

Active Recombinant Full Length Human CA1 Protein, His tagged

Cat. No. CA1-05HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Carbonic Anhydrase 1 Protein, Human (His, solution) expresses in E. coli with a 6*His tag at the C-terminus. Carbonic Anhydrase 1 (CA1) expression and CA1-mediated calcification are significantly associated with atherosclerosis (AS) progression
Species	Human
Source	E.coli
ProteinLength	2-261 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. 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	Solution. Supplied as a 0.22 µm filter solution of 12.5 mM Tris-HCl, 75 mM NaCl, pH 7.5.
Bio-activity	The esterase activity is determined to be greater than 24

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	pmol/min/μg.
AASequence	ASPDWGYDDKNGPEQWSKLYPIANGNNQSPVDIKTSETKHDTSLKPISVSYNPATA KEIINVGHSSFHVNFEEDNDNRSVLKGGPFSDSYRLFQHFHWGSTNEHGSEHTVDGV KYSAELHVAHWNSAKYSSLAEAASKADGLAVIGVLMKVGEANPKLQKVLDALQAIKT KGKRAPFTNFDPTLLPSSLDFTWYTPGSLTHPPLYESVTWIICKESISVSSEQLAQFR SLLSNVEGDNAVPMQHNNRPTQPLKGRTVRASFHHHHHH
Endotoxin	< 1 EU/μg by LAL
Purity	≥ 95 %, as determined by reducing SDS-PAGE.
Storage	Stored at -80 centigrade for 1 year from date of receipt. It is stable at -20 centigrade for 3 months after opening. It is recommended to freeze aliquots at -80 centigrade for extended storage. Avoid repeated freeze-thaw cycles.
Concentration	2.00 mg/mL
Shipping	Shipping with dry ice.

GENE INFORMATION

Gene Name	CA1 carbonic anhydrase I [Homo sapiens (human)]
Official Symbol	CA1
Synonyms	CA1; carbonic anhydrase I; carbonic anhydrase 1; Car1; carbonic anhydrase B; carbonic dehydratase; carbonate dehydratase I; CAB; CA-I
Gene ID	759

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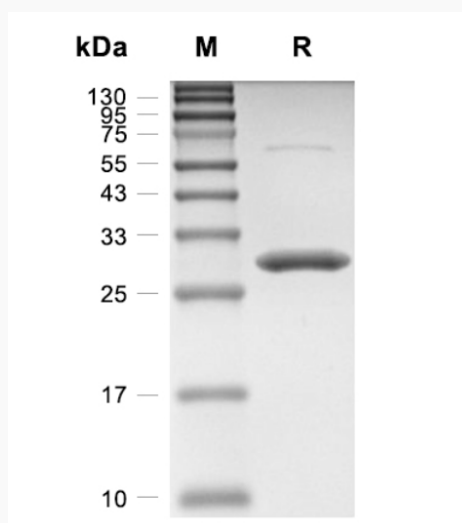
mRNA Refseq [NM_001128829](#)

Protein Refseq [NP_001122301](#)

MIM [114800](#)

UniProt ID [P00915](#)

SDS-PAGE



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