

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CEACAM-19 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 1042108
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human CEACAM-19 Met1-Gly157 Accession # Q7Z692
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	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.
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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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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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