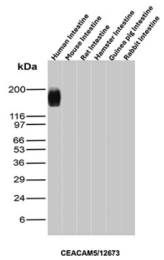
CEA Antibody / Human CEACAM5-Specific Antibody [clone CEACAM5/12673] (V5647)

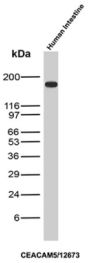
Catalog No.	Formulation	Size
V5647-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5647-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5647SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

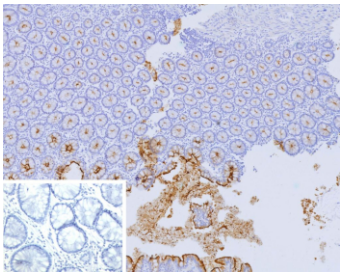
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG, kappa
Clone Name	CEACAM5/12673
Purity	Protein A/G affinity
UniProt	P06731
Localization	Cytoplasm and luminal surface
Applications	Western Blot : 2-4ug/ml Immunohistochemistry : 1-2ug/ml
Limitations	This CEA Antibody / Human CEACAM5-Specific Antibody is available for research use only.



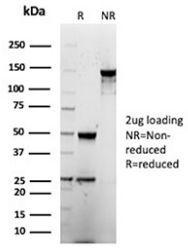
CEA Antibody Cross-Species Intestine WB. Western blot analysis of CEA / CEACAM5 expression using CEA antibody, clone CEACAM5/12673. Lane 1: human intestine lysate, Lane 2: mouse intestine lysate, Lane 3: rat intestine lysate, Lane 4: hamster intestine lysate, Lane 5: guinea pig intestine lysate, Lane 6: rabbit intestine lysate. A strong band is detected at approximately 180-200 kDa in human intestine, consistent with the predicted molecular weight of heavily glycosylated CEACAM5, while no comparable band is observed in the tested non-human intestine samples, supporting selective recognition of human CEA under these western blot conditions.



CEACAM5 Antibody Intestine WB. Western blot analysis of CEACAM5 / Carcinoembryonic antigen expression in human intestine tissue lysate using CEACAM5 antibody, clone CEACAM5/12673. Lane 1: human intestine tissue lysate. A strong band is detected at approximately 180-200 kDa, consistent with the predicted molecular weight of CEACAM5, with the elevated apparent size reflecting extensive glycosylation characteristic of this epithelial cell surface glycoprotein.



CEA Antibody Human Colon Tissue IHC. Immunohistochemistry staining of FFPE human colon tissue with CEA antibody (clone CEACAM5/12673). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free CEA antibody (CEACAM5/12673) as confirmation of integrity and purity.

Description

Carcinoembryonic antigen (CEACAM5) is a glycosylphosphatidylinositol-anchored cell surface glycoprotein that belongs to the carcinoembryonic antigen-related cell adhesion molecule family, commonly referred to as the CEA family of adhesion proteins. CEACAM5, widely known as CEA, plays a central role in epithelial cell adhesion, polarity maintenance, and intercellular signaling within mucosal tissues. CEA Antibody / Human CEACAM5-Specific Antibody is particularly suited for studies focused on human epithelial biology and tumor-associated antigen expression. CEACAM5 is highly expressed in normal gastrointestinal epithelium, especially in the colon and small intestine, and is frequently upregulated in colorectal, gastric, pancreatic, and other adenocarcinomas, supporting its long-standing use as a tumor marker in oncology research.

CEA antibody, also referred to as CEACAM5 antibody or carcinoembryonic antigen antibody, targets a protein characterized by extensive N-linked glycosylation, resulting in a broad and elevated apparent molecular weight during SDS-PAGE analysis. CEACAM5 is predominantly localized to the apical surface of epithelial cells, where it participates in homophilic and heterophilic adhesion interactions and contributes to epithelial barrier integrity. It is also released into circulation in certain disease states, making it a clinically relevant biomarker. Expression is strongest in differentiated epithelial cells of the gastrointestinal tract and is often retained or enhanced in tumor epithelial cells, where it contributes to altered adhesion dynamics and tumor progression.

This CEA Antibody / Human CEACAM5-Specific Antibody is uniquely positioned for applications requiring selective detection of human CEACAM5. Western blot analysis demonstrates a strong, high molecular weight CEACAM5 band in human intestine lysate, while no detectable corresponding band is observed in tested mouse, rat, hamster, guinea pig, or rabbit intestine lysates under identical conditions. This pattern supports preferential recognition of human CEACAM5 and provides a meaningful advantage in studies using human-derived samples, where reduced cross-species reactivity can minimize interpretive ambiguity and improve signal specificity in comparative experiments.

CEACAM5 is a member of the immunoglobulin superfamily and contains multiple extracellular Ig-like domains that

mediate cell-cell adhesion and signaling interactions. Its glycosylphosphatidylinositol anchor promotes localization to membrane microdomains, where it can interact with other CEACAM family members such as CEACAM6 and CEACAM1, as well as participate in signaling pathways that regulate cell survival, differentiation, and immune modulation. Dysregulated CEACAM5 expression has been associated with tumor progression, metastatic dissemination, and resistance to apoptosis, reflecting its functional importance in cancer biology and epithelial tissue remodeling.

In addition to its role in tumor biology, CEACAM5 contributes to normal tissue organization and epithelial homeostasis. Its strong and consistent expression in human intestinal epithelium, combined with selective detection in human lysates, supports its use as a reliable marker for human epithelial cells in research settings. A CEA antibody can be used in western blot, immunohistochemistry, or other research assays to evaluate CEACAM5 expression in human tissues and cancer models, providing insight into epithelial differentiation, tumor marker biology, and CEACAM-mediated signaling pathways.

This CEA antibody is part of a broader CEA antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the CEA Antibody / Human CEACAM5-Specific Antibody should be determined by the researcher.

This MAb does not react with nonspecific cross-reacting antigen (NCA) and with human polymorphonuclear leucocytes.

Immunogen

Human CEA/CECAM5 protein was used as the immunogen for the CEA antibody.

Storage

Aliquot the CEA antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CEA antibody, CEACAM5 antibody, Carcinoembryonic antigen antibody, CEACAM5 human-specific antibody, CEA human tissue antibody