



# Recombinant Protein Technical Manual

## Recombinant Human Carbonic Anhydrase 1/CA1 Protein (His Tag)(Active) RPES4109

### Product Data:

**Product SKU:** RPES4109

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** P00915

### Protein Information:

**Molecular Mass:** 29.9 kDa

**AP Molecular Mass:** 30 kDa

**Tag:** C-6His

**Bio-activity:** Measured by its esterase activity. The specific activity is 78.1 pmol/min/µg .

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

**Shipping:** This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at<-20°C.

**Formulation:** Supplied as a 0.2 µm filtered solution of 20mM TrisHCl, 150mM NaCl, 10% Glycerol, pH 8.0.

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

**Application:**

**Synonyms:** Carbonic Anhydrase 1; Carbonate Dehydratase I; Carbonic Anhydrase B; CAB; Carbonic Anhydrase I; CA-I; CA1

## Immunogen Information:

**Sequence:** Ala2-Phe261

## Background:

Carbonic Anhydrase 1 (CA1) is a cytosolic enzyme, belonging to the alpha-carbonic anhydrase family. It is highly expressed in erythrocytes and acts as an early marker for erythroid differentiation. Carbonic anhydrase 1 plays a important role in many biological processes such as calcification, cellular respiration, bone resorption, acid-base balance. It is activated by imidazole, histamine, L-adrenaline, L- and D-histidine, and L- and D-phenylalanine. At the same time, It is inhibited by sulfonamide derivatives and coumarins. In addition, CA1 is a zinc metalloenzyme that has reversible hydration of carbon dioxide. It can hydrate cyanamide to urea.