

Product datasheet for **DM1204**

CEACAM5 Mouse Monoclonal Antibody [Clone ID: D14HD11]

Product data:

Product Type:	Primary Antibodies
Clone Name:	D14HD11
Applications:	ELISA, FC, IF, IHC, WB
Recommended Dilution:	Flow Cytometry: 1.2 µg/10 ⁶ cells. The antibody is routinely tested on BOSC23 cells transiently transfected with a CEACAM5 expression vector. Cell based ELISA with intact, transiently transfected cells: 1/200. ELISA: 1/200-1/400. Western blot: 4 µg/ml. Immunofluorescence: 1 µg/10 ⁶ cells. For various applications see list of references.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Immunisation with extracted protein of CEACAM5
Specificity:	D14HD11 is a broadly reactive antibody which reacts with high affinity (affinity to solid phase bound CEACAM5: 2 x 10 ¹⁰ L/Mol [6]) with most of the CEACAM molecules (except CEACAM7 and CEACAM8) transiently expressed on the cell surface of transfected BOSC23 cells. D14HD11 was included and characterized in the studies from the Vllth Leucocyte Typing Workshop. It reacts with the CEACAM family N-domain.
Formulation:	PBS, pH 7.2 State: Purified State: Liquid purified IgG fraction
Concentration:	lot specific
Purification:	Affinity Chromatography on Protein G
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.



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Stability:	Shelf life: one year from despatch.
Gene Name:	Homo sapiens carcinoembryonic antigen related cell adhesion molecule 5 (CEACAM5), transcript variant 1
Database Link:	Entrez Gene 1048 Human P06731
Background:	CEA-related cell adhesion molecules (CEACAM) belong to the carcinoembryonic antigen (CEA) family (1). The CEA family proteins belong to the immunoglobulin (Ig) superfamily and are composed of one Ig variable-like (IgV) and a varying number (0-6) of Ig constant-like (IgC) domains (1,2). CEACAM molecules are membrane-bound either via a transmembrane domain or a glycosylphosphatidyl inositol (GPI) anchor. CEACAM molecules are differentially expressed in epithelial cells or in leucocytes. Over-expression of CEA/CEACAM5 in tumours of epithelial origin is the basis of its wide-spread use as a tumour marker (2). The function of CEACAM family members varies widely: they function as cell adhesion molecules, tumour suppressors, regulators of lymphocyte and dendritic cell activation, receptors of Neisseria species and other bacteria (1).
Synonyms:	CEA, Carcinoembryonic antigen

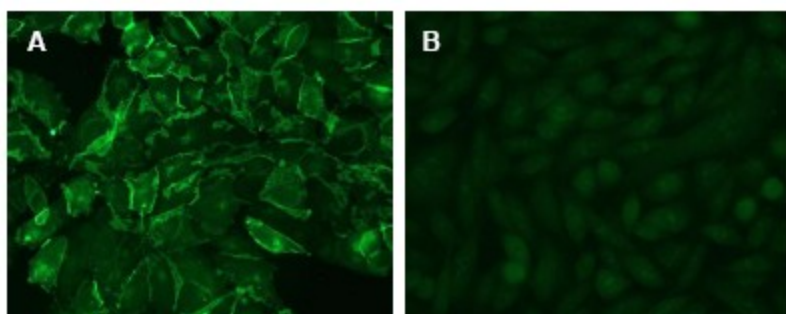
Product images:

Figure 2: Immunofluorescence Microscopy of CHO cells using D14HD11. CHO cells were transfected with an expression vector encoding CEACAM1 (A). Untransfected CHO parental cells served as Negative Control (B). Binding of D14HD11 was visualized with a FITC-conjugated secondary antibody.

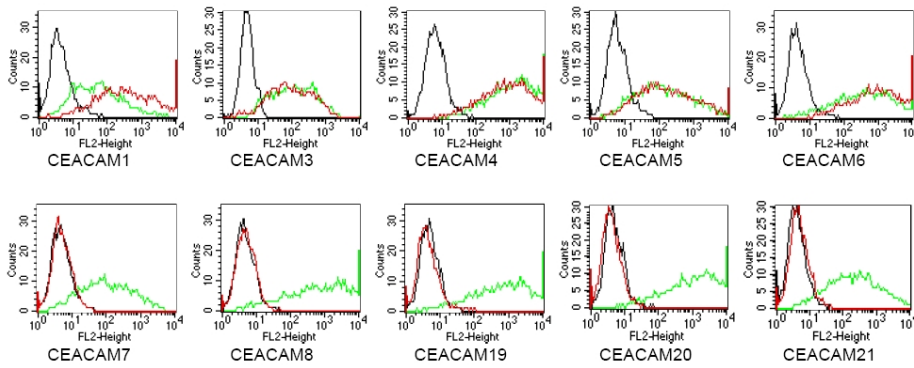


Figure 3: BOSC cells were transiently transfected with expression vectors containing either the cDNA of CEACAM1, CEACAM3-CEACAM8 or CEACAM19-21. Recognition of CEACAM4 was tested on CHO cells stably transfected with a CEACAM4 expression vector. Expression of the constructs was confirmed with monoclonal antibodies known to recognise the corresponding proteins (CEACAM1: 4/3/17, CEACAM3, 4: D14HD11, CEACAM5: 26/3/13, CEACAM6: 9A6, CEACAM7: BAC2, CEACAM8: GM-2H6, CEACAM19-21: anti-myc, green curves). An irrelevant monoclonal antibody served as a negative control (black curves). Forspecificity testing, protein G purified D14HD11 was tested on all CEACAM transfectants. A positive signal was obtained with CEACAM1, CEACAM3, CEACAM4, CEACAM5 and CEACAM6 expressing cells (red curves).

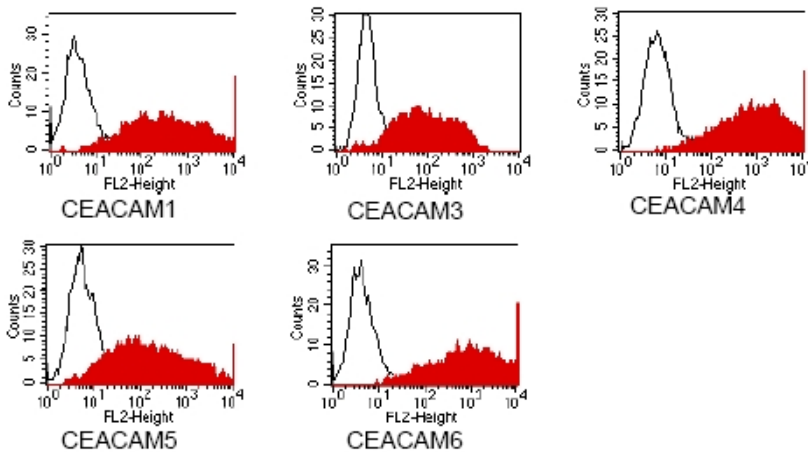


Figure 4: FACS analysis of BOSC23 cells using D14HD11. BOSC23 cells were transiently transfected with an expression vector encoding either CEACAM1, 3, 4, 5, 6 (red curves) or an irrelevant protein (control transfectant: black curves). Binding of D14HD11 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with CEACAM1, CEACAM3, CEACAM4, CEACAM5 and CEACAM6 expressing cells.

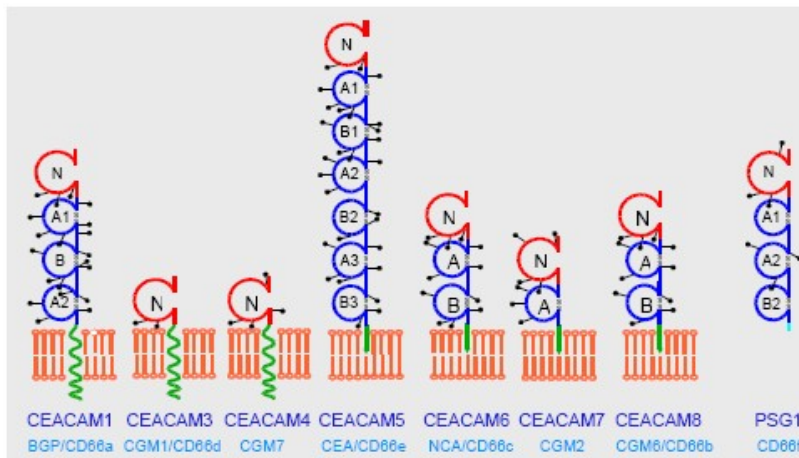


Figure 1: Domain organization of the human CEACAM family. The CEACAM family consists of two subgroups, the CEACAM and the PSG subgroup. CEACAM family members are membrane bound by either via a transmembrane domain or a GPI anchor (green arrow) whereas the PSGs are secreted glycoproteins. N-linked glycosylation sites are shown as drum sticks. The IgV domains are shown in red, the IgC domains in blue.