

CFTR Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	168	Rabbit	#P13569	1080

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CFTR Antibody detects endogenous levels of total CFTR protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to amino acids near the amino terminus of human CFTR. Antibodies are purified by protein A and peptide affinity chromatography.

Background

CFTR (ABC35, ABCC7, CBAVD, CF, dj760C5.1, MRP7, TNR-CFTR) is a member of the ATP-binding cassette (ABC) transporter superfamily. Mutations in ABC genes have been linked to many diseases. CFTR is a plasma membrane cyclic AMP activated chloride channel that is expressed in the epithelial cells of the lung and several other organs (1,2). It mediates the secretion of Cl⁻ and also regulates several channels including the epithelial sodium channel (ENaC), K⁺ channels, ATP release mechanisms, anion exchangers, sodium bicarbonate transporters and aquaporin water channels (3,4,5,6,7,8,9,10). Mutations in the CFTR gene cause cystic fibrosis, a disease that is characterized by exocrine pancreatic insufficiency, increase in sweat gland NaCl, male infertility and airway disease (1,2,11). Intracellular trafficking regulates the number of CFTR molecules at the cell surface, which in part regulates Cl⁻ secretion. Deletion of phenylalanine 508 (deltaF508) is the most common mutation in CF patients. This mutation results in retention in the ER, where ER quality control mechanisms target the deltaF508 mutant to the proteasome for degradation (12-14). Therefore, disruption of CFTR trafficking leads to dysregulation of Cl⁻ secretion at the plasma membrane of epithelial cells.

Background References

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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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