SANTA CRUZ BIOTECHNOLOGY, INC.

CFTR (C-19): sc-8910

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 regula-tory 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 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CFTR of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-8910 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

CFTR (C-19) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

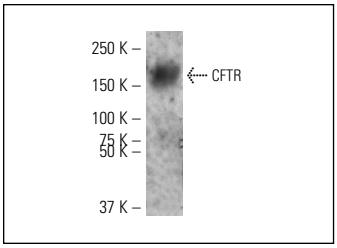
Suitable for use as control antibody for CFTR siRNA (h): sc-35054, CFTR shRNA Plasmid (h): sc-35054-SH and CFTR shRNA (h) Lentiviral Particles: sc-35054-V.

Molecular Weight of CFTR: 165 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CFTR (C-19): sc-8910. Western blot analysis of CFTR expression in CFTR-transfected BHK cells.

SELECT PRODUCT CITATIONS

1. Morris, M.R., et al. 2005. Reduced iC3β-mediated phagocytotic capacity of pulmonary neutrophils in cystic fibrosis. Clin. Exp. Immunol. 142: 68-75.
2. Zhang, J.T., et al. 2013. Downregulation of CFTR promotes epithelial-to-mesenchymal transition and is associated with poor prognosis of breast cancer. Biochim. Biophys. Acta 1833: 2961-2969.