Human CEACAM-5/CD66e Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 487610

Catalog Number: FAB41282T

100 µg

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 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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).

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