

Carbonic Anhydrase IV Active Protein | CA4 active protein

Carbonic Anhydrase IV Protein, Mouse, Recombinant (His Tag)

CATALOG #
AAA258156

HOST
HEK293 Cells

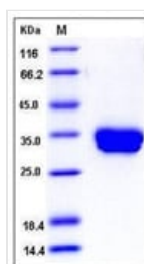
PRODUCT SYNONYMS

Carbonic Anhydrase IV; Carbonic Anhydrase IV Protein; Mouse; Recombinant (His Tag); Mouse Carbonic Anhydrase IV/Car4 Protein (His Tag); AW456718 Protein; Ca4 Protein; Car4 Protein; RP23-167D6.1 Protein; carbonic anhydrase IV; CA4 active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>98% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-Ser27 7
Species	Mouse
Activity	Measured by its esterase activity. The specific activity is >10pmoles/min/ug.
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Glu 18
Tag	C-His
Protein Construction	A DNA sequence encoding the mouse Car4 (NP_031633.1) without the C-terminal propeptide (Met 1-Ser 277) was expressed, with a C-terminal polyhistidine tag.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for CA4 active protein	Background: The carbonic anhydrases (or carbonate dehydratases) are classified as metalloenzyme for its zinc ion prosthetic group and form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons, a reversible reaction that takes part in maintaining acid-base balance in blood and other tissues. The carbonic anhydraseI (CA) family consists of at least 11 enzymatically active members and a few inactive homologous proteins. Carbonic anhydrase IV (CAIV) is a membrane-associated enzyme anchored to plasma membrane surfaces by a phosphatidylinositol glycan linkage. CAIV is a high-activity isozyme in CO ₂ hydration comparable to that of CAII. Furthermore, CAIV is more active in HCO ₃ ⁻ dehydration than is CAII. However, the esterase activity of CAIV is decreased 150-fold compared to CAII.
References	Lehtonen J, et al. (2004) Characterization of CA XIII, a Novel Member of the Carbonic Anhydrase Isozyme Family. The Journal of Biological Chemistry. 279: 2719-27.Lindskog S. (1997) Structure and mechanism of carbonic anhydrase. Pharmacology & Therapeutics. 74(1): 1-20.Baird TT, et al. (1997) Catalysis and Inhibition of Human Carbonic Anhydrase IV. Biochemistry. 36 (9): 2669-78.

NCBI AND UNIPROT INFORMATION

NCBI GI #	6671678
NCBI GeneID	12351
NCBI Accession #	NP_031633.1
NCBI GenBank Nucleotide #	NM_007607.2
UniProt Accession #	Q64444
Molecular Weight	Predicted Molecular Mass: 31.08 kDa The secreted recombinant mouse Car4 consists of 271 amino acids and has a calculated molecular mass of 31 kDa as estimated in SDS-PAGE under reducing conditions.
NCBI Official Full Name	carbonic anhydrase 4
NCBI Official Synonym Full Names	carbonic anhydrase 4
NCBI Official Symbol	Car4
NCBI Official Synonym Symbols	Ca4; AW456718
NCBI Protein Information	carbonic anhydrase 4
UniProt Protein Name	Carbonic anhydrase 4
UniProt Gene Name	Ca4
UniProt Synonym Gene Names	Car4; CA-IV

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.