

## Product datasheet for **AR09206PU-N**

### Carbonic anhydrase 2 (1-260) Human Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Carbonic anhydrase 2 (1-260) human recombinant protein, 0.1 mg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MSHHWGYGKH NGPEHWHKDF PIAKGERQSP VDIDHTAKY DPSLKPLSVS YDQATSLRIL NNGHAFNVEF DDSQDKAVLK GGPLDGTYRL IQFHFHWGSL DGQGSEHTVD KKKYAAELHL VHWNTKYGDF GKAVQQPDGL AVLGIFLKV GSAKPLGQKVV DVLDSIKTKG KSADFTNFDP RGLLPESLDY WTYPGSLTTP PLLECVTWIV LKEPISVSSE QVLKFRKLN FNGEGEPEELM VDNWRPAQPL KNRQIKASFK
Predicted MW:	29.2 kDa
Concentration:	lot specific
Purity:	>95% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM DTT, 50 mM NaCl, 10% glycerol
Bioactivity:	Biological: Specific activity is 50-70 nmoles/min/ug and was obtained by measuring the increase in the amount of p-nitrophenol by its esterase activity. Specific activity is defined as the amount of p-nitrophenol that 1ug of enzyme can reduce at 25°C for 1 minute. <u>Activity Assay</u> 1. Prepare assay buffer into a suitable container: The final concentrations are 12.5 mM Tris, 75 mM NaCl, pH 7.5. 2. Dilute 4-Nitrophenyl-Acetate(4-NPA) to 2 mM in Assay Buffer. 3. Dilute recombinant CA2 protein with various concentrations (1ug, 2ug, 5ug) in 50 ul assay buffer.  4. Load 50 µL of 2mM 4-NPA into diluted recombinant CA2 solutions, and start the reaction by adding 50 µL of 2 mM Substrate. 5. Read at a wavelength of 405 nm (bottom read) in kinetic mode for 5 minutes.



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<b>Preparation:</b>	Liquid purified protein
<b>Protein Description:</b>	Recombinant human CA2 was expressed in E.coli and purified by using conventional chromatography.
<b>Storage:</b>	Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer. Avoid repeated freezing and thawing.
<b>Stability:</b>	Shelf life: one year from despatch.
<b>RefSeq:</b>	<a href="#">NP_000058</a>
<b>Locus ID:</b>	760
<b>UniProt ID:</b>	<a href="#">P00918</a> , <a href="#">V9HW21</a>
<b>Cytogenetics:</b>	8q21.2
<b>Synonyms:</b>	CA-II; CAC; CAII; Car2; HEL-76; HEL-S-282
<b>Summary:</b>	The protein encoded by this gene is one of several isozymes of carbonic anhydrase, which catalyzes reversible hydration of carbon dioxide. Defects in this enzyme are associated with osteopetrosis and renal tubular acidosis. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2014]
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Nitrogen metabolism

**Product images:**