

## Carbonic Anhydrase IX Active Protein | CA9 active protein

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

CATALOG #  
**AAA258194**

HOST  
**HEK293 Cells**

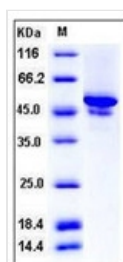
### PRODUCT SYNONYMS

Carbonic Anhydrase IX; Carbonic Anhydrase IX Protein; Mouse; Recombinant (His Tag); Mouse Carbonic Anhydrase IX/Car9 Protein (His Tag); carbonic anhydrase IX; CA9 active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                     |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                        |
| Purity/Purification     | >95% as determined by SDS-PAGE                                                                                                                                                                                                                                      |
| Form/Format             | Lyophilized from sterile PBS, pH7.4. 5% trehalose, 8% mannitol.                                                                                                                                                                                                     |
| Sequence                | Met1-Asp390                                                                                                                                                                                                                                                         |
| Species                 | Mouse                                                                                                                                                                                                                                                               |
| Bio Activity            | Measured by its esterase activity. The specific activity is >100pmoles/min/ug.                                                                                                                                                                                      |
| Endotoxin               | <1.0EU per ug of the protein as determined by the LAL method                                                                                                                                                                                                        |
| Predicted N Terminal    | Gln 32                                                                                                                                                                                                                                                              |
| Tag                     | His                                                                                                                                                                                                                                                                 |
| Protein Construction    | A DNA sequence encoding the extracellular domain of mouse CAR9 (NP_647466.2)(Met 1-Asp 390) was expressed, with a C-terminal polyhistidine tag.                                                                                                                     |
| Reconstitution          | It is recommended that sterile water (200ul) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is measured by UV.                                                                                                                        |
| Preparation and Storage | Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles<br><br>Samples are stable for up to twelve months from date of receipt at -70°C |

### IMAGES



SDS-PAGE

## ADDITIONAL INFORMATION

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Related Product Information for CA9 active protein</b> | Description: Carbonic anhydrases IX (CA IX), also known as membrane antigen MN or CA9, is a member of the carbonic anhydrase (CA) family and may be involved in cell proliferation and cellular transformation. CAs are zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide ( $H_2O + CO_2 = H^+ + HCO_3^-$ ) and thus participate in a variety of biological and physical processes. CA IX protein is expressed primarily in carcinoma cells lines, and the expression is cell density dependent and has been shown to be strongly induced by hypoxia, accordingly facilitates adaptation of tumor cells to hypoxic conditions. It is involved in tumorigenesis through many pathways, such as pH regulation and cell adhesion control. CA IX is used as a marker of tumor hypoxia and as a new therapeutic target for many human carcinomas and cancers. |
| <b>Product Categories/Family for CA9 active protein</b>   | <a href="#">Cancer Drug Targets</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>References</b>                                         | <p>Loncaster JA, et al. (2001) Carbonic anhydrase (CA IX) expression, a potential new intrinsic marker of hypoxia: correlations with tumor oxygen measurements and prognosis in locally advanced carcinoma of the cervix. <i>Cancer Res.</i> 61(17): 6394-9.</p> <p>Zvada J, et al. (2003) Soluble form of carbonic anhydrase IX (CA IX) in the serum and urine of renal carcinoma patients. <i>Br J Cancer.</i> 89(6): 1067-71.</p> <p>Pan P, et al. (2006) Carbonic anhydrase gene expression in CA II-deficient (Car2<sup>-/-</sup>) and CA IX-deficient (Car9<sup>-/-</sup>) mice. <i>J Physiol.</i> 571(Pt 2): 319-27.</p> <p>Zhou GX, et al. (2010) Quantification of carbonic anhydrase IX expression in serum and tissue of renal cell carcinoma patients using enzyme-linked immunosorbent assay: prognostic and diagnostic potentials. <i>Urology.</i> 75(2): 257-61.</p> |

## NCBI AND UNIPROT INFORMATION

|                                         |                                                                                                                                                                                                                                                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NCBI GI #</b>                        | <a href="#">145046220</a>                                                                                                                                                                                                                                       |
| <b>NCBI GeneID</b>                      | <a href="#">230099</a>                                                                                                                                                                                                                                          |
| <b>NCBI Accession #</b>                 | <a href="#">NP_647466.2</a>                                                                                                                                                                                                                                     |
| <b>NCBI GenBank Nucleotide #</b>        | <a href="#">NM_139305.2</a>                                                                                                                                                                                                                                     |
| <b>UniProt Accession #</b>              | <a href="#">Q8VHB5</a> ; <a href="#">Q8K1G1</a> ; <a href="#">Q8VDE4</a>                                                                                                                                                                                        |
| <b>Molecular Weight</b>                 | Molecular Mass: The secreted recombinant mouse CAR9 comprises 370 amino acids and has a calculated molecular mass of 40.3 kDa. As a result of glycosylation, the apparent molecular mass of the recombinant protein is approximately 45-50 kDa in SDS-PAGE unde |
| <b>NCBI Official Full Name</b>          | carbonic anhydrase 9                                                                                                                                                                                                                                            |
| <b>NCBI Official Synonym Full Names</b> | carbonic anhydrase 9                                                                                                                                                                                                                                            |
| <b>NCBI Official Symbol</b>             | Car9                                                                                                                                                                                                                                                            |
| <b>NCBI Official Synonym Symbols</b>    | Ca9; CAIX; MN/CA9                                                                                                                                                                                                                                               |
| <b>NCBI Protein Information</b>         | carbonic anhydrase 9                                                                                                                                                                                                                                            |
| <b>UniProt Protein Name</b>             | Carbonic anhydrase 9                                                                                                                                                                                                                                            |
| <b>UniProt Gene Name</b>                | <b>Ca9</b>                                                                                                                                                                                                                                                      |
| <b>UniProt Synonym Gene Names</b>       | Car9; CA-IX; CAIX                                                                                                                                                                                                                                               |

**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/hek293-cells-ca9-active-protein/carbonic-anhydrase-ix/258194>