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Monoclonal Antibody to Human CEACAM5 - Purified

Alternate names: CEA, Carcinoembryonic antigen, Carcinoembryonic antigen-related cell adhesion molecule 5, Meconium antigen 100

Catalog No.: DM1202

Quantity: 0.1 mg

Concentration: 2.0 mg/ml

Background: CEACAM5 (CEA-related cell adhesion molecule 5, CEA) belongs to the carcinoembryonic antigen (CEA) gene family (1,2). It encodes a glycosyl phosphatidyl inositol (GPI)-linked glycoprotein with a Mr of 180,000-200,000 which is most strongly expressed on epithelial cells of the fetal and adult colon and to a minor extent on epithelial cells of the stomach and sweat glands, squamous epithelial cell of the tongue, esophagus and cervix. CEACAM5 is used as a tumor marker for early detection of recurrent disease due to its expression in adenocarcinomas of the colon, lung, breast, stomach and pancreas and in mucinous ovarian carcinomas (3). Like all members of the CEACAM family, it consists of a single N domain, with structural homology to the immunoglobulin variable domains, followed by six immunoglobulin constant-like A (A1, A2, A3) and B domains (B1, B2, B3).

Uniprot ID: P06731

NCBI: NP_004354.2

GeneID: 1048

Host / Isotype: Mouse / IgG1

Clone: 26/3/13

Immunogen: Extracted protein of CEACAM5.
Selection: Based on recognition of the complete **native protein** expressed on transfected mammalian cells

Format:
State: Liquid purified Ig fraction.
Purification: Protein G Chromatography.
Buffer System: PBS, pH 7.2 without preservatives.

Applications:
ELISA: 1/200-1/400.
CELISA: 1/200.
Flow Cytometry: 1.2 µg/10^6 cells.
Immunofluorescence: 1/200.
Western blot: 4 µg/ml.
Immunohistochemistry on Cryo-Sections: 1-2 µg/10^6 cells.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody recognizes exclusively CECAM5.
Species: Human.
Other species not tested.

Storage: Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General 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.
2. Hammarström S (1999). The carcinoembryonic antigen (CEA) family: structures, suggested functions and expression in normal and malignant tissues. Semin. Cancer Biol. 9, 67-81.
3. Grunert F, Stocks SC, Nagel G., Zimmermann W, Thompson JA, Jantscheff P and Kromer B. (1996). CD66 family Workshop: Binding of myeloid blind panel antibodies and CD66 Subsection antibodies to HeLa transfectants expressing individual CD66 molecules. In Leukocyte Typing VI: White cell Differentiation Antigens (T. Kishimoto et al., eds.), Garland Publishing Inc., New York and London, pp. 1012-1025.

Pictures:

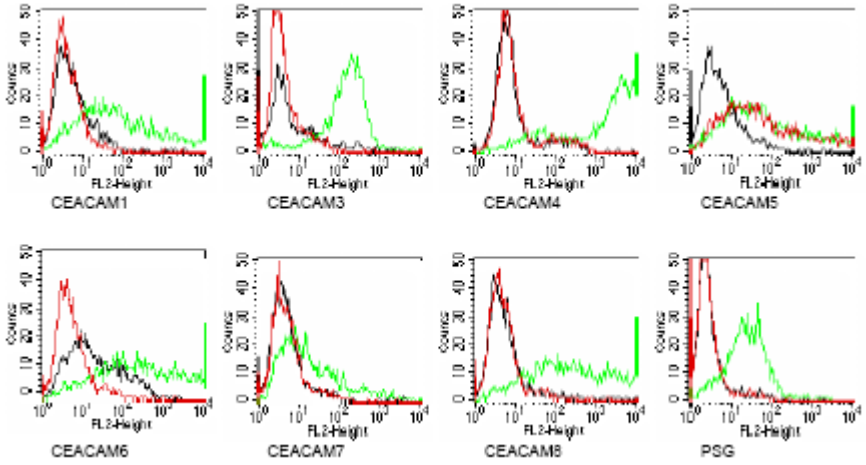

Figure 1. Specificity testing of 26/3/13. BOSC23 cells were transiently transfected with expression vectorscontaining either the cDNA of CEACAM1, CEACAM5-8. Recognition of CEACAM3, 4 and of a recombinant transmembrane-anchored PSG1 fusion protein was tested on stably transfected HeLa (CEACAM3, PSG) and CHO cells (CEACAM4), respectively. Expression of the constructs was confirmed with monoclonal antibodies known to recognize the corresponding proteins (CEACAM1, 3, 4, 5 and 6: D14HD11; CEACAM7: CAC2; CEACAM8: TET2; PSG: BAP1; green curves). An irrelevant monoclonal antibody served as a negative control (black curves). For specificity testing, protein G purified 26/3/13 was tested on all CEACAM transfectants. A positive signal was only obtained with CEACAM5 expressing cells (red curves).

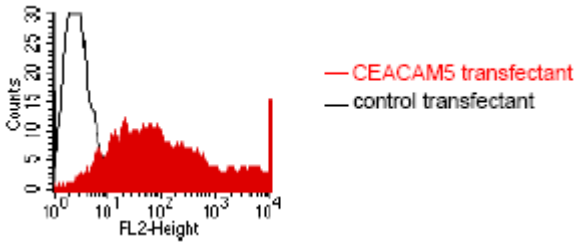

Figure 2. FACS analysis of BOSC23 cells using 26/3/13 antibody Cat.-No DM1202. BOSC23 cells were transiently transfected with an expres-sion vector encoding either CEACAM5 (red curve) or an irrelevantprotein (control transfectant). Binding of 26/3/13 was detected witha PE conjugated secondary antibody. A positive signal was obtained only with CEACAM5 transfected cells.