



# Recombinant Protein Technical Manual

## Recombinant Human Carbonic Anhydrase II/CA2 Protein (His Tag)(Active)

RPES2820

### Product Data:

**Product SKU:** RPES2820

**Size:** 50µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** NP\_000058.1

### Protein Information:

**Molecular Mass:** 30 kDa

**AP Molecular Mass:** 30 kDa

**Tag:** C-His

**Bio-activity:** Measured by its esterase activity. The specific activity is >150 pmoles/min/µg.

**Purity:** > 96 % as determined by reducing SDS-PAGE.

**Endotoxin:** Please contact us for more information.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile 20mM Tris 0.5M NaCl, pH 8.0

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** CA-II;CAC;CAII;Car2;HEL-76;HEL-S-282

## Immunogen Information:

**Sequence:** Met 1-Lys 260

## Background:

The carbonic anhydrases (or carbonate dehydratases) are classified as metalloenzyme for its zinc ion prosthetic group and form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons, a reversible reaction that takes part in maintaining acid-base balance in blood and other tissues. The carbonic anhydrase I (CA) family consists of at least 11 enzymatically active members and a few inactive homologous proteins. Carbonic anhydrase II is one of fourteen forms of human  $\alpha$  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 tubule. Carbonic anhydrase II has been shown to interact with Band 3 and Sodium-hydrogen antiporter 1.