

PRODUCT DATA SHEET

ANTI-HUMAN CEACAM19 MONOCLONAL ANTIBODY

PRODUCT INFORMATION

Catalog Number:	GM-0515	Clone:	HY-8H10
Description:	purified monoclonal mouse antibody	Specificity:	anti-human CEACAM19
Isotype:	IgG1/kappa	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 immunization with cDNA encoding human CEACAM19	Selection:	based on recognition of the complete native protein expressed on transfected mammalian cells

WORKING DILUTIONS

Flow cytometry:	1.2 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

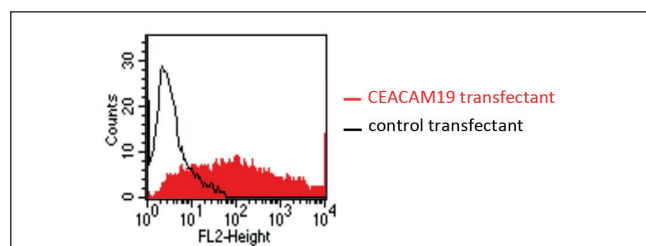


Fig. 1: FACS analysis of BOSC23 cells using HY-8H10 Cat.# GM-0515. BOSC23 cells were transiently transfected with an expression vector encoding either CEACAM19 (red curve) or an irrelevant protein (control transfectant). Binding of HY-8H10 was detected with a PE- conjugated secondary antibody. A positive signal was obtained only with CEACAM19 transfected cells.

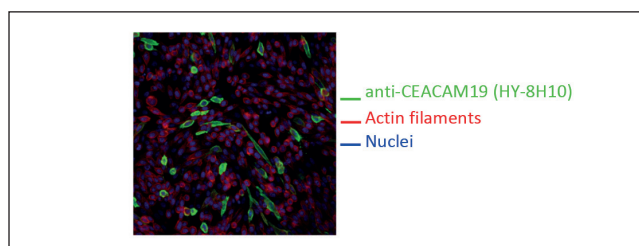


Fig. 2: Spectral Confocal Microscopy of CHO cells using HY-8H10 Cat.# GM-0515. CHO cells were transiently transfected with an expression vector encoding CEACAM19. Binding of HY-8H10 was visualized with a FITC- conjugated secondary antibody (green). Actin filaments are labeled with Alexa Fluor-555 Phalloidin (red). Cell nuclei are stained with DAPI (blue).

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ANTIBODY CROSS-REACTIVITY WITH MEMBERS OF THE CEA FAMILY

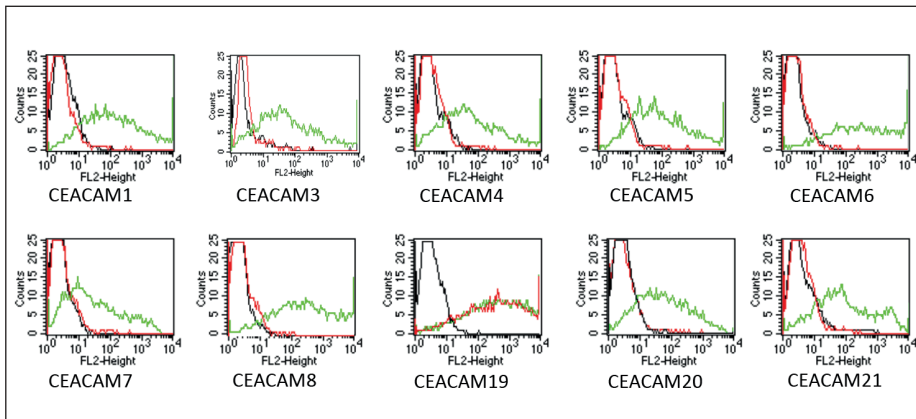


Fig. 3: BOSC23 cells were transiently transfected with expression vectors containing either the cDNA of CEACAM1, CEACAM3-8 or CEACAM19-21. Expression of the constructs was tested with monoclonal antibodies known to recognize the corresponding proteins (CEACAM1,3,4,5 and 6: D14HD11; CEACAM7: BAC2; CEACAM8: Tet2; green curves). An irrelevant monoclonal antibody served as a negative control (black curves). For specificity testing, protein G-purified HY-8H10 was tested on all CEA-CAM transfectants. A positive signal was obtained only with CEACAM19 transfected cells (red curve).

SDS-PAGE ANALYSIS OF HY-8H10

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

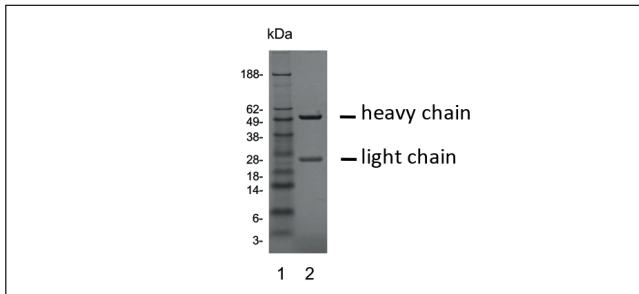


Fig. 4: SDS-PAGE analysis of purified HY-8H10 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified HY-8H10 antibody. Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

BACKGROUND

CEA-related cell adhesion molecule 19 (CEACAM19) belongs to the carcinoembryonic antigen (CEA) gene family (1). It encodes a putative glycoprotein which is membrane-bound via a transmembrane domain. Like all members of the CEACAM family, the CEACAM19 protein is a single-pass type I membrane protein and consists of a single extracellular N domain. CEACAM19 expression is ubiquitous with highest expression in prostate, uterus, fetal brain, mammary gland, adrenal gland, skeletal muscle, small intestine, and kidney.

REFERENCES

- Zimmermann W (2002).** Carcinoembryonic antigen. In Wiley Encyclopedia of Molecular Medicine (T. Creighton, ed.), John Wiley & Sons Inc., New York, USA, pp. 459-462.
- Hammarström S (1999).** The carcinoembryonic antigen (CEA) family: structures, suggested functions and expression in normal and malignant tissues. *Semin. Cancer Biol.* 9, 67-81.

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