

Active Recombinant Full Length Human CA1 Protein, His tagged

Cat. No. CA1-2505H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant carbonic anhydrase fused to His-tag, was expressed in E. coli and purified by conventional chromatography techniques.
Species	Human
Source	E.coli
ProteinLength	1-261aa
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 show extensive diversity in tissue distribution and in their subcellular localization. This CA1 gene is closely linked to the CA2 and CA3 genes on chromosome 8. It encodes a cytosolic protein that is found at the highest level in erythrocytes. Allelic variants of this gene have been described in some populations. Alternative splicing and the use of alternative promoters results in multiple transcript variants.
Form	Liquid
Molecular Mass	31.0 kDa
Bio-activity	Specific activity is > 300 pmol/min/μg, and is defined as the amount of enzyme that

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	hydrolyze 1.0 pmole of 4-nitrophenyl acetate to 4-nitrophenol per minute at pH 8.0 at 37 centigrade.
AASequence	MGSSHHHHHHSSGLVPRGSHMASPDWGYDDKNGPEQWSKLYPIANGNNQSPVDI KTSETKHDTSLKPISVSYNPATAKEIINVGHSHFVNFEDNDNRSVLKGGPFSDSYRLF QFHFHWGSTNEHGSEHTVDGVKYSaelHVAHWNSAKYSSLAEAASKADGLAVIGV LMKVGEANPKLQKVLDALQAIKTKGKRAPFTNFDpstLLPSSLDFTYPGSLTHPPL YESVTWICKESISVSSEQLAQFRSLLSNVEGDNAVPMQHNNRPTQPLKGRTVRASF
Application	SDS-PAGE, Enzyme Activity
Purity	> 95% 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	20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol
Concentration	1 mg/mL (determined by Bradford assay)
Reference	1. Nogradi A., et al. (1998). Am J Pathol. 153:1-4. 2. Ferry JG., et al. (1999). Proc Natl Acad Sci U S A. 96(26):15184-9

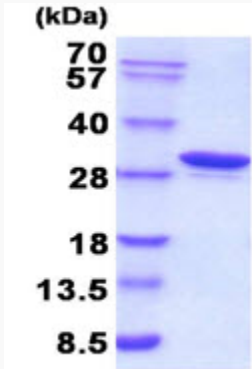
GENE INFORMATION

Gene Name	CA1 carbonic anhydrase 1 [Homo sapiens (human)]
Official Symbol	CA1

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Synonyms	CA1; carbonic anhydrase I; carbonic anhydrase 1; Car1; carbonic anhydrase B; carbonic dehydratase; carbonate dehydratase I; CAB; CA-I;
Gene ID	759
mRNA Refseq	NM_001128829
Protein Refseq	NP_001122301
MIM	114800
UniProt ID	P00915
SDS-PAGE	 15% SDS-PAGE (3ug) 3 µg by SDS-PAGE under reducing condition and visualized by coomassie blue stain.