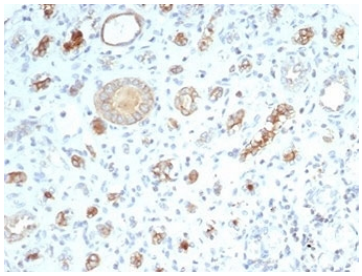
CFTR Antibody for IHC / Immunohistochemistry Antibody [clone CFTR/7003R] (V9382)

Catalog No.	Formulation	Size
V9382-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9382-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9382SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

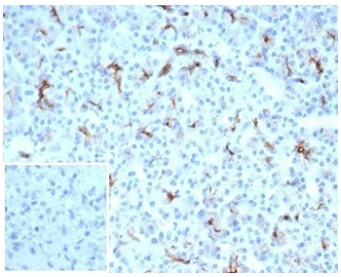
Recombinant RABBIT MONOCLONAL

Bulk quote request

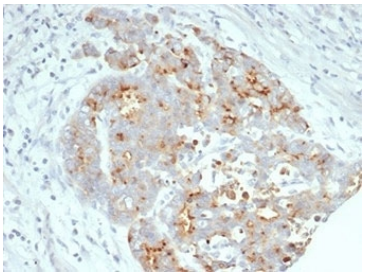
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	CFTR/7003R
Purity	Protein A/G affinity
UniProt	P13569
Localization	Cell surface, Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This CFTR Antibody for IHC / Immunohistochemistry Antibody is available for research use only.



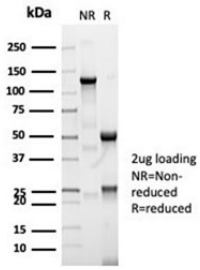
CFTR Antibody for IHC Kidney. Immunohistochemistry analysis of Cystic fibrosis transmembrane conductance regulator / CFTR expression in FFPE human kidney tissue using recombinant rabbit monoclonal antibody clone CFTR/7003R. This CFTR antibody shows apical membranous HRP-DAB brown staining in renal tubular epithelial cells, with luminal accentuation and minimal signal in surrounding stromal elements; nuclei are counterstained blue. The staining pattern is consistent with polarized epithelial localization of CFTR in kidney tubules. Antigen retrieval was performed by boiling sections in 10 mM Tris buffer with 1 mM EDTA, pH 9, for 20 min followed by cooling at room temperature.



CFTR Antibody for IHC Pancreas. Immunohistochemistry analysis of Cystic fibrosis transmembrane conductance regulator / CFTR expression in FFPE human pancreatic tissue using recombinant rabbit monoclonal antibody clone CFTR/7003R. This CFTR antibody shows apical membranous HRP-DAB brown staining in pancreatic ductal epithelial cells, with minimal signal in surrounding acinar and stromal compartments; nuclei are counterstained blue. The staining pattern reflects polarized epithelial localization consistent with pancreatic duct structures. Inset shows a PBS-only negative control processed without primary antibody, confirming minimal non-specific background staining. Antigen retrieval was performed by boiling sections in 10 mM Tris buffer with 1 mM EDTA, pH 9, for 20 min followed by cooling at room temperature.



CFTR Antibody for IHC Ovarian Carcinoma. Immunohistochemistry analysis of Cystic fibrosis transmembrane conductance regulator / CFTR expression in FFPE human ovarian carcinoma tissue using recombinant rabbit monoclonal antibody clone CFTR/7003R. This CFTR antibody shows membranous and cytoplasmic HRP-DAB brown staining in tumor epithelial cells, with heterogeneous distribution across tumor regions, while surrounding stromal elements show reduced signal; nuclei are counterstained blue. The staining pattern is consistent with epithelial ion channel expression in carcinoma tissue. Antigen retrieval was performed by boiling sections in 10 mM Tris buffer with 1 mM EDTA, pH 9, for 20 min followed by cooling at room temperature.



SDS-PAGE analysis of purified, BSA-free recombinant CFTR antibody (clone CFTR/7003R) as confirmation of integrity and purity.

Description

Cystic fibrosis transmembrane conductance regulator (CFTR) is a membrane-associated ATP-binding cassette transporter that functions as a cAMP-regulated chloride and bicarbonate channel in epithelial tissues. Cystic fibrosis transmembrane conductance regulator (CFTR) is primarily localized to the apical membrane of polarized epithelial cells lining organs such as the airway, pancreas, salivary glands, intestine, and biliary system, where it plays a central role in fluid secretion and mucosal hydration. CFTR Antibody for IHC / Immunohistochemistry Antibody is particularly suited for visualizing CFTR distribution in formalin-fixed, paraffin-embedded tissue sections, enabling direct assessment of epithelial ion channel localization within intact tissue architecture. For a widely cited CFTR antibody used across multiple study types, see our M3A7 clone.

CFTR antibody, also referred to as cystic fibrosis transmembrane conductance regulator antibody or ABCC7 antibody, recognizes a large multi-domain protein composed of two nucleotide-binding domains, a regulatory domain, and multiple transmembrane segments that form the ion channel pore. CFTR activity is tightly controlled by phosphorylation and ATP binding, which regulate channel gating and ion conductance. In immunohistochemistry applications, CFTR is typically detected with apical membranous and luminal staining in epithelial cells, particularly within ductal and glandular structures, reflecting its physiological role in directing ion transport across epithelial surfaces.

This CFTR Antibody for IHC / Immunohistochemistry Antibody is optimized for tissue-based detection, providing clear visualization of CFTR localization relative to epithelial organization. Immunohistochemical staining highlights polarized expression patterns that distinguish epithelial compartments from surrounding stromal and immune cell populations. This spatial resolution is particularly valuable in tissues such as pancreas and salivary gland, where CFTR expression is

concentrated in ductal epithelium, as well as in airway and intestinal tissues where epithelial transport function is critical. The ability to visualize CFTR in situ supports detailed analysis of tissue morphology, epithelial polarity, and glandular structure.

Mutations in CFTR are the underlying cause of cystic fibrosis, a genetic disorder characterized by defective chloride transport, impaired mucociliary clearance, and accumulation of viscous secretions. The most common mutation, delta F508, results in misfolding and defective trafficking of CFTR, leading to reduced apical membrane localization. These alterations can be assessed at the tissue level using immunohistochemistry, where changes in CFTR distribution and intensity provide insight into disease pathology. CFTR localization patterns are therefore highly relevant for studies of epithelial dysfunction and therapeutic response in cystic fibrosis and related conditions.

In addition to its role in cystic fibrosis, CFTR contributes to broader epithelial biology through regulation of other ion channels, vesicle trafficking, and epithelial differentiation. Altered CFTR expression has been reported in certain cancers and inflammatory conditions, where disruption of epithelial polarity and ion transport may influence disease progression. Its distinct apical localization and strong association with glandular and ductal epithelium make CFTR particularly well suited for immunohistochemical analysis. A CFTR antibody for IHC can be used to evaluate CFTR expression and localization in epithelial tissues and disease models, supporting investigations into ion transport, epithelial organization, and CFTR-associated pathology.

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

Application Notes

Optimal dilution of the CFTR Antibody for IHC / Immunohistochemistry Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 550-850 was used as the immunogen for the recombinant CFTR antibody.

Storage

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

Alternate Names

CFTR antibody, Cystic fibrosis transmembrane conductance regulator antibody, ABCC7 antibody, CFTR IHC antibody, CFTR immunohistochemistry antibody

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