

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CEACAM-5/CD66e in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human CEACAM-1 or -6 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 487609
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human CEACAM-5/CD66e Lys35-Ala685 Accession # ABM87752
<b>Conjugate</b>	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	HEK293 human embryonic kidney cell line transfected with human CEACAM-5/CD66e and eGFP

#### PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### 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 upregulated 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).

#### References:

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