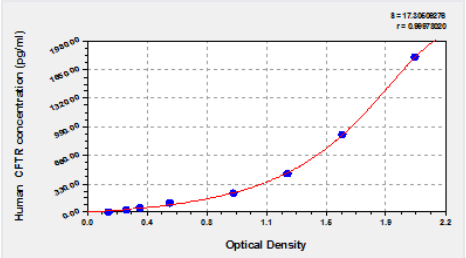
Cystic Fibrosis Transmembrane Conductance Regulator (ATP-Binding Cassette Sub-Family C, Member 7) (CFTR) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7) (CFTR), ELISA Kit
Full Product Name	Human Cystic fibrosis transmembrane conductance regulator, CFTR ELISA Kit
Product Gene Name	CFTR elisa kit
Product Synonym Names	Human Cystic fibrosis transmembrane conductance regulator (CFTR) ELISA kit; tcag7.78; ABC35; ABCC7; CF; CFTR/MRP; MRP7; TNR-CFTR; dJ760C5.1; ATP-binding cassette sub-family C; member 7; cystic fibrosis transmembrane conductance regulator; cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C; member 7)
Species Reactivity	Human
Assay Type	Sandwich
Samples	Serum, plasma, tissue homogenates, Cell lysates
Detection Range	28 pg/ml-1800 pg/ml
Sensitivity	7 pg/ml
Specificity	This assay has high sensitivity and excellent specificity for detection of Human CFTR. No significant cross-reactivity or interference between Human CFTR and analogues was observed.
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Molecular Weight	168,142 Da
OMIM	602421
3D Structure	ModBase 3D Structure for P13569
Detection Wavelength	450 nm
Sample Volume	50-100ul
Protein Biological Process 1	Transport
Protein Biological Process 2	Anion transport
Protein Biological Process 3	Ion transport
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CFTR elisa kit	**Principle of the Assay:** This assay employs the quantitative sandwich enzyme immunoassay technique. Antibody specific for CFTR has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any CFTR present is bound by the immobilized antibody. After removing any unbound substances, a biotin-conjugated antibody specific for CFTR is added to the wells. After washing, avidin conjugated Horseradish Peroxidase (HRP) is added to the wells. Following a wash to remove any unbound avidin-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of CFTR bound in the initial step. The color development is stopped and the intensity of the color is measured.

Other Notes	Small volumes of CFTR elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CFTR purchase	MBS911465 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7) (CFTR) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CFTR. The ELISA analytical biochemical technique of the MBS911465 kit is based on CFTR antibody-CFTR antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CFTR antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CFTR. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of CFTR elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CFTR. It may not necessarily be applicable to this product.

NCBI GI #	90421313
NCBI GeneID	1080
NCBI Accession #	NP_000483.3
UniProt Primary Accession #	P13569
UniProt Secondary Accession #	Q20BG8; Q20BH2; Q2I0A1; Q2I102
UniProt Related Accession #	P13569
GenBank Nucleotide #	NM_000492.3
NCBI Official Full Name	cystic fibrosis transmembrane conductance regulator
NCBI Official Synonym Full Names	cystic fibrosis transmembrane conductance regulator (ATP-binding cassette sub-family C, member 7)
NCBI Official Symbol	CFTR
NCBI Official Synonym Symbols	CF; MRP7; ABC35; ABCC7; CFTR/MRP; TNR-CFTR; dJ760C5.1
UniProt Protein Name	Cystic fibrosis transmembrane conductance regulator
UniProt Synonym Protein Names	ATP-binding cassette sub-family C member 7; Channel conductance-controlling ATPase (EC:3.6.3.49); cAMP-dependent chloride channel
Protein Family	Cystic fibrosis transmembrane conductance regulator
UniProt Gene Name	CFTR
UniProt Synonym Gene Names	ABCC7; CFTR
UniProt Entry Name	CFTR_HUMAN
NCBI Protein Information	cystic fibrosis transmembrane conductance regulator; cAMP-dependent chloride channel; channel conductance-controlling ATPase

NCBI Summary for CFTR	This gene encodes a member of the ATP-binding cassette (ABC) transporter superfamily. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MRP subfamily that is involved in multi-drug resistance. The encoded protein functions as a chloride channel and controls the regulation of other transport pathways. Mutations in this gene are associated with the autosomal recessive disorders cystic fibrosis and congenital bilateral aplasia of the vas deferens. Alternatively spliced transcript variants have been described, many of which result from mutations in this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for CFTR	CFTR: a member of the MRP subfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. Functions as a chloride channel and controls the regulation of other transport pathways. Mutations have been observed in patients with the autosomal recessive disorders cystic fibrosis (CF) and congenital bilateral aplasia of the vas deferens (CBAVD). Alternative splice Protein type: EC 3.6.3.49; Membrane protein, integral; Channel, chloride; Membrane protein, multi-pass; Transporter, ABC family; Transporter; Hydrolase Chromosomal Location of Human Ortholog: 7q31.2 Cellular Component: recycling endosome; microvillus; cytoplasmic vesicle membrane; cell surface; protein complex; basolateral plasma membrane; early endosome membrane; early endosome; apical plasma membrane; cytoplasm; plasma membrane Molecular Function: bicarbonate transmembrane transporter activity; chloride channel activity; protein binding; chloride channel inhibitor activity; enzyme binding; chloride transmembrane transporter activity; channel-conductance-controlling ATPase activity; ATP-binding and phosphorylation-dependent chloride channel activity; ATP binding; PDZ domain binding Biological Process: response to drug; intracellular pH elevation; response to peptide hormone stimulus; cholesterol transport; iodide transport; transepithelial chloride transport; water transport; membrane hyperpolarization; respiratory gaseous exchange; positive regulation of vasodilation; cholesterol biosynthetic process; vasodilation; cellular response to hormone stimulus; response to estrogen stimulus; bicarbonate transport; transport; response to cytokine stimulus; transmembrane transport; sperm capacitation; lung development Disease: Vas Deferens, Congenital Bilateral Aplasia Of; Bronchiectasis With Or Without Elevated Sweat Chloride 1; Cystic Fibrosis; Pancreatitis, Hereditary
Research Articles on CFTR	**1.** VIP regulates CFTR membrane expression and function in Calu-3 cells by increasing its interaction with NHERF1 and P-ERM in a VPAC1- and PKCepsilon-dependent manner.
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