Revision 4

Store at -20C

#78335

CFTR (D6W6L) Rabbit mAb

Cell Signaling TECHNOLOGY®

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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, IP, IF-IC	H	Endogenous	150-220	Rabbit IgG	#P13569	1080

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:400 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #30167.

Specificity/Sensitivity

CFTR (D6W6L) Rabbit mAb recognizes endogenous levels of total CFTR protein. This antibody also detects a 60 kDa band of unknown origin in some cell lines.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein fragment of human CFTR protein. The epitope corresponds to a region surrounding Arg735 of human CFTR.

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 proteosome for degradation (12-14). Therefore, disruption of CFTR trafficking leads to disregulation of Cl- secretion at the plasma membrane of epithelial cells.

Background References

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12. Gibson, R.L. et al. (2003) *Am. J. Respir. Crit. Care Med.* 168, 918-951.
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14. Riordan, J.R. (2005) *Annu. Rev. Physiol.* 67, 701-718.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human

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