Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) ELISA Kit for Human

PRODUCT OVERVIEW

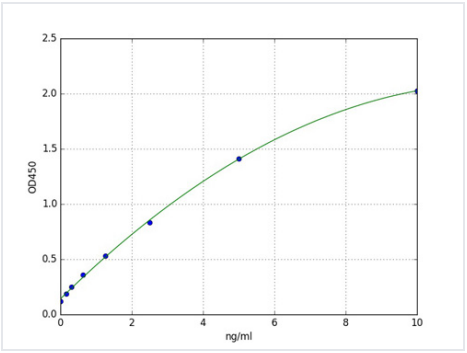
Product Name	Cystic Fibrosis Transmembrane Conductance Regulator (CFTR), ELISA Kit
Full Product Name	Human Cystic Fibrosis Transmembrane Conductance Regulator ELISA Kit
Product Gene Name	CFTR elisa kit
Product Synonym Names	CFTR/ABC35/ABCC7CF/ATP-binding cassette sub-family C member 7/ATP-binding cassette transporter sub-family C member 7/cAMP-dependent chloride channel/CFTR/MRP/Channel conductance-controlling ATPase/cystic fibrosis transmembrane conductance regulator/cystic fibrosis transmembrane conductance regulator (ATP-binding cassettesub-family C; member 7)/cystic fibrosis transmembrane conductance regulator; ATP-binding cassette (sub-family C; member 7)/TNR-CFTR
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.156-10ng/ml
Sensitivity	0.094ng/ml
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Molecular Weight	69,230 Da
OMIM	219700
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CFTR elisa kit	Principle of the Assay||This kit was based on sandwich enzyme-linked immune-sorbent assay technology. anti-Human CFTR antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-Human CFTR antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and wash with wash buffer. HRP-Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human CFTR amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of Human CFTR can be calculated.
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	MBS761492 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 (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 MBS761492 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 Data & Standard Curve

Results of a typical standard run of a Human CFTR ELISA Kit are shown below. This standard curve was generated at our lab for demonstration purpose only. Each user should obtain their own standard curve as per experiment. (N/A=not applicable)

X	ng/ml	0	0.156	0.313	0.625	1.25	2.5	5	10
Y	OD450	0.078	0.129	0.148	0.242	0.503	0.823	1.417	2.147

Typical Testing Data of CFTR elisa kit



Typical Standard Curve 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 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
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
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: Hydrolase; Membrane protein, integral; Transporter; Transporter, ABC family; EC 3.6.3.49; Channel, chloride; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 7q31.2 Cellular Component: apical plasma membrane; basolateral plasma membrane; cell surface; cytoplasm; cytosol; early endosome; early endosome membrane; lysosomal membrane; plasma membrane; protein complex; recycling endosome Molecular Function: ATP binding; ATP-binding and phosphorylation-dependent chloride channel activity; bicarbonate transmembrane transporter activity; channel-conductance-controlling ATPase activity; chloride channel activity; chloride channel inhibitor activity; chloride transmembrane transporter activity; enzyme binding; PDZ domain binding; protein binding Biological Process: bicarbonate transport; cholesterol biosynthetic process; cholesterol transport; intracellular pH elevation; membrane hyperpolarization; positive regulation of exocytosis; respiratory gaseous exchange; small GTPase mediated signal transduction; sperm capacitation; transmembrane transport; transport; vesicle docking during exocytosis Disease: Bronchiectasis With Or Without Elevated Sweat Chloride 1; Cystic Fibrosis; Pancreatitis, Hereditary; Vas Deferens, Congenital Bilateral Aplasia Of
Research Articles on CFTR	**1.** Report novel mutations and polymorphisms in the CFTR gene associated with three subtypes of congenital absence of vas deferens.
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