

Recombinant human Carbonic Anhydrase 14/CA14 protein

Catalog Number: ATGP2485

PRODUCT INFORMATION

Expression system

E.coli

Domain

16-290aa

UniProt No.

Q9ULX7

NCBI Accession No.

NP_036245

Alternative Names

Carbonate dehydratase XIV, Carbonic anhydrase XIV, CA-XIV

PRODUCT SPECIFICATION

Molecular Weight

33.2 kDa (298aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 10% glycerol, 1mM DTT

Purity

> 85% by SDS-PAGE

Biological Activity

Specific activity is > 700pmol/min/ug, and is defined as the amount of enzyme that hydrolyze 1.0pmole of 4-nitrophenyl acetate to 4-nitrophenol per minute at pH 7.5 at 37C.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

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

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate 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 acid. They

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show extensive diversity in tissue distribution and in their subcellular localization. CA14 is predicted to be a type I membrane protein and shares highest sequence similarity with the other transmembrane CA isoform, CA XII; however, they have different patterns of tissue-specific expression and thus may play different physiologic roles. Recombinant human CA14 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

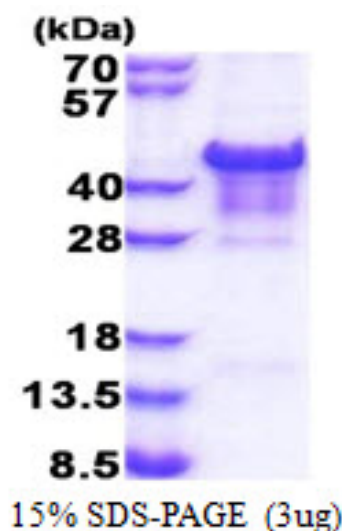
MGSSHHHHHH SSGLVPRGSH MGSADGGQHW TYEGPHGQDH WPASYPECGN NAQSPIDIQT DSVTFDPDLP
ALQPHGYDQP GTEPLDLHNN GHTVQLSLPS TLYLGGLPRK YVAAQLHLHW GQKGSPGGSE HQINSEATFA ELHIVHYDSD
SYDSLSEAAE RPQGLAVLGI LIEVGETKNI AYEHLSHLH EVRHKDQKTS VPPFNLRELL PKQLGQYFRY NGSLLTPPCY
QSVLWTVFYR RSQISMEQLE KLQGTLFSTE EEPKLLVQN YRALQLNQR MVFASFIQAG SSYTTGEM

General References

Temperini C., et al. (2006) Chemistry. 12:7057-7066
Temperini C., et al. (2006) J. Med. Chem. 49:3019-3027

DATA

SDS-PAGE



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