

Recombinant human Carbonic Anhydrase 3/CA3 protein

Catalog Number: ATGP0503

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-260aa

UniProt No.

P07451

NCBI Accession No.

AAH04897

Alternative Names

Carbonic anhydrase III, Carbonate dehydratase III, Car3, CAIII, CA3

PRODUCT SPECIFICATION

Molecular Weight

29.5 kDa (260aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

Formulation

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

Purity

> 90% by SDS-PAGE

Tag

Non-Tagged

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

Description

CA3, also known as carbonic anhydrase III, is an enzyme that catalyses rapid conversion of carbon dioxide to bicarbonate and protons ($\text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3 + \text{H}^+$). This protein is involved in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption and the formation of aqueous humor, cerebrospinal fluid, saliva and gastric juice. It contains a zinc ion in their active site and the primary function of this enzyme is known to maintain acid-base balance in blood and other tissues, and to help transport carbon dioxide of tissues. Recombinant CA3 protein was expressed in E. coli and purified by using conventional

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chromatography techniques.

Amino acid Sequence

MAKEWGYASH NGPDHWHELF PNAKGENQSP IELHTKDIRH DPSLQPWSVS YDGGSAKTIL NNGKTCRVVF DDTYDRSMLR
GGPLPGPYRL RQFHLHWGSS DDHGSEHTVD GVKYAAELHL VHWNPKYNTF KEALKQRDGI AVIGIFLKIG HENGEFQIFL
DALDKIKTKG KEAPFTKFD P SCLFPACRDY WTYQGSFTTP PCEECIVWLL LKEPMTVSSD QMAKLRSLLS SAENEPPVPL
VSNWRPPQPI NNRVVRASFK

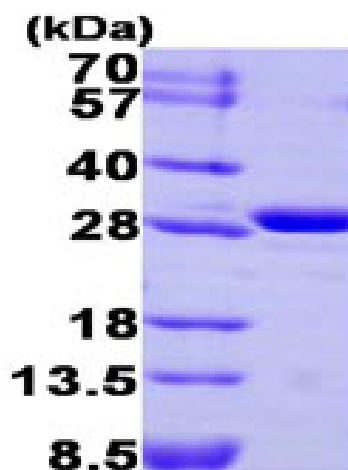
General References

Lindskog S., et al (1997) Pharmacol Ther, 74(1):1-20.

Sawaya MR., et al (2006) J Biol Chem. 281(11):7546-55

DATA

SDS-PAGE



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

15% SDS-PAGE (3ug)