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

## Catalog Number: PKSH032156

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

Description	
Species	Human
Source	Ecoli-derived Human Carbonic Anhydrase 1;CA1 protein Ala2-Phe261, with an C-
	terminal His
Calculated MW	29.9 kDa
Observed MW	25-35 kDa
Accession	P00915
Bio-activity	Not validated for activity
Properties	
Purity	>95 % as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per µg of the protein 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 $< -20^{\circ}$ C.
Formulation	Supplied as a 0.2 µm filtered solution of 12.5mM Tris-HCl, 75mM NaCl, pH 7.5.
Data	
	kDa <u>MK R</u>
	120 90
	60
	40
	30
	20
	14

## 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 improtant 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.