

# Recombinant human Carbonic Anhydrase 1/CA1 protein

Catalog Number: ATGP0427

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-261aa

### UniProt No.

P00915

### NCBI Accession No.

NP\_001122301

### Alternative Names

Carbonic anhydrase I, CA-I, Carbonate dehydratase I, Carbonic anhydrase B, CAB, Cyanamide hydratase CA1, Car1

## PRODUCT SPECIFICATION

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### Molecular Weight

31.0 kDa (281aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol

### Purity

> 95% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

Carbonic anhydrase 1 (CA1) is a zinc metalloenzyme that catalyses reversible hydration of CO<sub>2</sub> (CO<sub>2</sub> + H<sub>2</sub>O HCO<sub>3</sub><sup>-</sup> + H<sup>+</sup>). This protein is fundamental to many biological processes such as cellular respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. It is most abundant in erythrocytes and is a very early marker for erythroid differentiation. Recombinant human Carbonic anhydrase1, fused to His-tag at N-terminus, was expressed in E. coli and purified by using

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conventional chromatography.

## Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH> MASP DWGYDD KNGPEQWSKL YPIANGNNQS PVDIKTSETK HDTSLKPISV  
SYNPATAKEI INVGHFSFHVN FEDNDNRSVL KGGPFSDSYR LFQFHFHWGS TNEHGSEHTV DGVKYS AELH VAHWNSAKYS  
SLAEAASKAD GLAVIGVLMK VGEANPKLQK VLDALQAIKT KGKRAPFTNF DPSTLLPSSL DFWTYPGSLT HPPLYESVTW  
IICKESISVS SEQLAQFRSL LSNVEGDNAV PMQHNNRPTQ PLKGRTVRAS F

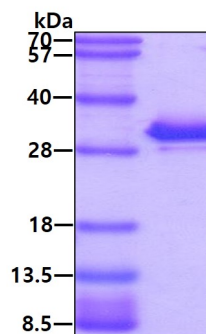
## General References

Nogradi A., et al. (1998). Am J Pathol. 153:1-4

Ferry JG., et al. (1999). Proc Natl Acad Sci u S A. 96(26):15184-9.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.