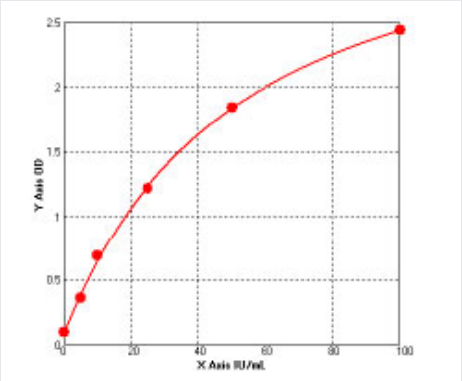
Carbonic Anhydrase 1 (CA1) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Carbonic Anhydrase I (CA1), ELISA Kit
Full Product Name	Human Carbonic Anhydrase I ELISA Kit
Product Gene Name	CA1 elisa kit
Species Reactivity	Human
Assay Type	Quantitative Competitive
Samples	Serum, Plasma, Cell Culture Supernatants, Body Fluid And Tissue Homogenate
Sensitivity	1.0 pg/mL.
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	28,870 Da
OMIM	114800
Sample Preparation	We suggest pre-experimenting with neat (undiluted) samples, 1:2 or 1:4 dilutions. Please avoid diluting your samples more than 1:10 as it would exceed the dilution limit set for this kit. If the expected concentration of the target is beyond the detection range of the kit, please contact our technical support team
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for CA1 elisa kit	Intended Uses: This CA ELISA kit is a 1.5 hour solid-phase ELISA designed for the quantitative determination of Porcine CA. This ELISA kit for research use only! Principle of the Assay: CA ELISA kit applies the competitive enzyme immunoassay technique utilizing a polyclonal anti-CA antibody and an CA-HRP conjugate. The assay sample and buffer are incubated together with CA-HRP conjugate in pre-coated plate for one hour. After the incubation period, the wells are decanted and washed five times. The wells are then incubated with a substrate for HRP enzyme. The product of the enzyme-substrate reaction forms a blue colored complex. Finally, a stop solution is added to stop the reaction, which will then turn the solution yellow. The intensity of color is measured spectrophotometrically at 450nm in a microplate reader. The intensity of the color is inversely proportional to the CA concentration since CA from samples and CA-HRP conjugate compete for the anti-CA antibody binding site. Since the number of sites is limited, as more sites are occupied by CA from the sample, fewer sites are left to bind CA-HRP conjugate. A standard curve is plotted relating the intensity of the color (O.D.) to the concentration of standards. The CA concentration in each sample is interpolated from this standard curve.
Other Notes	Small volumes of CA1 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 CA1 purchase	MBS731524 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Carbonic Anhydrase I (CA1) 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 CA1. The ELISA analytical biochemical technique of the MBS731524 kit is based on CA1 antibody-CA1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CA1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CA1. 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 CA1 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CA1. It may not necessarily be applicable to this product.

NCBI GI #	20380766
NCBI GeneID	759
NCBI Accession #	AAH27890.1
UniProt Related Accession #	P00915
NCBI Official Full Name	CA1 protein
NCBI Official Synonym Full Names	carbonic anhydrase I
NCBI Official Symbol	CA1
NCBI Official Synonym Symbols	CAB; CA-I; Car1; HEL-S-11
UniProt Protein Name	Carbonic anhydrase 1
UniProt Synonym Protein Names	Carbonate dehydratase I; Carbonic anhydrase B; CAB; Carbonic anhydrase I; CA-I
Protein Family	Actin
UniProt Gene Name	CA1
UniProt Synonym Gene Names	CAB; CA-I
UniProt Entry Name	CAH1_HUMAN
NCBI Protein Information	carbonic anhydrase 1; carbonic anhydrase B; carbonate dehydratase I; epididymis secretory protein Li 11
NCBI Summary for CA1	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. This CA1 gene is closely linked to the CA2 and CA3 genes on chromosome 8. It encodes a cytosolic protein that is found at the highest level in erythrocytes. Allelic variants of this gene have been described in some populations. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]

UniProt Comments for CA1	CA1: Reversible hydration of carbon dioxide. Can hydrates cyanamide to urea. Belongs to the alpha-carbonic anhydrase family. Protein type: Lyase; EC 4.2.1.1; Energy Metabolism - nitrogen Chromosomal Location of Human Ortholog: 8q21.2 Cellular Component: cytosol Molecular Function: carbonate dehydratase activity; zinc ion binding Biological Process: bicarbonate transport; one-carbon compound metabolic process
Research Articles on CA1	**1.** may be involved in the pathogenesis of Abdominal aortic aneurysm
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

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