

Carbonic Anhydrase 2 Protein, Human (HEK293, His)

Cat. No.:	HY-P78746
Synonyms:	CA2; CA-II; CAII; Car2
Species:	Human
Source:	HEK293
Accession:	NP_000058.1 (M1-K260)
Gene ID:	760
Molecular Weight:	approximately 31.72 kDa

PROPERTIES

AA Sequence	<pre> MSHHWGYGKH NGPEHWHKDF PIAKGERQSP VDIDTHTAKY DPSLKPLSVS YDQATSLRIL NNGHAFNVEF DDSQDKAVLK GGPLDGTYRL IQFHFHWGSL DGGGSEHTVD KKKYAAELHL VHWNTKYGDF GKAVQQPDGL AVLGIFLKVG SAKPGLQKVV DVLDSIKTKG KSADFTNFDP RGLLPESLDY WTPGSLTTP P L L E C V T W I V L K E P I S V S S E Q V L K F R K L N F N G E G E P E E L M VDNWRPAQPL KNRQIKASFK </pre>
Biological Activity	Measured by its esterase activity. The specific activity is 1454.8 pmol/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.22 μm filtered solution of 20 mM Tris, 150 mM NaCl, pH 8.0 or 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.
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. 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 2 Protein 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
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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 colon, as well as eight other tissues. This tissue-specific expression profile suggests its potential involvement in specialized physiological processes beyond its well-established functions in acid-base balance.

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

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