

Product Data Sheet

anti-human CEACAM20 monoclonal antibody

Product information

Catalog Number:	GM-0516
Clone:	HT-12D8
Description:	purified monoclonal mouse antibody
Specificity:	anti-human CEACAM20
Isotype:	IgG1
Purification:	Protein G
Storage:	short term: 2°C - 8°C; long term: -20°C (avoid repeated freezing and thawing)
Buffer :	phosphate buffered saline, pH 7.2
Immunogen:	genetic immunisation with cDNA encoding human CEACAM20
Selection:	based on recognition of the complete native protein expressed on transfected mammalian cells

Working dilutions

Flow cytometry:	1.2 µg/10 ⁶ cells
Immunofluorescence:	1 µg/10 ⁶ cells
CELISA:	1:200 - 1:400

For each application a titration should be performed to determine the optimal concentration.

Specificity testing by flow cytometry and by Spectral Confocal Microscopy

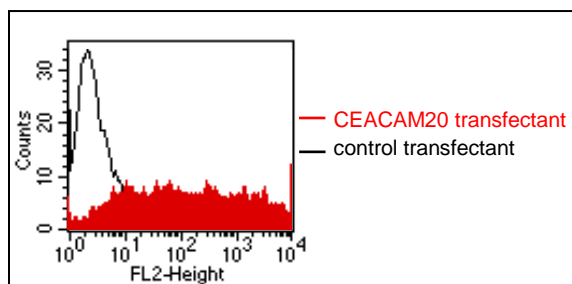


Fig.1: FACS analysis of BOSC23 cells using HT-12D8 Cat.# GM-0516. BOSC23 cells were transiently transfected with an expression vector encoding either CEACAM20 (red curve) or an irrelevant protein (control transfectant). Binding of HT-12D8 was detected with a PE- conjugated secondary antibody. A positive signal was obtained only with CEACAM20 transfected cells.

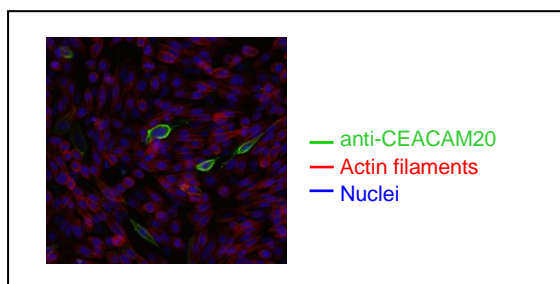


Fig.2: Spectral Confocal Microscopy of CHO cells using HT-12D8 Cat.# GM-0516. CHO cells were transiently transfected with an expression vector encoding CEACAM20. Binding of HT-12D8 was visualized with a FITC-conjugated secondary antibody (green). Actin filaments are labeled with Alexa Fluor-555 Phalloidin (red). Cell nuclei are stained with DAPI (blue).

Antibody cross-reactivity with members of the CEA family

For research use only. Not for diagnostic or therapeutic use.

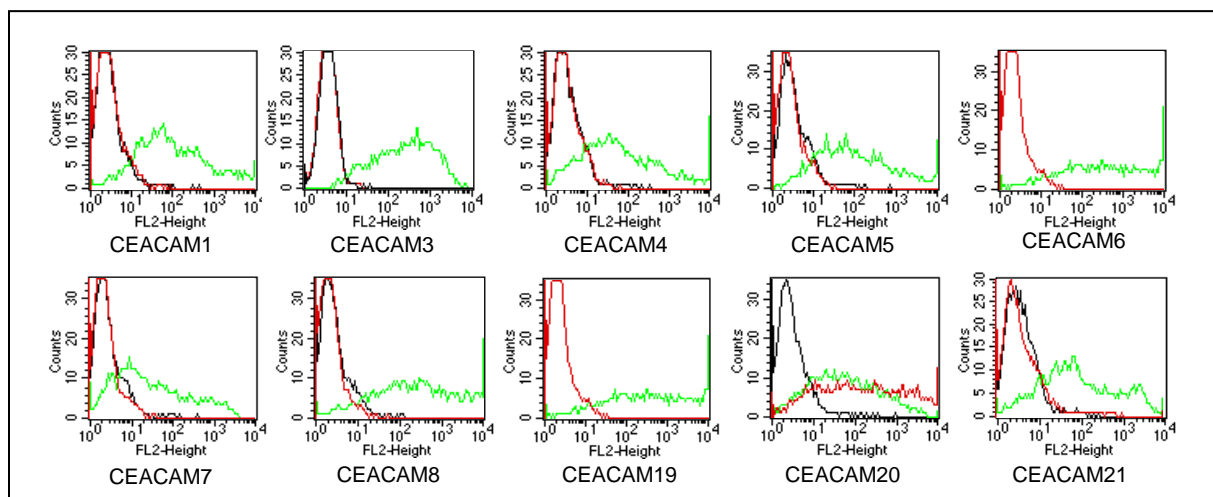


Fig3: BOSC23 cells were transiently transfected with expression vectors containing either the cDNA of CEACAM1, CEACAM3-8 or CEACAM19-21. Expression of the constructs was tested with monoclonal antibodies known to recognize the corresponding proteins (CEACAM1,3,4,5 and 6: D14HD11; CEACAM7: BAC2; CEACAM8: Tet2; CEACAM19,21: α -myc; CEACAM20: α -flag; green curves). An irrelevant monoclonal antibody served as a negative control (black curves). For specificity testing, protein G-purified HT-12D8 was tested on all CEACAM transfectants. A positive signal was obtained only with CEACAM20 transfected cells (red curve).

SDS-PAGE analysis of HT-12D8

The antibody was purified by protein G affinity chromatography from cell culture supernatants and verified by SDS-Page (Fig.4).

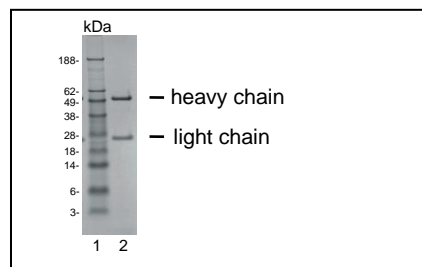


Fig.4: SDS-PAGE analysis of purified HT-12D8 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 μ g of purified HT-12D8 antibody. Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

Background

CEA-related cell adhesion molecule 20 (CEACAM20) belongs to the carcinoembryonic antigen (CEA) gene family (1). It encodes a putative glycoprotein which is membrane-bound via a transmembrane domain. The CEACAM20 protein contains a single N domain followed by 4 immunoglobulin-like A (A1, A2) and B (B1, B2) domains. Expression of CEACAM20 can be found in tissues of prostate, testis, duodenum and small intestine with highest expression in prostate. The function of CEACAM family members varies widely: they function as cell adhesion molecules, tumor suppressors, regulators of lymphocyte and dendritic cell activation, receptors of *Neisseria* species and other bacteria. High expression of CEACAM20 in tissue of prostate carcinoma and in prostate carcinoma cell lines suggest that CEACAM20 can be used as a tumor marker.

References

1. **Zimmermann W** (2002). Carcinoembryonic antigen. In *Wiley Encyclopedia of Molecular Medicine* (T. Creighton, ed.), John Wiley & Sons Inc., New York, USA, pp. 459-462.