

Carbonic Anhydrase 9 Protein, Human (HEK293, His)

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| 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: | Approximately 45-60 kDa, due to the glycosylation. |

PROPERTIES

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| AA Sequence | <pre> 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 </pre> |
| Biological Activity | Measured by its esterase activity. The specific activity is >10 pmol/min/μg. |
| Appearance | Lyophilized powder |
| Formulation | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4 or PBS, pH 7.4, 8% trehalose. |
| Endotoxin Level | <1 EU/μg, determined by LAL method. |
| Reconstitution | It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. 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 from date of receipt. 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.

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

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