

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CEACAM-19 in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 1042108
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human CEACAM-19 Met1-Gly157 Accession # Q7Z692
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.

**Flow Cytometry** Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was HEK293 Human Cell Line Transfected with Human CEACAM-19 and eGFP.

#### 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

Carcinoembryonic antigen-related cell adhesion molecule-19 (CEACAM-19), also known as CEA-like gene 1 (CEAL1), is a member of the CEACAM subfamily of glycoproteins in the immunoglobulin (Ig) superfamily. Mature human CEACAM-19 consists of a 125 amino acid (aa) extracellular domain, a 21 aa helical transmembrane domain, and a 122 aa cytoplasmic domain (1,2). The extracellular domain contains an Ig-like domain as well as a glycosylation site, while the cytoplasmic domain is predicted to contain at least one immunoreceptor tyrosine-based activation motif (ITAM) (3,4). The extracellular domain of human CEACAM-19 shows 71%, 72%, and 78% aa identity to mouse, rat, and bovine CEACAM-19. The CEACAM family of proteins are involved in numerous intercellular-adhesion and intracellular signaling processes including cell adhesion, cell growth, recognition and differentiation, angiogenesis, and apoptosis (5,6). CEACAM-19 expression has been identified in a wide range of tissues including prostate, uterus, fetal brain, mammary and adrenal glands, skeletal muscle, small intestine, and kidney (1). Human CEACAM-19 has been found to be overexpressed in BT-474, BT20, and T47D breast cancer cell lines as well as LNCaP prostate cancer cells, suggesting a role in tumor progression and metastasis (1,3, 7). The overexpression in breast cancer patients is associated with poor prognosis (7).

#### References:

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2. Estiar, M. *et al.* (2016) *Clin Exp Med* doi:10.1007/s10238-016-0442-1.
3. Beauchemin, N. and Arabzadeh, A. (2013) *Cancer Metastasis Rev* **32** (3-4):643.
4. Kuespert, K. *et al.* (2006) *Curr Opin Cell Biol* **18**:565.
5. Obrink, B. (1997) *Curr Opin Cell Biol* **9**:616.
6. Horst, AK. and Wagener, C. (2004) *Handb Exp Pharmacol* 283.
7. Michaelidou, K. *et al.* (2013) *Int J Oncol* **42**:1770.

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