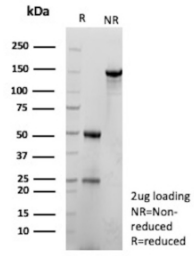
CD66a Cell Adhesion Molecule Antibody / CEACAM1 [clone r29H2] (V5989)

Catalog No.	Formulation	Size
V5989-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5989-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5989SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Recombinant MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	r29H2
UniProt	P13688
Localization	Cell membrane, Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This CD66a Cell Adhesion Molecule/CEACAM1 antibody is available for research use only.



SDS-PAGE Analysis Purified CD66a Cell Adhesion Molecule/CEACAM1 antibody (clone 29H2). Confirmation of Purity and Integrity of Antibody

Description

CD66a Cell Adhesion Molecule antibody, also known as CEACAM1 antibody, recognizes Carcinoembryonic antigen-related cell adhesion molecule 1, a type I transmembrane glycoprotein encoded by the CEACAM1 gene and commonly referred to as Biliary glycoprotein 1 and BGP-1. CD66a is a member of the carcinoembryonic antigen-related cell adhesion molecule family within the immunoglobulin superfamily and is primarily localized to the plasma membrane of epithelial and immune cells. It is expressed in liver, biliary epithelium, intestine, prostate, and mammary gland, as well as

in subsets of activated T cells, B cells, and natural killer cells, supporting epithelial architecture and immune regulation.

CD66a Cell Adhesion Molecule 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 altered regulatory capacity. In polarized epithelial tissues, CEACAM1 is enriched at apical and lateral membranes, where it contributes to maintenance of glandular structure and barrier integrity while coordinating adhesion-dependent signaling events.

Beyond its structural role, CD66a functions as an immune regulatory receptor. In lymphocytes, CEACAM1 can act as a co-inhibitory receptor influencing T cell activation, tolerance, and inflammatory responses, linking CD66a biology to immune checkpoint-like mechanisms. These functions position CEACAM1 as a relevant target in studies of immune homeostasis, tumor-immune interactions, and inflammatory signaling. In addition, several bacterial and viral pathogens utilize CEACAM family members as host receptors, underscoring the importance of this molecule in host-pathogen interaction research.

Altered expression of CEACAM1 has been reported in colorectal carcinoma, hepatocellular carcinoma, breast cancer, melanoma, and prostate cancer. In certain epithelial tumors, reduced expression correlates with decreased intercellular adhesion and increased invasiveness, while in other contexts elevated expression is associated with tumor progression and immune modulation. These context-dependent roles highlight the value of CD66a Cell Adhesion Molecule antibody for evaluating membrane protein expression patterns in both normal and disease-associated tissues.

This recombinant monoclonal antibody (clone r29H2) targets CEACAM1 protein in research applications. CD66a Cell Adhesion Molecule antibody supports investigation of adhesion molecule dynamics, isoform-specific signaling differences, and tumor-associated changes in CEACAM1 expression.

Application Notes

1. Optimal dilution of the CD66a Cell Adhesion Molecule/CEACAM1 antibody should be determined by the researcher.

2. This CD66a Cell Adhesion Molecule/CEACAM1 antibody is recombinantly produced by expression in CHO cells.

Immunogen

Prokaryotic recombinant protein corresponding to a 170 amino acid truncate (266 to 436aa) of the CD66a molecule was used as the immunogen for the CD66a Cell Adhesion Molecule/CEACAM1 antibody.

Storage

CD66a Cell Adhesion Molecule/CEACAM1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.