed against CHO-cells expressing CEACAM6; but no cross-reactivity was detected against CHO-cells expressing human CEACAM1, 3, 4, 5, 7, 8 or murine CEACAM1/2 and rat CEACAM1 (not shown). Dead cells were discriminated by staining with propidium iodide (PI) and excluded from the analysis.



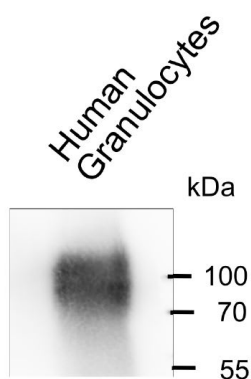
Immunohistochemistry staining

Formalin fixed lung tissues were paraffin embedded, deparaffinized and epitope was retrieved by heat induction. Endogenous peroxidase activity was blocked with 3% H₂O₂ and slides blocked with 1 % BSA/PBS. Tissue slides were incubated with 10 µg/ml mAb **1H7-4B** in 0.5% BSA/PBS, followed by a biotinylated rabbit anti-mouse Ab and VECTASTAIN ABC reagent (Vector Laboratories, USA). Staining was visualized using diaminobenzidine (DAB) substrate and counterstained with hematoxylin (blue). The dark line shows the expression of CEACAM6. (2)



Immunoprecipitation of CEACAM6

Lysates of human granulocytes were incubated with 10 μ g/ml mAb **1H7-4B** and bound proteins were immunoprecipitated with protein A Sepharose. Precipitated proteins were exposed to an SDS-PAGE immunoblot and immunodetected by a pAb anti-CEA (Dako) (that cross-reacts with human CEACAM1-8), followed by HRP-conjugated secondary Abs. Visualization by chemiluminescent shows a 90kDa band in the expected size of human CEACAM6.



Western Blotting Analysis

Lysate of human granulocytes was separated under non-reducing condition in a 7% Tricine gel, blotted on a nitrocellulose membrane and incubated with 5 μ g/ml mAb **1H7-4B** (diluted in blocking buffer over-night at 4°C). Subsequently, the membrane was incubated with an HRP-coupled goat anti mouse antibody, and bound antigen was visualized by ECL detection.

REFERENCE

- (1) [Klaile 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. *Resp Res.* 14. August 2013;14(1):85. PMID: 23941132
- (2) [Klaile et al.](#) Antibody ligation of CEACAM1, CEACAM3, and CEACAM6, differentially enhance the cytokine release of human neutrophils in responses to Candida albicans. *Cell Immunol.* 2022 Jan;371:104459. PMID:34847408
- (3) [Muturi et al.](#) Tumor and endothelial cell-derived microvesicles carry distinct CEACAMs and influence T-cell behavior. *PLoS One.* 8(9):e74654. 2013. PMID: 2404030

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