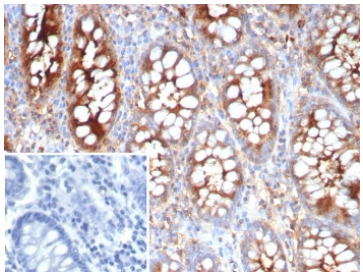
Carcinoembryonic Antigen-Related CEACAM1 Antibody / BGP-1 [clone CEACAM1/4837] (V5481)

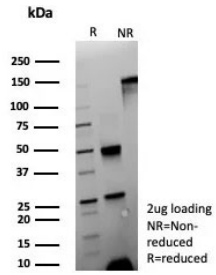
Catalog No.	Formulation	Size
V5481-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5481-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5481SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	CEACAM1/4837
Purity	Protein A/G affinity
UniProt	P13688
Localization	Secreted, Cell membrane
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This Carcinoembryonic Antigen-Related CEACAM1 antibody is available for research use only.



Immunohistochemistry analysis of Carcinoembryonic Antigen-Related CEACAM1 antibody in human colon tissue. FFPE human colon sections demonstrate strong membranous and apical HRP-DAB brown staining in glandular epithelial cells lining the colonic crypts, consistent with CEACAM1, also known as CD66a, localization at the luminal surface. Stromal and lamina propria cells show minimal staining. The inset negative control, in which PBS was used in place of primary antibody, shows no specific brown chromogenic signal. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to staining.



SDS-PAGE analysis of purified Carcinoembryonic Antigen-Related CEACAM1 antibody (clone CEACAM1/4837) as confirmation of integrity and purity.

Description

Carcinoembryonic Antigen-Related CEACAM1 antibody, also known as Carcinoembryonic antigen-related cell adhesion molecule 1 antibody, recognizes a type I transmembrane glycoprotein encoded by the CEACAM1 gene and commonly referred to as CD66a and Biliary glycoprotein 1. This immunoglobulin superfamily member is primarily localized to the plasma membrane of epithelial and immune cells, where it functions in cell-cell adhesion and intracellular signaling. CEACAM1 is expressed in liver, biliary epithelium, intestine, prostate, and mammary gland, and it is also detected in subsets of activated immune cells, supporting both epithelial organization and immune regulation.

Carcinoembryonic Antigen-Related CEACAM1 antibody detects a protein composed of extracellular immunoglobulin-like domains, a single transmembrane region, and alternatively spliced cytoplasmic tails. Long cytoplasmic isoforms contain immunoreceptor tyrosine-based inhibitory motifs that recruit phosphatases and regulate downstream signaling pathways involved in proliferation, differentiation, and apoptosis. Short isoforms lack these motifs and exhibit distinct regulatory capacity, allowing CEACAM1 to exert context-dependent effects across cell types. In polarized epithelial tissues, CEACAM1 is enriched at apical and lateral membranes, contributing to maintenance of tissue architecture and barrier integrity while coordinating adhesion-dependent signaling.

CEACAM1 is frequently referred to as CD66a in immunophenotyping contexts and as BGP-1 in epithelial biology literature. Beyond adhesion, CEACAM1 can act as a co-inhibitory receptor influencing T cell activation, tolerance, and inflammatory responses, linking this molecule to immune checkpoint-like signaling behavior. These functions position Carcinoembryonic antigen-related cell adhesion molecule 1 as a relevant target for studies of immune regulation, inflammation, and tumor-immune interactions. In addition, several bacterial and viral pathogens exploit CEACAM family members as host receptors, making CEACAM1 useful in host-pathogen interaction research and mucosal immunity studies.

Altered expression of CEACAM1 has been reported in colorectal carcinoma, hepatocellular carcinoma, breast cancer, melanoma, and prostate cancer. Depending on tumor type and disease stage, decreased CEACAM1 expression may be associated with reduced intercellular adhesion and increased invasiveness, while increased expression in other settings is linked to tumor progression and immune modulation. These context-dependent findings support the use of Carcinoembryonic Antigen-Related CEACAM1 antibody as a tool for evaluating membrane protein expression patterns across normal tissue biology and disease-relevant models.

The Carcinoembryonic Antigen-Related CEACAM1 antibody (clone CEACAM1/4837) is suitable for detecting CEACAM1 protein expression in research applications. This reagent supports investigation of adhesion molecule dynamics, isoform-linked signaling differences, and tumor-associated changes in CEACAM1 expression.

Application Notes

Optimal dilution of the Carcinoembryonic Antigen-Related CEACAM1 antibody should be determined by the researcher.

Immunogen

A recombinant fragment (within amino acids 50-250) of human Carcinoembryonic antigen-related cell adhesion molecule 1 protein was used as the immunogen for the Carcinoembryonic Antigen-Related CEACAM1 antibody.

Storage

Aliquot the Carcinoembryonic Antigen-Related CEACAM1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.