SANTA CRUZ BIOTECHNOLOGY, INC.

CFTR (N-20): sc-8909

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. CFTR 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

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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 Mdr-1. 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.
6. Wendeler, M.W., et al. 2007. Improved maturation of CFTR by an ER export signal. FASEB J. E-published ahed of print.
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CHROMOSOMAL LOCATION

Genetic locus: CFTR (human) mapping to 7q31.2; Cftr (mouse) mapping to 6 A2.

SOURCE

CFTR (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-8909 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.

APPLICATIONS

CFTR (N-20) is recommended for detection of CFTR of mouse, rat and 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).

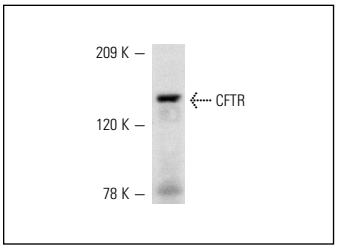
CFTR (N-20) is also recommended for detection of CFTR in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for CFTR siRNA (h): sc-35054, CFTR siRNA (m): sc-35053, CFTR shRNA Plasmid (h): sc-35054-SH, CFTR shRNA Plasmid (m): sc-35053-SH, CFTR shRNA (h) Lentiviral Particles: sc-35054-V and CFTR shRNA (m) Lentiviral Particles: sc-35053-V.

Molecular Weight of CFTR: 165 kDa.

Positive Controls: rat lung tissue extract: sc-2396.

DATA



CFTR (N-20): sc-8909. Western blot analysis of CFTR expression in rat lung tissue extract.

SELECT PRODUCT CITATIONS

1. Cohen, J.C., et al. 2005. Pathophysiologic consequences following inhibition of a CFTR-dependent developmental cascade in the lung. BMC Dev. Biol. 5: 2.
2. Chao, Y.C., et al. 2007. Ethanol enhanced *in vivo* gene delivery with non-ionic polymeric micelles inhalation. J. Control Release 118: 105-117.
3. Bao, H.F., et al. 2008. A synthetic prostone activates apical chloride channels in A6 epithelial cells. Am. J. Physiol. Gastrointest. Liver Physiol. 295: G234-G251.
4. Mannowetz, N., et al. 2010. Early activation of sperm by HCO^{3-} is regulated hormonally in the murine uterus. Int. J. Androl. E-Published.

RESEARCH USE

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