

Carbonic Anhydrase VII (CA7) Active Protein | CA7 active protein

Active Carbonic Anhydrase VII (CA7)

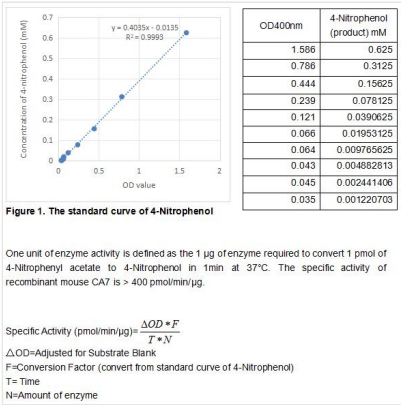
CATALOG # AAA161904	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Carbonic Anhydrase VII (CA7); Active Carbonic Anhydrase VII (CA7); Carbonic Anhydrase VII; CA-VII; CAVII; Carbonate dehydratase VII4; CA7 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ser58~Pro2 17
Applicable Applications for CA7 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
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

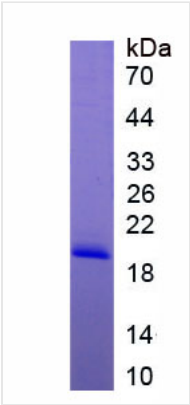


Bioactivity

Carbonic anhydrase catalyzes the reversible reaction of CO₂ + H₂O = HCO₃⁻ + H⁺, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption. Carbonic Anhydrase VII encoded by the CA7 gene is a cytosolic protein predominantly expressed in the salivary gland. CA7 may have additional tissue distributions and functions. For example, studies with CA inhibitors provide evidence that human CA7 is the CA isozyme responsible for the anticonvulsant/antiepileptic activity of sulfonamides and sulfamates. In fact, CA7 has been shown in a rat model to act as a developmental switch in GABAergic signaling in neurons. The activity of recombinant mouse CA7 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 CA7 (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.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

Product Categories/Family for CA7 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	667667704
NCBI GeneID	12354
NCBI Accession #	NP_001288093.1
NCBI GenBank Nucleotide #	NM_001301164.1
UniProt Accession #	Q9ERQ8; Q811X4
Molecular Weight	29,915 Da
NCBI Official Full Name	carbonic anhydrase 7 isoform b
NCBI Official Synonym Full Names	carbonic anhydrase 7
NCBI Official Symbol	Car7
NCBI Official Synonym Symbols	Ca7; AV343731
NCBI Protein Information	carbonic anhydrase 7
UniProt Protein Name	Carbonic anhydrase 7
UniProt Gene Name	Ca7
UniProt Synonym Gene Names	Car7; CA-VII

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.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/carbonic-anhydrase-vii-ca7/161904>