

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

Catalog Number: PKSM040973

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

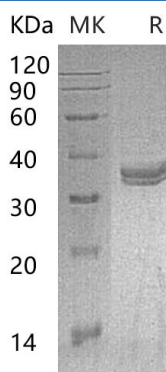
Description

Species	Mouse
Source	HEK293 Cells-derived Mouse Carbonic Anhydrase 4/CA4 protein Glu18-Ser277, with an C-terminal His
Calculated MW	30.5 kDa
Observed MW	36 kDa
Accession	Q64444
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per µg of the protein 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-HCl, 150mM NaCl, pH 8.0.

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 (residues 1-17), an ectodomain (residues 18-277) and a propeptide (residues 278-305), which is removed in the mature form. It is predominantly expressed in the embryo. CA4 can catalyze the reversible reaction of $\text{CO}_2 + \text{H}_2\text{O} \rightleftharpoons \text{HCO}_3^- + \text{H}^+$, and stimulates the sodium/bicarbonate transporter activity of SLC4A4. Studies have shown that this protein has a role in inherited renal abnormalities of bicarbonate transport. Alpha-carbonic anhydrase family members 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 distribution and in their subcellular localization.