

Carbonic Anhydrase 2 Protein, Mouse (His)

Cat. No.:	HY-P72861
Synonyms:	Carbonic anhydrase 2; Carbonic anhydrase C; CAC; CA-II; CA2
Species:	Mouse
Source:	HEK293
Accession:	AAH55291 (S2-K260)
Gene ID:	12349
Molecular Weight:	30-35 kDa

PROPERTIES

AA Sequence	<pre> S H H W G Y S K H N G P E N W H K D F P I A N G D R Q S P V D I D T A T A Q H D P A L Q P L L I S Y D K A A S K S I V N N G H S F N V E F D D S Q D N A V L K G G P L S D S Y R L I Q F H F H W G S S D G Q G S E H T V N K K K Y A A E L H L V H W N T K Y G D F G K A V Q Q P D G L A V L G I F L K I G P A S Q G L Q K V L E A L H S I K T K G K R A A F A N F D P C S L L P G N L D Y W T Y P G S L T T P P L L E C V T W I V L R E P I T V S S E Q M S H F R T L N F N E E G D A E E A M V D N W R P A Q P L K N R K I K A S F K </pre>
Biological Activity	Measured by its esterase activity. The specific activity is > 400 pmol/min/μg.
Appearance	Solution
Formulation	Supplied as 0.22 μm filtered solution in PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	Carbonic Anhydrase 2 (CA2) is a member of the carbonic anhydrase isozyme family, responsible for catalyzing the reversible hydration of carbon dioxide. Dysregulation of this enzyme is linked to conditions such as osteopetrosis and renal tubular acidosis. Two transcript variants encoding distinct isoforms have been identified. In addition to its fundamental role in carbon dioxide metabolism, the protein exhibits biased expression in various tissues, with notable levels in the stomach and
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colon, as well as eight other tissues. It can also hydrate cyanamide to urea. CA2 is essential for bone resorption and osteoclast differentiation. CA2 plays vital role in the regulation of ion transport and pH balance and is involved in many biological processes. Moreover, CA2 downregulation promoted HCC metastasis and invasion. It serves as a suppressor of HCC metastasis and EMT and is correlated with favorable overall survival (OS) in HCC patients^{[1][2][3][4]}.

Caution: Product has not been fully validated for medical applications. For research use only.

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