

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

Active Carbonic Anhydrase VIII (CA8)

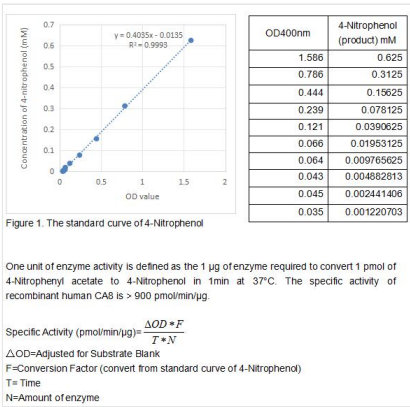
CATALOG # AAA161905	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
-------------------------------	-----------------------	---

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

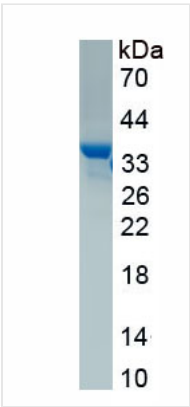
PRODUCT SPECIFICATIONS

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~Gln29 0
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 µL of various concentrations of CA8 (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 CA8 active protein	Active proteins
--	-----------------

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.

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

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