

Active Recombinant Human CA12 Protein, His tagged

Cat. No. CA12-104H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human CA12, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.
Species	Human
Source	Insect Cells
ProteinLength	25-301 aa
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. 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. Three transcript variants encoding different isoforms have been identified for this gene.
Form	Liquid
Molecular Mass	31.94 kDa
Bio-activity	Specific activity is > 300 pmol/min/μg, and is defined as the amount of enzyme that hydrolyze 1.0 pmole of 4-nitrophenyl acetate to 4-nitrophenol per minute at pH 7.5 at 37 centigrade.

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AASequence	APVNGSKWTYFGPDGENSWSKKYPSCGGLLQSPIDLHSDILQYDASLTPLEFQGYN LSANKQFLLTNNGHSVKLNLPSPDMHIQGLQSRYSATQLHLHWGNPNDPHGSEHTVS GQHFAAELHIVHYNSDLYPDASTASNKSEGLAVLAVLIEMGSFNPSYDKIFSHLQHVK YKGQEA FVPGFNIEELLPERTAEYYRYRGS LTPPCNPTVLWTVFRNPVQISQEQLL ALETALYCTHMDDPSPREMINNFRQVQKFDERLVYTSFSQVQVCTAAGLS
Application	SDS-PAGE, Enzyme Activity
Endotoxin	< 1 EU/μg by LAL
Purity	> 90% by SDS-PAGE
Note	For research use only. This product is not intended or approved for human, diagnostics or veterinary use.
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.
Storage Buffer	Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol
Concentration	0.5 mg/mL (determined by absorbance at 280nm)
Reference	1. Tureci O. et al. (1998) Proc Natl Acad Sci U S A. 95(13):7608-13. 2. Kyllonen MS. et al. (2003) J Histochem Cytochem. 51(9):1217-24

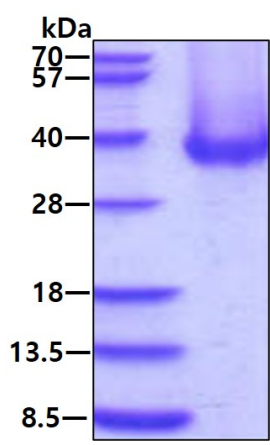
GENE INFORMATION

Gene Name	CA12 carbonic anhydrase 12 [Homo sapiens (human)]
Official Symbol	CA12

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Synonyms	CA12; carbonic anhydrase XII; carbonic anhydrase 12; HsT18816; CA-XII; carbonic dehydratase; carbonate dehydratase XII; tumor antigen HOM-RCC-3.1.3; CAXII; FLJ20151;
Gene ID	771
mRNA Refseq	NM_001218
Protein Refseq	NP_001209
MIM	603263
UniProt ID	O43570
SDS-PAGE	 3 µg by SDS-PAGE under reducing condition and visualized by coomassie blue stain.