Active Recombinant Human CA4 protein, His-tagged

Cat. No. CA4-7835H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Human CA4 protein(P22748)(19-283 aa), fused with N-terminal His tag, was expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	19-283 aa
Form	PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Bio-activity	Carbonic Anhydrase (CA) catalyzes the reversible reaction of CO2 H2O = HCO3- H , which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption. CA4 is a GPI anchored membrane enzyme expressed on the luminal surfaces of pulmonary (and certain other) capillaries and of proximal renal tubules. It functions as the principal CO2 taste sensor. The activity of recombinant human CA4 was measured by its ability to hydrolyze 4-Nitrophenyl acetate (4-NPA) to 4-Nitrophenol. The reaction was performed in 12.5 mM Tris, 75 mM NaCl, pH 7.5 (assay buffer), initiated by addition 50 µL of various concentrations of CA4 (diluted by assay buffer) to 50 µ of 2 mM substrate 4-NPA (100 mM stock in Acetone, diluted by assay buffer). Incubated at 37°C for 5min, then read at a wavelength of 400 nm. One unit of enzyme activity is defined as the 1 µg of enzyme required to convert 1 pmol of 4-Nitrophenyl acetate to 4-Nitrophenol in 1min at 37°C. The specific activity of recombinant human CA4 is > 15 pmol/min/µ.

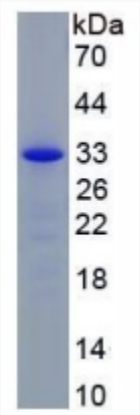
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Molecular Mass	31.8kDa
Endotoxin	<1.0EU per 1μg (determined by the LAL method).
Purity	> 95%
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months.
Reconstitution	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name	CA4 carbonic anhydrase IV [Homo sapiens]
Official Symbol	CA4
Synonyms	CA4; carbonic anhydrase IV; retinitis pigmentosa 17 (autosomal dominant) , RP17; carbonic anhydrase 4; CAIV; Car4; CA-IV; carbonic dehydratase IV; carbonate dehydratase IV; RP17;
Gene ID	762
mRNA Refseq	NM_000717
Protein Refseq	NP_000708
MIM	114760
UniProt ID	P22748

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