

## Carbonic Anhydrase 1 Protein, Human (His)

<b>Cat. No.:</b>	HY-P7718
<b>Synonyms:</b>	rHuCarbonic Anhydrase 1, His; Carbonic Anhydrase 1; Carbonate Dehydratase I; Carbonic Anhydrase B; CAB; Carbonic Anhydrase I; CA1
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P00915 (S2-F261)
<b>Gene ID:</b>	759
<b>Molecular Weight:</b>	25-35 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> A S P D W G Y D D K   N G P E Q W S K L Y   P I A N G N N Q S P   V D I K T S E T K H D T S L K P I S V S   Y N P A T A K E I I   N V G H S F H V N F   E D N D N R S V L K G G P F S D S Y R L   F Q F H F H W G S T   N E H G S E H T V D   G V K Y S A E L H V A H W N S A K Y S S   L A E A A S K A D G   L A V I G V L M K V   G E A N P K L Q K V L D A L Q A I K T K   G K R A P F T N F D   P S T L L P S S L D   F W T Y P G S L T H P P L Y E S V T W I   I C K E S I S V S S   E Q L A Q F R S L L   S N V E G D N A V P M Q H N N R P T Q P   L K G R T V R A S F   H H H H H H           </pre>
<b>Biological Activity</b>	Measured by its esterase activity. The specific activity is 78.1 pmol/min/μg.
<b>Appearance</b>	Solution
<b>Formulation</b>	Supplied as a 0.2 μm filter solution of 12.5 mM Tris-HCl, 75 mM NaCl, pH 7.5.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	N/A
<b>Storage &amp; Stability</b>	Stored at -80°C. 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.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	Carbonic anhydrase 1 (CA1) is a member of the carbonic anhydrase (CA) family that reversibly catalyzes the hydration of CO <sub>2</sub> to form HCO <sub>3</sub> <sup>-</sup> , which then rapidly binds to calcium ions to form calcium carbonate. CA1 was also highly expressed in human AS tissues and in rat vascular smooth muscle cells (VSMCs) with β-glycerophosphate-induced calcification <sup>[1]</sup> .
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## REFERENCES

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[1]. Lin Yuan, et al. Carbonic Anhydrase 1-Mediated Calcification Is Associated With Atherosclerosis, and Methazolamide Alleviates Its Pathogenesis

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

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