SANTA CRUZ BIOTECHNOLOGY, INC.

CFTR (H-182): sc-10747

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.

CHROMOSOMAL LOCATION

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

SOURCE

CFTR (H-182) is a rabbit polyclonal antibody raised against amino acids 1-182 mapping at 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.

APPLICATIONS

CFTR (H-182) 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 (H-182) 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: MH-S whole cell lysate: sc-364785, rat lung extract: sc-2396 or AMJ2-C8 whole cell lysate: sc-364366.

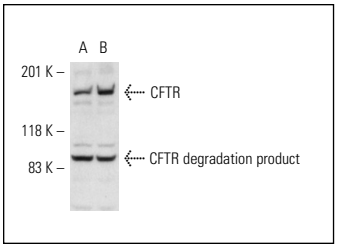
STORAGE

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.

DATA



CFTR (H-182): sc-10747. Western blot analysis of CFTR expression in MH-S (**A**) and AMJ2-C8 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, X., et al. 2002. Partial correction of endogenous δF508 CFTR in human cystic fibrosis airway epithelia by spliceosome-mediated RNA *trans*-splicing. Nat. Biotechnol. 20: 47-52.
2. Solbach, T.F., et al. 2008. ATP-binding cassette transporters in human heart failure. Naunyn Schmiedebergs Arch. Pharmacol. 377: 231-243.
3. Hirota, C.L., et al. 2009. Loss of Ca^{2+}-mediated ion transport during colitis correlates with reduced ion transport responses to a Ca^{2+}-activated K^{+} channel opener. Br. J. Pharmacol. 156: 1085-1097.
4. Tuo, B., et al. 2009. Involvement of phosphatidylinositol 3-kinase in cAMP- and cGMP-induced duodenal epithelial CFTR activation in mice. Am. J. Physiol., Cell Physiol. 297: C503-C515.
5. Homma, K., et al. 2010. Interaction between CFTR and prestin (SLC26A5). Biochim. Biophys. Acta 1798: 1029-1040.
6. Auriche, C., et al. 2010. CFTR expression and activity from the human CFTR locus in BAC vectors, with regulatory regions, isolated by a single-step procedure. Gene Ther. 17: 1341-1354.
7. Su, X., et al. 2011. Role of CFTR expressed by neutrophils in modulating acute lung inflammation and injury in mice. Inflamm. Res. 60: 619-632.
8. Del Porto, P., et al. 2011. Dysfunctional CFTR alters the bactericidal activity of human macrophages against *Pseudomonas aeruginosa*. PLoS ONE 6: e19970.
9. Kotb, A.M., et al. 2011. Replacement of E-cadherin by N-cadherin in the mammary gland leads to fibrocystic changes and tumor formation. Breast Cancer Res. 13: R104.