

Recombinant Mouse Carbonic Anhydrase 4/CA4 Protein (His Tag)

Catalog Number: PKSM040721

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

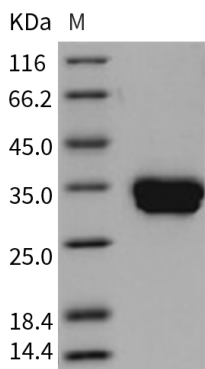
Description

Species	Mouse
Source	HEK293 Cells-derived Mouse Carbonic Anhydrase 4/CA4 protein Met 1-Ser 277, with an C-terminal His
Calculated MW	31.0 kDa
Observed MW	31 kDa
Accession	NP_031633.1
Bio-activity	Measured by its esterase activity. The specific activity is > 10 pmoles/min/μg.

Properties

Purity	> 98 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 98 % as determined by reducing SDS-PAGE.

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 anhydrase I (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 CO₂ hydration comparable to that of CAII. Furthermore, CAIV is more active in HCO₃⁻ dehydration than is CAII. However, the esterase activity of CAIV is decreased 150-fold compared to CAII.

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