

Carbonic Anhydrase I (CA1) Active Protein | CA1 active protein

Active Carbonic Anhydrase I (CA1)

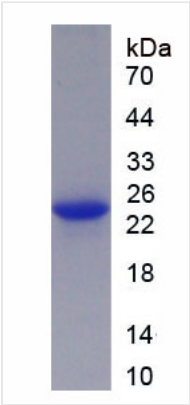
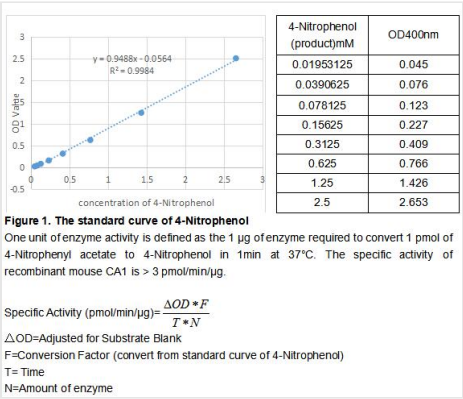
CATALOG # AAA161797	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Carbonic Anhydrase I (CA1); Active Carbonic Anhydrase I (CA1); Carbonic Anhydrase I; CA-I; CAI; Car1; CAB; Carbonic anhydrase B; Carbonate dehydratase I4; CA1 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Asp15~Gln2 23
Applicable Applications for CA1 active protein	Activity Assay, Cell Culture
Species	Mouse
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.5
Research Area	Enzyme & Kinase, Bone metabolism
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



SDS-PAGE
Figure. SDS-PAGE

Bioactivity

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. CA1 is a cytosolic enzyme with the highest levels in erythrocytes and is a very early marker for erythroid differentiation. The activity of recombinant mouse CA1 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 CA1 (diluted by assay buffer) to 50 µL of 2 mM substrate 4-NPA (100 mM stock in Acetone, diluted by assay buffer). Incubated at 37 degree C for 5min, then read at a wavelength of 400 nm.

ADDITIONAL INFORMATION

Product Categories/Family for CA1 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	145301561
NCBI GeneID	12346
NCBI Accession #	NP_001077426.1
NCBI GenBank Nucleotide #	NM_001083957.1
UniProt Accession #	P13634; Q3TS19; Q9DC84
Molecular Weight	28,331 Da
NCBI Official Full Name	carbonic anhydrase 1
NCBI Official Synonym Full Names	carbonic anhydrase 1
NCBI Official Symbol	Car1
NCBI Official Synonym Symbols	Ca1; Car-1; AW555628
NCBI Protein Information	carbonic anhydrase 1
UniProt Protein Name	Carbonic anhydrase 1
UniProt Gene Name	Ca1
UniProt Synonym Gene Names	Car1; CA-I

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.