Cytochrome C Oxidase Subunit 5a, Mitochondrial (COX5A) ELISA Kit for Human

PRODUCT OVERVIEW

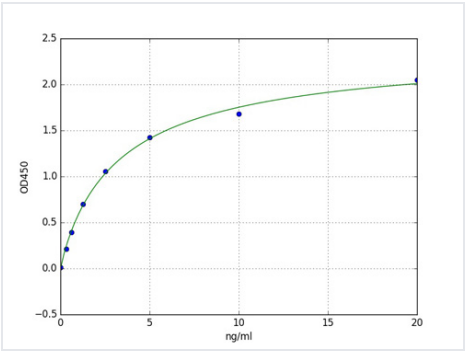
Product Name	Cytochrome c oxidase subunit 5A, mitochondrial (COX5A), ELISA Kit
Full Product Name	Human Cytochrome c oxidase subunit 5A, mitochondrial ELISA Kit
Product Gene Name	COX5A elisa kit
Product Synonym Names	COX5A/Cytochrome c oxidase subunit 5A; mitochondrial/Cytochrome c oxidase polypeptide Va
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.313-20ng/ml
Sensitivity	0.188ng/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	16,762 Da
OMIM	603773
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for COX5A elisa kit	Principle of the Assay||This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-Human COX5A antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-Human COX5A 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 COX5A amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of Human COX5A can be calculated.
Other Notes	Small volumes of COX5A 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 COX5A purchase	MBS760845 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cytochrome c oxidase subunit 5A, mitochondrial (COX5A) 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 COX5A. The ELISA analytical biochemical technique of the MBS760845 kit is based on COX5A antibody-COX5A antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect COX5A antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, COX5A. 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 COX5A 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	0.313	0.625	1.25	2.5	5	10	20
Y	OD450	0.009	0.121	0.233	0.448	0.833	1.429	1.869	2.291

Typical Testing Data of COX5A elisa kit



Typical Standard Curve of COX5A elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for COX5A. It may not necessarily be applicable to this product.

NCBI GI #	190885499
NCBI GeneID	9377
NCBI Accession #	NP_004246.2
UniProt Secondary Accession #	P30045; Q8TB65
UniProt Related Accession #	P20674
GenBank Nucleotide #	NM_004255.3
NCBI Official Full Name	cytochrome c oxidase subunit 5A, mitochondrial
NCBI Official Synonym Full Names	cytochrome c oxidase subunit 5A
NCBI Official Symbol	COX5A
NCBI Official Synonym Symbols	VA; COX; COX-VA
UniProt Protein Name	Cytochrome c oxidase subunit 5A, mitochondrial
UniProt Synonym Protein Names	Cytochrome c oxidase polypeptide Va
Protein Family	Cytochrome c oxidase
UniProt Gene Name	COX5A
UniProt Entry Name	COX5A_HUMAN
NCBI Protein Information	cytochrome c oxidase subunit 5A, mitochondrial
NCBI Summary for COX5A	Cytochrome c oxidase (COX) is the terminal enzyme of the mitochondrial respiratory chain. It is a multi-subunit enzyme complex that couples the transfer of electrons from cytochrome c to molecular oxygen and contributes to a proton electrochemical gradient across the inner mitochondrial membrane. The complex consists of 13 mitochondrial- and nuclear-encoded subunits. The mitochondrially-encoded subunits perform the electron transfer of proton pumping activities. The functions of the nuclear-encoded subunits are unknown but they may play a role in the regulation and assembly of the complex. This gene encodes the nuclear-encoded subunit Va of the human mitochondrial respiratory chain enzyme. A pseudogene COX5AP1 has been found in chromosome 14q22. [provided by RefSeq, Jul 2008]

UniProt Comments for COX5A	COX5A: This is the heme A-containing chain of cytochrome c oxidase, the terminal oxidase in mitochondrial electron transport. Belongs to the cytochrome c oxidase subunit 5A family. Protein type: Energy Metabolism - oxidative phosphorylation; Mitochondrial; EC 1.9.3.1; Oxidoreductase Chromosomal Location of Human Ortholog: 15q24.1 Cellular Component: mitochondrial inner membrane; mitochondrial respiratory chain complex IV; myelin sheath Molecular Function: cytochrome-c oxidase activity; electron carrier activity; metal ion binding; protein binding Biological Process: cellular metabolic process; gene expression; mitochondrial electron transport, cytochrome c to oxygen; transcription initiation from RNA polymerase II promoter
Research Articles on COX5A	**1.** Our current study showed that COX Va may play a role in migration and invasion of NSCLC cells and can be used as a biomarker to predict aggressiveness of NSCLC.
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