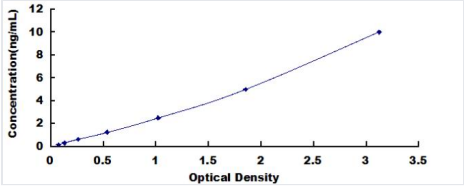
Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Cystic Fibrosis Transmembrane Conductance Regulator (CFTR), ELISA Kit
Full Product Name	Human Cystic Fibrosis Transmembrane Conductance Regulator (CFTR) ELISA Kit
Product Gene Name	CFTR elisa kit
Product Synonym Names	ABC35; ABCC7; CF; CFTR/MRP; MRP7; TNR-CFTR; ATP-Binding Cassette Subfamily C,Member 7; Channel conductance-controlling ATPase; cAMP-dependent chloride channel
Species Reactivity	Human
Assay Type	Sandwich
Samples	Tissue Homogenates, Cell Lysates or Other Biological Fluids.
Detection Range	0.156-10ng/mL
Sensitivity	0.053ng/mL
Preparation and Storage	For unopened kits: All the reagents should be kept at 4 degree C upon receipt. For opened kits: Once the kit is opened, the remaining reagents still need to be stored according to the above storage conditions. In addition, return the unused wells to the foil pouch containing the desiccant pack and reseal along entire edge of zip-seal.
Molecular Weight	69,230 Da
OMIM	219700
3D Structure	ModBase 3D Structure for P13569
RTU ELISA Kit's Advantage	The Ready-To-Use (RTU) Kits require fewer steps in setup and take less time to run. Detection Solutions are pre-diluted and total incubation time is shorter than many other ELISA Kits.
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CFTR elisa kit	Test Principle: The microtiter plate provided in this kit has been pre-coated with an antibody specific to CFTR. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific to CFTR. Next, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. After TMB substrate solution is added, only those wells that contain CFTR, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450nm ± 10nm. The concentration of CFTR in the samples is then determined by comparing the O.D. of the samples to the standard curve.
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	MBS458338 is a ready-to-use microwell, strip-or-full 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 MBS458338 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
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
Protein Family	Cystic fibrosis transmembrane conductance regulator
UniProt Gene Name	CFTR
UniProt Synonym Gene Names	ABCC7; CFTR
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. The encoded protein functions as a chloride channel, making it unique among members of this protein family, and controls ion and water secretion and absorption in epithelial tissues. Channel activation is mediated by cycles of regulatory domain phosphorylation, ATP-binding by the nucleotide-binding domains, and ATP hydrolysis. Mutations in this gene cause cystic fibrosis, the most common lethal genetic disorder in populations of Northern European descent. The most frequently occurring mutation in cystic fibrosis, DeltaF508, results in impaired folding and trafficking of the encoded protein. Multiple pseudogenes have been identified in the human genome. [provided by RefSeq, Aug 2017]

UniProt Comments for CFTR	Epithelial ion channel that plays an important role in the regulation of epithelial ion and water transport and fluid homeostasis (PubMed:26823428). Mediates the transport of chloride ions across the cell membrane (PubMed:10792060, PubMed:11524016, PubMed:11707463, PubMed:12519745, PubMed:15010471, PubMed:12588899, PubMed:17036051, PubMed:19398555, PubMed:19621064, PubMed:22178883, PubMed:25330774, PubMed:1712898, PubMed:8910473, PubMed:9804160, PubMed:12529365, PubMed:17182731, PubMed:26846474, PubMed:28087700). Channel activity is coupled to ATP hydrolysis (PubMed:8910473). The ion channel is also permeable to HCO3-; selectivity depends on the extracellular chloride concentration (PubMed:15010471, PubMed:19019741). Exerts its function also by modulating the activity of other ion channels and transporters (PubMed:12403779, PubMed:22178883, PubMed:22121115, PubMed:27941075). Plays an important role in airway fluid homeostasis (PubMed:16645176, PubMed:19621064, PubMed:26823428). Contributes to the regulation of the pH and the ion content of the airway surface fluid layer and thereby plays an important role in defense against pathogens (PubMed:14668433, PubMed:16645176, PubMed:26823428). Modulates the activity of the epithelial sodium channel (ENaC) complex, in part by regulating the cell surface expression of the ENaC complex (PubMed:17434346, PubMed:27941075, PubMed:17182731). Inhibits the activity of the ENaC channel containing subunits SCNN1A, SCNN1B and SCNN1G (PubMed:17182731). Inhibits the activity of the ENaC channel containing subunits SCNN1D, SCNN1B and SCNN1G, but not of the ENaC channel containing subunits SCNN1A, SCNN1B and SCNN1G (PubMed:27941075). May regulate bicarbonate secretion and salvage in epithelial cells by regulating the transporter SLC4A7 (PubMed:12403779). Can inhibit the chloride channel activity of ANO1 (PubMed:22178883). Plays a role in the chloride and bicarbonate homeostasis during sperm epididymal maturation and capacitation (PubMed:19923167, PubMed:27714810).
Research Articles on CFTR	**1.** CFTR stabilizes beta-catenin and prevents its degradation, defect of which results in the activation of NF-kappaB-mediated inflammatory cascade
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