Carbonic Anhydrase 9 Protein, Human (HEK293, His)

Cat. No.:	HY-P70064
Synonyms:	rHuCarbonic Anhydrase 9/CA9, His; CA9; CA-IX; Carbonic Anhydrase IX; Carbonate dehydratase IX; G250; MN; P54/58N; RCC; RCC-associated protein G250
Species:	Human
Source:	HEK293
Accession:	Q16790 (Q38-D414)
Gene ID:	768
Molecular Weight:	45-60 kDa

PROPERTIES

AA Sequence	Q R L P R M Q E D S P L G G G S S G E D D P L G E E D L P S E E D S P R E E D P P G E E D L P G E E D L P G E E D L P E V K P K S E E E G S L K L E D L P T V E A P G D P Q E P Q N N A H R D K E G D D Q S H W R Y G G D P P W P R V S P A C A G R F Q S P V D I R P Q L A A F C P A L R P L E L L G F Q L P P L P E L R L R N N G H S V Q L T L P P G L E M A L G P G R E Y R A L Q L H L H W G A A G R P G S E H T V E G H R F P A E I H V V H L S T A F A R V D E A L G R P G G L A V L A A F L E E G P E E N S A Y E Q L L S R L E E I A E E G S E T Q V P G L D I S A L L P S D F S R Y F Q Y E G S L T T P P C A Q G V I W T V F N Q T V M L S A K Q L H T L S D T L W G P G D S R L Q L N F R A T Q P L N G R V I E A S F P A G V D S S P R A A E P V Q L N S C L A A G D
Biological Activity	Measured by its esterase activity.The specific activity is 19.46-29.88 pmol/min/μg.as measured with under the described conditions.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Carbonic Anhydrase 9 (CA9) protein plays a crucial role as a catalyst in the conversion between carbon dioxide and water. It facilitates the formation of bicarbonate and hydrogen ions, the dissociated ions of carbonic acid. This enzymatic activity is essential for maintaining proper pH balance and regulating various physiological processes, including acid-base homeostasis, respiration, and ion transport. CA9 protein acts as a key player in the dynamic equilibrium of carbon dioxide and water, contributing to the efficient transport and regulation of these molecules in the body.

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