

# CFTR (GA1): sc-20074

## BACKGROUND

CFTR, for cystic fibrosis transmembrane conductance regulator, is a cyclic adenosine monophosphate (cAMP)-regulated chloride channel protein. CFTR belongs to the MDR subfamily within the ATP-binding transport protein family. It has two transmembrane domains (TMDs), two nucleotide binding domains (NBDs) and one regulatory domain. Mutations of CFTR are associated with cystic fibrosis (CF), a disease characterized by chronic bronchopulmonary disease, elevated sweat electrolytes and insufficient pancreatic function. CFTR mutations can also result in congenital bilateral absence of vas deferens (CBAVD), a form of male sterility that a majority of male CF patients exhibit.

## REFERENCES

1. Riordan, J.R., et al. 1989. Identification of the cystic fibrosis gene: cloning and characterization of complementary DNA. *Science* 245: 1066-1073.
2. Tsui, L.C. 1992. The spectrum of cystic fibrosis mutations. *Trends Genet.* 8: 392-398.
3. Gabriel, S.E., et al. 1993. CFTR and outward rectifying chloride channels are distinct proteins with a regulatory relationship. *Nature* 363: 263-268.
4. Hoof, T., et al. 1994. Cystic fibrosis-type mutational analysis in the ATP-binding cassette transporter signature of human P-glycoprotein MDR1. *J. Biol. Chem.* 269: 20575-20583.
5. Kunzelmann, K. 1999. The cystic fibrosis transmembrane conductance regulator and its function in epithelial transport. *Rev. Physiol. Biochem. Pharmacol.* 137: 1-70.

## CHROMOSOMAL LOCATION

Genetic locus: CFTR (human) mapping to 7q31.2.

## SOURCE

CFTR (GA1) is a mouse monoclonal antibody raised against C-terminal recombinant human CFTR protein, corresponding to amino acids 1387-1480, requires amino acids 1445-1460.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CFTR (GA1) is recommended for detection of CFTR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

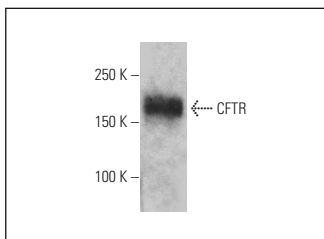
Suitable for use as control antibody for CFTR siRNA (h): sc-35054, CFTR shRNA Plasmid (h): sc-35054-SH and CFTR shRNA (h) Lentiviral Particles: sc-35054-V.

Molecular Weight of CFTR: 165 kDa.

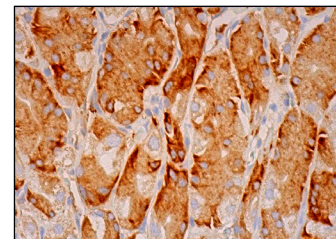
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



CFTR (GA1): sc-20074. Western blot analysis of CFTR expression in CFTR-transfected BHK cells.



CFTR (GA1): sc-20074. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Ganeshan, R., et al. 2007. CFTR surface expression and chloride currents are decreased by inhibitors of N-WASP and actin polymerization. *Biochim. Biophys. Acta* 1773: 192-200.
2. Sharma, N., et al. 2016. A sequence upstream of canonical PDZ-binding motif within CFTR COOH-terminus enhances NHERF1 interaction. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 311: L1170-L1182.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **CFTR (A-3): sc-376683** for CFTR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.