

# 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

# Recombinant human Carbonic Anhydrase 14/CA14 protein

Catalog Number: ATGP2485

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 SGLVPRGSH MGSADGGQHW TYEGPHGQDH WPASYPECGN NAQSPIDIQT DSVTFDPDLP  
ALQPHGYDQP GTEPLDLHNN GHTVQLSLPS TLYLGGLPRK YVAAQLHLHW GQKGSPGGSE HQINSEATFA ELHIVHYDSD  
SYDSLSEAAE RPQGLAVLGI LIEVGETKNI AYEHLSHLH EVRHKDQKTS VPPFNLRELL PKQLGQYFRY NGLTTPPCY  
QSVLWTVFYR RSQISMEQLE KLGQTLFSTE EEPKLLVQN YRALQPLNQR MVFASFIQAG SSYTTGEM

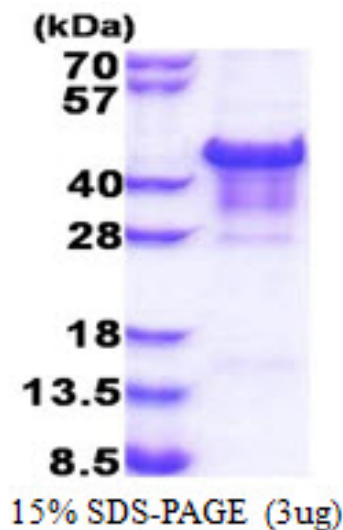
## General References

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.