

Carbonic Anhydrase VIII (CA8) Active Protein | CA8 active protein

Active Carbonic Anhydrase VIII (CA8)

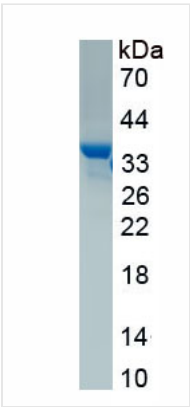
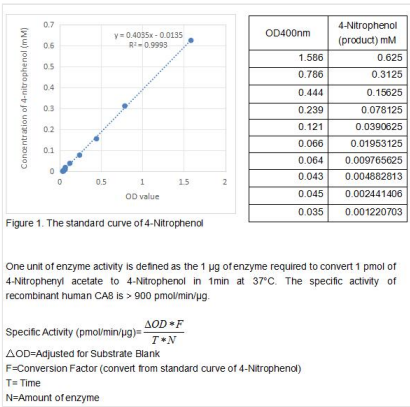
CATALOG # AAA161905	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Carbonic Anhydrase VIII (CA8); Active Carbonic Anhydrase VIII (CA8); Carbonic Anhydrase VIII; CAVIII; CA-VIII; CALS; CARP; Carbonic anhydrase-related protein4; CA8 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	Met1~Gln290
Applicable Applications for CA8 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	4.8
Research Area	Enzyme & Kinase
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. CA8, also called CA-related protein (CARP), is a cytosolic protein without CA activity (i.e., the reversible hydration of CO₂) due to point mutations in the zinc-binding site. CA8 is expressed exclusively in Purkinje cells of the cerebellum, where it binds inositol 1,4,5-triphosphate receptor type 1. CA8 overexpression in human colorectal cancer and non-small cell lung cancer indicates that it plays a role in the process of invasion in these types of malignancy. The activity of recombinant human CA8 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 μ L of various concentrations of CA8 (diluted by assay buffer) to 50 μ L 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 CA8 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	22027500
NCBI GeneID	767
NCBI Accession #	NP_004047.3
NCBI GenBank Nucleotide #	NM_004056.4
UniProt Accession #	P35219; Q32MY2; A8K0A5; B3KQZ7
Molecular Weight	32,973 Da
NCBI Official Full Name	carbonic anhydrase-related protein
NCBI Official Synonym Full Names	carbonic anhydrase VIII
NCBI Official Symbol	CA8
NCBI Official Synonym Symbols	CALS; CARP; CAMRQ3; CA-VIII
NCBI Protein Information	carbonic anhydrase-related protein; CA-related protein; carbonate dehydratase; carbonic anhydrase-like sequence
UniProt Protein Name	Carbonic anhydrase-related protein
UniProt Gene Name	CA8
UniProt Synonym Gene Names	CALS; CARP; CA-VIII
UniProt Entry Name	CAH8_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.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/carbonic-anhydrase-viii-ca8/161905>