

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



Catalog Number:PKSH032156

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

## Description

<b>Synonyms</b>	Carbonic Anhydrase 1;Carbonate Dehydratase I;Carbonic Anhydrase B;CAB;Carbonic Anhydrase I;CA-I;CA1
<b>Species</b>	Human
<b>Expression Host</b>	E.coli
<b>Sequence</b>	Ala2-Phe261
<b>Accession</b>	P00915
<b>Calculated Molecular Weight</b>	29.9 kDa
<b>Observed molecular weight</b>	25-35 kDa
<b>Tag</b>	C-His

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.
<b>Storage</b>	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
<b>Shipping</b>	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.
<b>Formulation</b>	Supplied as a 0.2 $\mu$ m filtered solution of 12.5mM Tris-HCl, 75mM NaCl, pH 7.5.
<b>Reconstitution</b>	Not Applicable

## 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.

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