

**Human recombinant protein Carbonic anhydrase 2**  
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**Catalog # PBV10626r****Specification**

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**Human recombinant protein Carbonic anhydrase 2 - Product info**

|                   |                                 |
|-------------------|---------------------------------|
| Primary Accession | <a href="#">P00918</a>          |
| Concentration     | 1                               |
| Calculated MW     | 29.2 kDa (260 aa, 1-260 aa) KDa |

**Human recombinant protein Carbonic anhydrase 2 - Additional Info**

|                                                                                                                    |                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene ID                                                                                                            | 760                                                                                                                                                                                                                                                                                                                  |
| Gene Symbol                                                                                                        | CA2                                                                                                                                                                                                                                                                                                                  |
| <b>Other Names</b>                                                                                                 |                                                                                                                                                                                                                                                                                                                      |
| CA-II, CAC, Carbonic anhydrase 2, Carbonate dehydratase 2, can, cynT2, yadF, b0126, JW0122, Carbonic Anhydrase II. |                                                                                                                                                                                                                                                                                                                      |
| Gene Source                                                                                                        | Human                                                                                                                                                                                                                                                                                                                |
| Source                                                                                                             | E. Coli                                                                                                                                                                                                                                                                                                              |
| Assay&Purity                                                                                                       | SDS-PAGE; ≥95%                                                                                                                                                                                                                                                                                                       |
| Assay2&Purity2                                                                                                     | N/A;                                                                                                                                                                                                                                                                                                                 |
| Recombinant                                                                                                        | Yes                                                                                                                                                                                                                                                                                                                  |
| Results                                                                                                            | 50-70 nmoles/min/ µg                                                                                                                                                                                                                                                                                                 |
| Sequence                                                                                                           | MSHHWGYGKH NGPEHWHKDF PIAKGERQSP<br>VDIDHTAKY DPSLKPLSVS YDQATSLRIL<br>NNGHAFNVEF DDSQDKAVLK GGPLDGTYRL<br>IQFHFHWGSL DGQGSEHTVD KKKYAAELHL<br>VHWNTKYGDF GKAVQQPDGL AVLGIFLKVG<br>SAKPGLQKVV DVLDSIKTKG KSADFTNFDP<br>RGLLPESLDY WTYPGSLTTP PLLECVTWIV<br>LKEPISVSSE QVLKFRKLNF NGEPEPEELM<br>VDNWRPAQPL KNRQIKASFK |

**Format**  
Liquid**Storage**

-80°C; 1 mg/ml solution in 20 mM Tris-HCl buffer (pH 8.0) containing 50 mM NaCl, 1 mM DTT and 10% glycerol.

**Human recombinant protein Carbonic anhydrase 2 - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Human recombinant protein Carbonic anhydrase 2 - Images**

### **Human recombinant protein Carbonic anhydrase 2 - Background**

The enzyme Carbonic anhydrase 2 (CA2) is a part of the enzyme family that catalyses rapid inter-conversion of carbon dioxide & water to bicarbonate, carbonic acid and protons ( $\text{CO}_2 + \text{H}_2\text{O}$  to  $\text{HCO}_3 + \text{H}$ ), a reaction that occurs rather slowly in the absence of a catalyst. The majority of carbonic anhydrases enclose a zinc ion in their active site and therefore is classified as metalloenzymes. The most important function of Carbonic anhydrase is known to preserve acid-base balance in blood and other tissues, and to help transport carbon dioxide of tissues. Carbonic anhydrases have been found in all kingdoms of life. Mammalian carbonic anhydrase is monomeric and belongs to the alpha class. Mutations in the CA2 gene result in the CA2 deficiency syndrome, an autosomal recessive disorder that produces osteoporosis, renal tubular acidosis and cerebral calcification.

### **Human recombinant protein Carbonic anhydrase 2 - References**

Montgomery J.C., et al. Nucleic Acids Res. 15:4687-4687(1987).  
Murakami H., et al. Genomics 1:159-166(1987).  
Halleck A., et al. Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.  
Ota T., et al. Nat. Genet. 36:40-45(2004).  
Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.