Human Recombinant Carbonic anhydrase 2

CATALOG #: 6390-100 100 µg

ALTERNATE NAMES: CA-II, CAC, Carbonic anhydrase 2, Carbonate dehydratase 2, can, cynT2, yadF, b0126, JW0122, Carbonic Anhydrase II.

SOURCE: E.Coli

PURITY: > 95% by SDS - PAGE

MOL. WEIGHT: 29.2 kDa (260 aa, 1-260 aa)

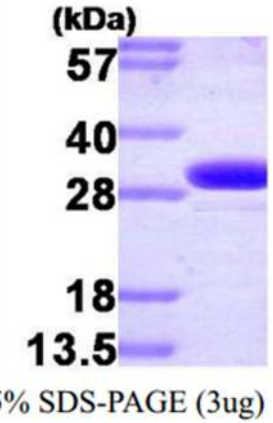
FORMULATION: 1 mg/ml solution in 20 mM Tris-HCl buffer (pH 8.0) containing 50 mM NaCl, 1 mM DTT and 10% glycerol.

STORAGE CONDITIONS:
Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

DESCRIPTION:
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 (CO_2 + H_2O to HCO_3 + 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.

AMINO ACID SEQUENCE:
MSHHWGYGKH NGPEHWHKDF PIAKGERQSP VDIDTHTAKY DPSLKPLSVS YDQATSLRIL NNGHAFNVEF DDSQDKAVLK GGPLDGTYRL IQFHFHWGSL DGQGSEHTVD KKKYAAELHL VHWNTKYGDF GKAVQQPDGL AVLGIFLKVG SAKPGLQKVV DVLDSIKTKG KSADFTNFDP RGLLPESLDY WTYPGSLTTP PLLECVTWIV LKEPISVSSE QVLKFRKLNF NGEGEPEELM VDNWRPAQPL KNRQIKASFK

BIOLOGICAL ACTIVITY:
Specific activity is 50-70 nmoles/min/µg 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 1 µg of enzyme can reduce at 25°C for 1 minute.



15% SDS-PAGE (3ug)

Human Recombinant Carbonic Anhydrase 2

RELATED PRODUCTS:

- MMP-1, human recombinant **(Cat. No. 7781-10, 50, 1000)**
- MMP-2, human recombinant **(Cat. No. 7782-10, 50, 1000)**
- MMP-3, human recombinant **(Cat. No. 7783-10, 50, 1000)**
- MMP-9, human recombinant **(Cat. No. 7789-10, 50, 1000)**

FOR RESEARCH USE ONLY! Not to be used in humans.