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.

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

SOURCE
CFTR (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1419-1457 near the C-terminus of CFTR of human origin.

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

CFTR (A-3) is available conjugated to agarose (sc-376683 AC), 500 µg/0.25 ml agarose in 1 ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-376683 PE), fluorescein (sc-376683 FITC), Alexa Fluor® 488 (sc-376683 AF488) or Alexa Fluor® 647 (sc-376683 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-376683 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS
CFTR (A-3) is recommended for detection of CFTR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 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: NIH/3T3 whole cell lysate: sc-2210, MCF7 whole cell lysate: sc-2206 or AMJ2-C8 whole cell lysate: sc-364366.