

Anti-CFTR Antibody
Mouse Monoclonal Antibody
Catalog # AH13097**Specification**

Anti-CFTR Antibody - Product Information

Application	WB, IHC-P, IF
Primary Accession	P13569
Other Accession	489786 , 621460 , 661104
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2a
Calculated MW	168142

Anti-CFTR Antibody - Additional Information**Gene ID** 1080**Other Names**

ABC35; ATP Binding Cassette Superfamily C Member 7 (ABCC7); cAMP-dependent chloride channel; CFTR; CFTR/MRP; Channel conductance-controlling ATPase; Cystic Fibrosis Transmembrane Conductance Regulator; MRP7; TNR CFTR

Application Note

WB~~1:1000
IHC-P~~N/A
IF~~1:50~200

Format

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

Storage

Store at 2 to 8°C. Antibody is stable for 24 months.

Precautions

Anti-CFTR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Anti-CFTR Antibody - Protein Information**Name** CFTR ([HGNC:1884](#))**Synonyms** ABCC7**Function**

Epithelial ion channel that plays an important role in the regulation of epithelial ion and water transport and fluid homeostasis (PubMed: <http://www.uniprot.org/citations/26823428>)

target="_blank">26823428). Mediates the transport of chloride ions across the cell membrane (PubMed:10792060, PubMed:11524016, PubMed:11707463, PubMed:12519745, PubMed:12529365, PubMed:12588899, PubMed:12727866, PubMed:15010471, PubMed:17036051, PubMed:1712898, PubMed:17182731, PubMed:19398555, PubMed:19621064, PubMed:22178883, PubMed:25330774, PubMed:26846474, PubMed:28087700, PubMed:8910473, PubMed:9804160). Possesses an intrinsic ATPase activity and utilizes ATP to gate its channel; the passive flow of anions through the channel is gated by cycles of ATP binding and hydrolysis by the ATP-binding domains (PubMed:11524016, PubMed:15284228, PubMed:26627831, PubMed:8910473). The ion channel is also permeable to HCO₃(-); selectivity depends on the extracellular chloride concentration (PubMed:15010471, PubMed:19019741). In vitro, mediates ATP-dependent glutathione flux (PubMed:12727866). Exerts its function also by modulating the activity of other ion channels and transporters (PubMed:12403779, PubMed:22121115, PubMed:22178883, PubMed:27941075). Plays an important role in airway fluid homeostasis (PubMed:16645176, PubMed:19621064, PubMed:26823428). Contributes to the regulation of the pH and the ion content of the airway surface fluid layer and thereby plays an important role in defense against pathogens (PubMed:14668433, PubMed:16645176, PubMed:26823428). Modulates the activity of the epithelial sodium channel (ENaC) complex, in part by regulating the cell surface expression of the ENaC complex (PubMed:17182731, PubMed:17434346, PubMed:27941075). Inhibits the activity of the ENaC channel containing subunits SCNN1A, SCNN1B and SCNN1G (PubMed:17182731). Inhibits the activity of the ENaC channel containing subunits SCNN1D, SCNN1B and SCNN1G, but not of the ENaC channel containing subunits SCNN1A, SCNN1B and SCNN1G (PubMed:17182731, PubMed:27941075). May regulate bicarbonate secretion and salvage in epithelial

cells by regulating the transporter SLC4A7 (PubMed:12403779). Can inhibit the chloride channel activity of ANO1 (PubMed:22178883). Plays a role in the chloride and bicarbonate homeostasis during sperm epididymal maturation and capacitation (PubMed:19923167, PubMed:27714810, PubMed:29393851).

Cellular Location

Apical cell membrane; Multi-pass membrane protein {ECO:0000269|Ref.57}. Early endosome membrane; Multi-pass membrane protein {ECO:0000269|Ref.57}. Cell membrane; Multi-pass membrane protein {ECO:0000269|Ref.57}. Recycling endosome membrane; Multi-pass membrane protein {ECO:0000269|Ref.57}. Endoplasmic reticulum membrane; Multi-pass membrane protein {ECO:0000269|Ref.57}. Nucleus {ECO:0000250|UniProtKB:P34158}. Note=The channel is internalized from the cell surface into an endosomal recycling compartment, from where it is recycled to the cell membrane (PubMed:17462998, PubMed:19398555, PubMed:20008117). In the oviduct and bronchus, detected on the apical side of epithelial cells, but not associated with cilia (PubMed:22207244). In Sertoli cells, a processed product is detected in the nucleus (By similarity). ER stress induces GORASP2-mediated unconventional (ER/Golgi-independent) trafficking of core-glycosylated CFTR to cell membrane (PubMed:21884936). {ECO:0000250|UniProtKB:P34158, ECO:0000269|PubMed:19398555, ECO:0000269|PubMed:20008117, ECO:0000269|PubMed:21884936, ECO:0000269|PubMed:22207244, ECO:0000305|PubMed:17462998}

Tissue Location

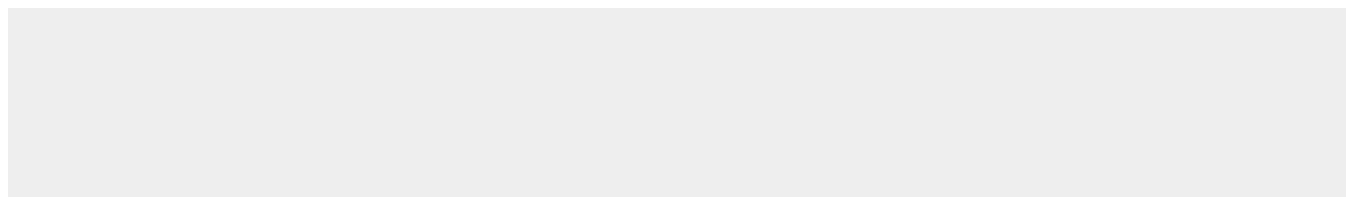
Expressed in the respiratory airway, including bronchial epithelium, and in the female reproductive tract, including oviduct (at protein level) (PubMed:15716351, PubMed:22207244). Detected in pancreatic intercalated ducts in the exocrine tissue, on epithelial cells in intralobular striated ducts in sublingual salivary glands, on apical membranes of crypt cells throughout the small and large intestine, and on the reabsorptive duct in eccrine sweat glands (PubMed:1284548, PubMed:28130590). Detected on the equatorial segment of the sperm head (at protein level) (PubMed:19923167). Detected in nasal and bronchial superficial epithelium (PubMed:15716351). Expressed by the central cells on the sebaceous glands, dermal adipocytes and, at lower levels, by epithelial cells (PubMed:28130590)

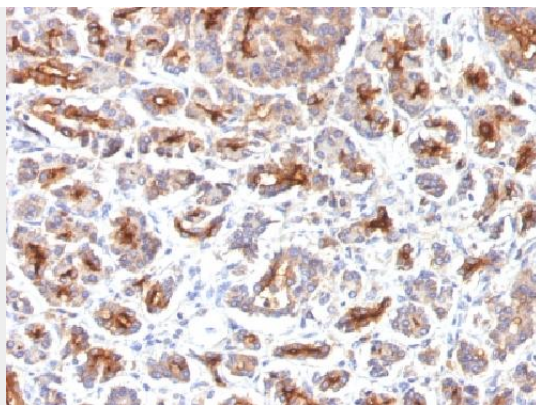
Anti-CFTR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-CFTR Antibody - Images





Formalin-fixed, paraffin-embedded Human Pancreas stained with CFTR Monoclonal Antibody (SPM176).

Anti-CFTR Antibody - Background

Recognizes a protein of 165-170kDa, identified as cystic fibrosis transmembrane conductance regulator (CFTR). CFTR is composed of two membrane-spanning domains (MSD), two nucleotide-binding domains (NBD), and an R domain. It is structurally similar to multidrug resistance (Mdr1) protein and both are members of the superfamily of ATP-binding cassette (ABC) transporters, also known as traffic ATPases, which are implicated in the movement of various substrates. The CFTR protein is a small conductance adenosine 3',5'-cyclic monophosphate (cAMP)-activated chloride ion channel found in the apical membranes of epithelia within the pancreas, airway, intestine, bile duct, sweat gland, and male genital ducts. CFTR is a valuable marker of human pancreatic duct cell development and differentiation.