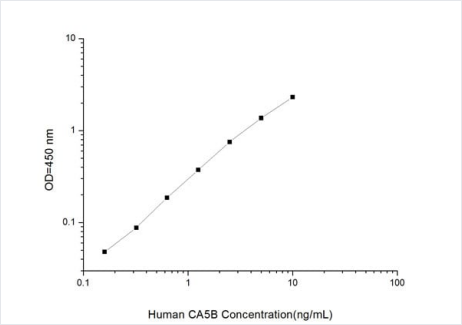
CA5B ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	CA5B, ELISA Kit
Full Product Name	Human CA5B (Carbonic Anhydrase VB, Mitochondrial) ELISA Kit
Product Gene Name	CA5B elisa kit
Species Reactivity	Human
Assay Type	Sandwich
Samples	Serum, Plasma, Biological Fluids
Detection Range	0.156-10ng/mL
Sensitivity	Min: 0.094ng/mL; Max: 10ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of Human CA5B. No significant cross-reactivity or interference between Human CA5B and analogues was observed. Note: Limited by current skills and knowledge, it is impossible for us to complete the cross- reactivity detection between Human CA5B and all the analogues, therefore, cross reaction may still exist.
Preparation and Storage	Store at 4 degree C.
Molecular Weight	36,434 Da
OMIM	300230
3D Structure	ModBase 3D Structure for Q9Y2D0
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CA5B elisa kit	**Description:** The kit is a sandwich enzyme immunoassay for in vitro quantitative measurement of CA5B in human serum, plasma and other biological fluids **Principle of the Assay:** This ELISA kit uses Sandwich-ELISA as the method. The micro ELISA plate provided in this kit has been pre-coated with an antibody specific to Human CA5B. Standards or samples are added to the appropriate micro ELISA plate wells and bound by the specific antibody. Then a biotinylated detection antibody specific for Human CA5B and Avidin-Horseradish Peroxidase (HRP) conjugate is added to each micro plate well successively and incubated. Free components are washed away. The substrate solution is added to each well. Only those wells that contain Human CA5B, biotinylated detection antibody and Avidin-HRP conjugate will appear blue in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color turns yellow. The optical density (OD) is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The OD value is proportional to the concentration of Human CA5B. You can calculate the concentration of Human CA5B in the samples by comparing the OD of the samples to the standard curve.
Other Notes	Small volumes of CA5B 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 CA5B purchase	MBS2511652 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the CA5B, 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 CA5B. The ELISA analytical biochemical technique of the MBS2511652 kit is based on CA5B antibody-CA5B antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CA5B antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CA5B. 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 CA5B elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CA5B. It may not necessarily be applicable to this product.

NCBI GI #	6005723
NCBI GeneID	11238
NCBI Accession #	NP_009151.1
UniProt Primary Accession #	Q9Y2D0
UniProt Secondary Accession #	A8K4T5
UniProt Related Accession #	Q9Y2D0
GenBank Nucleotide #	NM_007220.3
NCBI Official Full Name	carbonic anhydrase 5B, mitochondrial
NCBI Official Synonym Full Names	carbonic anhydrase VB, mitochondrial
NCBI Official Symbol	CA5B
NCBI Official Synonym Symbols	CA-VB
UniProt Protein Name	Carbonic anhydrase 5B, mitochondrial
UniProt Synonym Protein Names	Carbonate dehydratase VB; Carbonic anhydrase VB; CA-VB
Protein Family	Carbonic anhydrase
UniProt Gene Name	CA5B
UniProt Synonym Gene Names	CA-VB
UniProt Entry Name	CAH5B_HUMAN
NCBI Protein Information	carbonic anhydrase 5B, mitochondrial; carbonate dehydratase VB; carbonic dehydratase
NCBI Summary for CA5B	Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. CA VB is localized in the mitochondria and shows the highest sequence similarity to the other mitochondrial CA, CA VA. It has a wider tissue distribution than CA VA, which is restricted to the liver. The differences in tissue distribution suggest that the two mitochondrial carbonic anhydrases evolved to assume different physiologic roles. [provided by RefSeq, Jul 2008]

UniProt Comments for CA5B	CA5B: Reversible hydration of carbon dioxide. Belongs to the alpha-carbonic anhydrase family. Protein type: Lyase; EC 4.2.1.1; Energy Metabolism - nitrogen; Mitochondrial Chromosomal Location of Human Ortholog: Xp21.1 Cellular Component: mitochondrion; mitochondrial matrix Molecular Function: carbonate dehydratase activity; zinc ion binding Biological Process: bicarbonate transport; one-carbon compound metabolic process
Research Articles on CA5B	**1.** activators enhanced kcat, with no effect on KM, favoring the RDS in the catalytic cycle; the activation pattern of the two mitochondrial isoforms is very different from each other and as compared to those of the cytosolic isoforms hCA I and II.
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