

Carbonic Anhydrase III, Muscle Specific (CA3) Active Protein | CA3 active protein

Active Carbonic Anhydrase III, Muscle Specific (CA3)

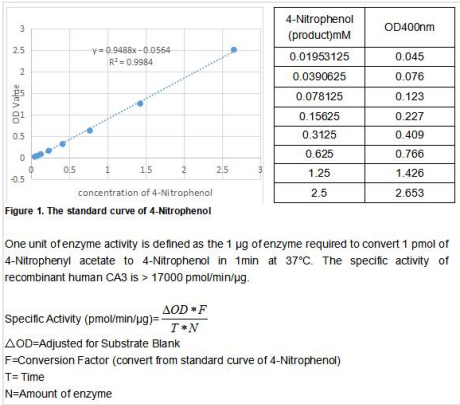
CATALOG # AAA161899	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Carbonic Anhydrase III; Muscle Specific (CA3); Active Carbonic Anhydrase III; Muscle Specific; CA-III; CAIII; Car3; Carbonate dehydratase III4; CA3 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	Ala2~Lys26 0
Applicable Applications for CA3 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	7.4
Research Area	Enzyme & Kinase
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

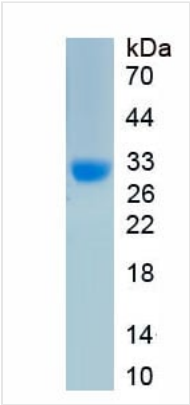


Bioactivity

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. CA3 is a cytosolic enzyme with a very low CA activity. It is expressed at low levels in human muscle during early development but increases rapidly during the last trimester to reach 50-60% of adult levels at birth. The activity of recombinant human CA3 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 CA3 (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 CA3 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4885099
NCBI GeneID	761
NCBI Accession #	NP_005172.1
NCBI GenBank Nucleotide #	NM_005181.3
UniProt Accession #	P07451; O60842; B2R867; B3KUC8
Molecular Weight	29,557 Da
NCBI Official Full Name	carbonic anhydrase 3
NCBI Official Synonym Full Names	carbonic anhydrase III, muscle specific
NCBI Official Symbol	CA3
NCBI Official Synonym Symbols	Car3; CAIII
NCBI Protein Information	carbonic anhydrase 3; CA-III; carbonate dehydratase III
UniProt Protein Name	Carbonic anhydrase 3
UniProt Gene Name	CA3
UniProt Synonym Gene Names	CA-III
UniProt Entry Name	CAH3_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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/carbonic-anhydrase-iii-muscle-specific-ca3/161899>