

## Recombinant Mouse Carbonic Anhydrase 4/CA4 Protein (aa 18-277, His Tag)

Catalog No. PKSM040973

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

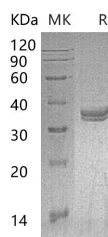
### Description

<b>Synonyms</b>	CA4;CAIV;CA-IV;Car4;Carbonate dehydratase IV;carbonic anhydrase 4;carbonic anhydrase IVRP17;carbonic dehydratase IV;EC4.2.1.1;retinitis pigmentosa 17;RP17
<b>Species</b>	Mouse
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Glu18-Ser277
<b>Accession</b>	Q64444
<b>Calculated Molecular Weight</b>	30.5 kDa
<b>Observed molecular weight</b>	36 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
<b>Shipping</b>	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution of 20mM Tris-HCl, 150mM NaCl, pH 8.0.
<b>Reconstitution</b>	Not Applicable

### Data



> 95 % as determined by reducing SDS-PAGE.

### Background

Carbonic anhydrase 4(CA4) is an enzyme that belongs to the alpha-carbonic anhydrase family. CA4 consists of a signal peptide (residues1-17), an ectodomain (residues18-277) and a propeptide (residues278-305), which is removed in the mature form. it is predominantly expressed in the embryo. CA4 can catalyzes the reversible reaction of  $\text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3^- + \text{H}^+$ , and stimulates the sodium/bicarbonate transporter activity of SLC4A4. Studies have shown that this protein have a role in inherited renal abnormalities of bicarbonate transport. Alpha-carbonic anhydrase family

### For Research Use Only

participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor. They show extensive diversity in tissue attribution and in their sub cellular localization.