



Recombinant Protein Technical Manual

**Recombinant Mouse Carbonic Anhydrase 4/CA4
Protein (aa 18-277, His Tag)
RPES5011**

Product Data:

Product SKU: RPES5011

Size: 10µg

Species: Mouse

Expression host: Human Cells

Uniprot: Q64444

Protein Information:

Molecular Mass: 30.5 kDa

AP Molecular Mass: 36 kDa

Tag: C-6His

Bio-activity:

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

Shipping: 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.

Formulation: Supplied as a 0.2 µm filtered solution of 20mM Tris, 150mM NaCl, pH8.0.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: 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

Immunogen Information:

Sequence: Glu18-Ser277

Background:

Carbonic anhydrase 4(CA4) is an enzyme that belongs to the alpha-carbonic anhydrase family. CA4 consists of a signal peptide (residues17), 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 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 is attribution and in their sub cellular localization.