

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CEACAM-5/CD66e in sandwich ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 487610
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived human CEACAM-5/CD66e Lys35-Ala685 Accession # Q8N4D0
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

ELISA Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CEACAM-5, also known as CEA and CD66e, belongs to the large family of CEACAM and pregnancy specific glycoproteins. CEACAM molecules are either transmembrane or GPI-linked, and are differentially expressed between species (1, 2). Orthologs of human CEACAM-5 have not been described in other species. CEACAM-5, which is expressed primarily by epithelial cells, consists of an N-terminal Ig-like V-set domain followed by six Ig-like C2-set domains and a GPI anchor (2-4). CEACAM-5 is synthesized as a 180 kDa, variably glycosylated molecule of which approximately 60% is carbohydrate (5). CEACAM-5 functions as a calcium-independent adhesion molecule through homophilic and heterophilic interactions with CEACAM-1 (6-8). CEACAM-5 is restricted to the apical face of intestinal epithelial cells in the adult but is more diffuse during embryonic development and in tumors (7). This is consistent with a role in the development and maintenance of epithelial architecture. CEACAM-5 is up-regulated in a wide variety of human tumors and is a commonly used cancer marker (9). It promotes tumor cell migration, invasion, adhesion, and metastasis (10). It also contributes to tumor formation by maintaining cellular proliferation in the presence of differentiation stimuli, and by blocking apoptosis following loss of ECM anchorage (anoikis) (11, 12). The GPI anchoring of CEACAM-5 can be released by GPI-PLD, resulting in a soluble molecule that also promotes tumor metastasis (13). Cell surface expression of CEACAM-5 on tumor cells prevents the adhesion of CEACAM-1 expressing NK cells and provides protection from NK-mediated lysis (6). CEACAM-5 also binds a subset of *Neisseria* opacity proteins (Opa) and *E. coli* adhesion proteins (14-16). These interactions trigger clustering of the lipid raft-localized CEACAM-5 to sites of pathogen contact (15, 16).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.