

Human carbonic anhydrase II ELISA Kit | CA2 elisa kit

Human carbonic anhydrase 2, CA-2 ELISA Kit

CATALOG #
AAA80760

REACTIVITY
Human

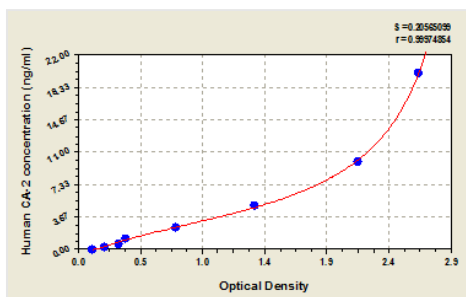
PRODUCT SYNONYMS

carbonic anhydrase II; Human carbonic anhydrase 2; CA-2 ELISA Kit; CA-II; CAII; Car2; carbonate dehydratase II; carbonic anhydrase B; carbonic dehydratase; CA2 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	This assay has high sensitivity and excellent specificity for detection of Human CA2. No significant cross-reactivity or interference between Human CA2 and analogues was observed.
Sequence Length	260
Detection Range	0.31 ng/ml-20 ng/ml
Sensitivity	0.08 ng/ml
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Detection Wavelength	450 nm
Sample Volume	50-100ul
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for CA2 elisa kit

Introduction: The carbonic anhydrases form a family of enzymes that catalyze the rapid conversion of carbon dioxide to bicarbonate and protons, a reaction that occurs rather slowly in the absence of a catalyst. The active site of most carbonic anhydrases contains a zinc ion; they are therefore classified as metalloenzymes. There are at least five distinct CA families (alpha, beta, gamma, delta and epsilon). These families have no significant amino acid sequence similarity and in most cases are thought to be an example of convergent evolution. The alpha-CAs are found in humans. Carbonic anhydrase II (gene name CA2), is one of fourteen forms of human alpha carbonic anhydrases. Carbonic anhydrase catalyzes reversible hydration of carbon dioxide. Defects in this enzyme are associated with osteopetrosis and renal tubular acidosis. Renal carbonic anhydrase allows the reabsorption of Sodium in the proximal tubule. Among the carbonic anhydrase isoenzymes, CAII has the highest catalytic efficiency (106 reactions/s) and is the isoenzyme that has been studied the most.

Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to CAII. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for CAII and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain CAII, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of CAII in the samples is then determined by comparing the O.D. of the samples to the standard curve.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4557395
NCBI GeneID	760
NCBI Accession #	NP_000058.1
NCBI GenBank Nucleotide #	NM_000067.2
UniProt Accession #	P00918; Q6FI12; Q96ET9; B2R7G8
Molecular Weight	29,246 Da
NCBI Official Full Name	carbonic anhydrase 2 isoform 1
NCBI Official Synonym Full Names	carbonic anhydrase II
NCBI Official Symbol	CA2
NCBI Official Synonym Symbols	CAC; CAII; Car2; CA-II; HEL-76
NCBI Protein Information	carbonic anhydrase 2; carbonic anhydrase B; carbonic anhydrase C; carbonic dehydratase; carbonate dehydratase II; epididymis luminal protein 76
UniProt Protein Name	Carbonic anhydrase 2
UniProt Gene Name	CA2
UniProt Synonym Gene Names	CAC; CA-II
UniProt Entry Name	CAH2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/ca2-human-elisa-kits/carbonic-anhydrase-ii/80760>