

Carbonic Anhydrase VB, Mitochondrial (CA5B) Active Protein | CA5B active protein

Active Carbonic Anhydrase VB, Mitochondrial (CA5B)

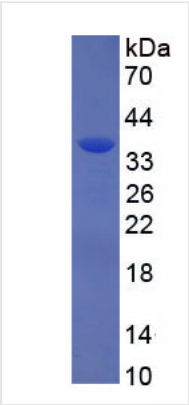
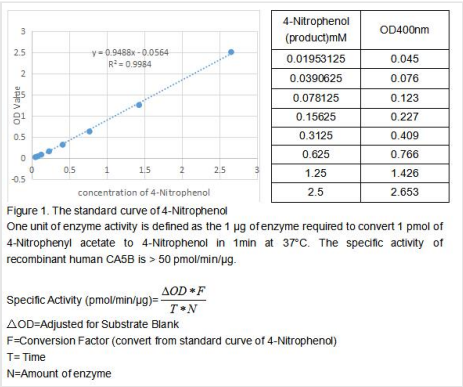
CATALOG # AAA161903	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Carbonic Anhydrase VB; Mitochondrial (CA5B); Active Carbonic Anhydrase VB; Mitochondrial; CA-VB; CAVB; Carbonate dehydratase VB4; CA5B 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	Cys34~Pro3 17
Applicable Applications for CA5B active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.6
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 (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. Carbonic Anhydrase VB encoded by the CA5B gene is a mitochondrial protein. In comparison with another mitochondrial CA (CA5A), CA5B has different tissue distribution and chromosomal location. The activity of recombinant human CA5B 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 CA5B (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 CA5B active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	6005723
NCBI GeneID	11238
NCBI Accession #	NP_009151.1
NCBI GenBank Nucleotide #	NM_007220.3
UniProt Accession #	Q9Y2D0; A8K4T5
Molecular Weight	36,434 Da
NCBI Official Full Name	carbonic anhydrase 5B, mitochondrial
NCBI Official Synonym Full Names	carbonic anhydrase VB, mitochondrial
NCBI Official Symbol	CA5B
NCBI Official Synonym Symbols	CA-VB
NCBI Protein Information	carbonic anhydrase 5B, mitochondrial; carbonic dehydratase; carbonate dehydratase VB
UniProt Protein Name	Carbonic anhydrase 5B, mitochondrial
UniProt Gene Name	CA5B
UniProt Synonym Gene Names	CA-VB
UniProt Entry Name	CAH5B_HUMAN

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.

