Recombinant human Carbonic Anhydrase 12/CA12 protein

Catalog Number: ATGP3124

PRODUCT INFORMATION

Expression system
Baculovirus

Domain
25-301aa

UniProt No.
O43570

NCBI Accession No.
NP_001209.1

Alternative Names
Carbonic anhydrase 12 isoform 1, CAXII, HsT18816, Carbonate dehydratase XII, CA-XII, tumor antigen HOM-RCC-3.1.3, Carbonic Anhydrase XII

PRODUCT SPECIFICATION

Molecular Weight
31.94 kDa (283aa)

Concentration
0.5mg/ml (determined by absorbance at 280nm)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity
> 90% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity is > 300pmol/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.

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BACKGROUND

Description

CA12, also known as Carbonic anhydrase 12, is an enzyme that in humans is encoded by the CA12 gene. 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. This gene product is a type I membrane protein that is highly expressed in normal tissues, such as kidney, colon and pancreas, and has been found to be overexpressed in 10% of clear cell renal carcinomas. Recombinant human CA12, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

Amino acid Sequence

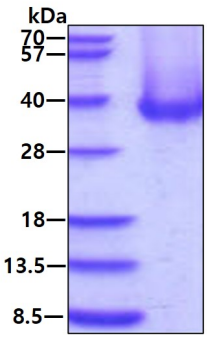
APVNGSKWTY FGPDGENSWS KKYPSCGGLL QSPIDLHSDI LQYDASLTPL EFQGYNLSAN KQFLLTNNGH SVKLNLPSDM HIQGLQSRYS ATQLHLHWGN PNDPHGSEHT VSGQHFAAEL HIVHYNSDLY PDASTASNKS EGLAVLAVLI EMGSFNPSYD KIFSHLQHVK YKGQEAFVPG FNIEELLPER TAEYYRYRGS LTTPPCNPTV LWTVFRNPVQ ISQEQLLALE TALYCTHMDD PSPREMINNF RQVQKFDERL VYTSFSQVQV CTAAGLS<HHH HHH>

General References

Tureci O. et al. (1998) Proc Natl Acad Sci U S A. 95(13):7608-13.
Kyllonen MS. et al. (2003) J Histochem Cytochem. 51(9):1217-24.

DATA

SDS-PAGE



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