**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 A2.

**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 IgG1 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 IP; to HRP (sc-376683 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycocyanthrin (sc-376683 PE), fluorescein (sc-376683 FITC), Alexa Fluor® 488 (sc-376683 AF488), Alexa Fluor® 546 (sc-376683 AF546), Alexa Fluor® 594 (sc-376683 AF594) or Alexa Fluor® 647 (sc-376683 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376683 AF680) or Alexa Fluor® 790 (sc-376683 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376683 P, (100 µg/200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM).

**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.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGx BP-HRP: sc-516102 or m-IgGx BP-HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Lumino Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGx BP-FITC: sc-516140 or m-IgGx BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGx BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

**DATA**

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**SELECT PRODUCT CITATIONS**


**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 for detailed protocols and support products.