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32-2201: Carbonic Anhydrase 2 Recombinant Protein

Alternative Name : Carbonic anhydrase 2,Carbonate dehydratase 2,Carbonic Anhydrase II,CA-II,Carbonic anhydrase C,CAC,CA2,CAII,Car2.

Description

Source : Escherichia Coli. Carbonic anhydrase 2 Human Recombinant protein produced in E.Coli containing 260 amino acids (1-260) and having a molecular mass of 29.2 kDa. The Carbonic anhydrase 2 is purified by proprietary chromatographic techniques. The enzyme Carbonic anhydrase II having an accession number of NP_414668 is also called carbonate dehydratase which is part of the enzyme family that catalyses rapid inter-conversion of carbon dioxide & water to bicarbonate, carbonic acid and protons (CO2 + H2O = HCO3 + 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. Carbonic anhydrase has 3 different classes: alpha, beta and gamma which share very little sequence or structural similarity, thus far they all perform the same function and require a zinc ion at the active site. Mammalian carbonic anhydrase is monomeric and belongs to the alpha class. Plant carbonic anhydrase is dimeric and belongs to the beta class.Methane-producing bacteria carbonic anhydrase is trimeric and grows in hot springs which forms the gamma class.

Product Info

Amount :	20 µg
Purification :	Greater than 95.0% as determined by SDS-PAGE.
Content :	Carbonic Anhydrase 2 protein solution (1mg/ml) containing 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 50mM NaCl and 10% glycerol.
Storage condition :	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.
Amino Acid :	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

Application Note

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 1ug of enzyme can reduce at 25C for 1 minute.

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