Human CellExp™ Carbonic Anhydrase 2/CA2, human recombinant

CATALOG #: 7479-10 10 µg
7479-50 50 µg

ALTERNATE NAMES: CA2, CA-II, CAII, Car2

SOURCE: HEK 293 cells (Ser 2 – Lys 260)

PURITY: ≥ 95% by SDS-PAGE gel

MOL. WEIGHT: This protein is fused with 6×His tag at the C-terminus, has a calculated MW of 30 kDa. The predicted N-terminus is Ser 2. DTT-reduced Protein migrates as 30 kDa.

ENDOTOXIN LEVEL: <1 EU/µg by LAL method

FORM: Lyophilized

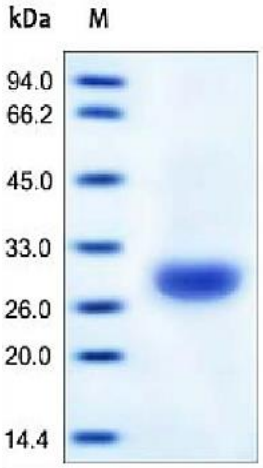
FORMULATION: Lyophilized from 0.22 µm filtered solution in 20 mM Tris, pH 8.0, with 150 mM NaCl, 1 mM DTT. Normally Mannitol or Trehalose is added as protectants before lyophilization.

STORAGE CONDITIONS: Store at -20°C. After reconstitution, aliquot and store at -20°C and use within 3 months. Avoid repeated freezing and thawing cycles.

RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 µg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

DESCRIPTION: Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes. CAs form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons (or vice versa), a reversible reaction that occurs rather slowly in the absence of a catalyst. One of the functions of the enzyme in animals is to interconvert carbon dioxide and bicarbonate to maintain acid-base balance in blood and other tissues, and to help transport carbon dioxide out of tissues. The active site of most carbonic anhydrases contains a zinc ion. They are, therefore, classified as metalloenzymes. There are at least five distinct CA families (α, β, γ, δ and ε). These families have no significant amino acid sequence similarity and in most cases are thought to be an example of convergent evolution. The α CAs are found in humans. Carbonic anhydrase II (CA2) also known as Carbonate dehydratase II, Carbonic anhydrase C, is one of fourteen forms of human α carbonic anhydrases. Defects in this enzyme are associated with osteopetrosis and renal tubular acidosis. Renal carbonic anhydrase allows the reabsorption of sodium ions in the proximal tube. Carbonic anhydrase II has been shown to interact with Band 3 and Sodium-hydrogen antiporter 1.

BIOLOGICAL ACTIVITY: Measured by its esterase activity for digestion of 4-Nitrophenyl Acetate (4-NPA). The specific activity is > 150 pmoles/min/µg.



Human recombinant Carbonic Anhydrase 2

RELATED PRODUCTS:

- Human CellExp™ CA9, human recombinant **(Cat. No. 7478-10)**
- Human CellExp™ CA4, human recombinant **(Cat. No. 7484-10)**
- Human CellExp™ CA10, human recombinant **(Cat. No. 7485-10)**
- Human Recombinant Carbonic anhydrase 2 **(Cat. No. 6390-100)**
- 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.