Human CEACAM-20 Antibody

Monoclonal Mouse IgG_1 Clone # 1032339

Catalog Number: MAB9416

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CEACAM-20 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 1032339
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell HEK293-derived human CEACAM-20 Gln31-Gly450 Accession # Q6UY09-1
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

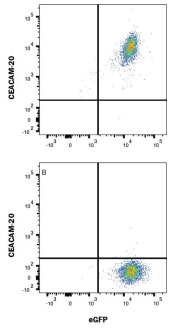
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	HEK293 Human Cell Line Transfected with Human CEACAM-20 and eGFP

DATA

Flow Cytometry



Detection of CEACAM-20 in HEK293 Human Cell Line Transfected with Human CEACAM-20 and eGFP by Flow Cytometry HEK293 human embryonic kidney cell line transfected with (A) human CEACAM-20 or (B) irrelevant protein, and eGFP was stained with Mouse Anti-Human CEACAM-20 Monoclonal Antibody (Catalog # MAB9416) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB002). Staining was performed using our Staining Membrane-associated Proteins protocol.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Carcinoembryonic antigen-related cell adhesion molecule-20 (CEACAM-20) is a member of the CEACAM subfamily of glycoproteins in the immunoglobulin (Ig) superfamily. Mature human CEACAM-20 consists of a 420 amino acid (aa) extracellular domain (ECD), a 21 aa helical transmembrane segment, and a 114 aa cytoplasmic domain. The extracellular domain possesses four IgC2-like domains which are stabilized by disulfide bonds, as well as several predicted glycosylation sites (1-5). The extracellular domain of CEACAM-20 is also unique among the CEACAMs because it contains a truncated IgV-like N domain (2). Within the ECD, human CEACAM-20 shares 64% and 62% aa identity with the mouse and rat CEACAM-20, respectively. The cytoplasmic domain is unusually long compared to most other CEACAMs and is predicted to contain four tyrosine phosphorylation sites, two of which correspond to the immune-receptor tyrosine-based activation motif (ITAM) (2, 3). Human CEACAM proteins have been linked to numerous intercellular-adhesion and intracellular signaling processes including cell adhesion, growth, and recognition, differentiation, angiogenesis, and apoptosis (7, 8). Human CEACAM-20 expression is limited to the reproductive system and the intestinal tract, with the highest levels of expression found in the small intestine and prostate (2, 3). An *in vitro* model of human prostate morphogenesis showed that CEACAM-20 is co-expressed with CEACAM-1 and plays a critical role in the formation of prostate organoids, making it a marker for prostate cancer (2). Although the exact mechanism is not fully understood, CEACAM-20 may promote the proliferation of intestinal epithelial cells (IECs) (9). There is evidence suggesting CEACAM-20 can induce the production of chemokines like interleukin (IL)-8 and stimulate inflammatory responses in colitis and Crohn's disease (6). CEACAM-20 is also thought to act as a physiological substrate for SAP-1 in the intestinal epithelium (10).

References:

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