Recombinant Human Carbonic Anhydrase 14/CA14 Protein (HEK293 Cells, His Tag)

Catalog Number: PKSH031597

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

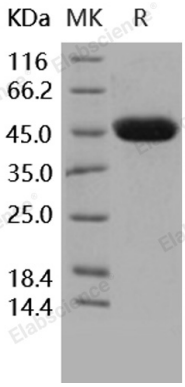
Description

Species	Human
Source	HEK293 Cells-derived Human Carbonic Anhydrase 14/CA14 protein Met 1-Met 290, with an C-terminal His
Calculated MW	32.3 kDa
Observed MW	45-48 kDa
Accession	NP_036245.1
Bio-activity	Not validated for activity

Properties

Purity	> 97 % 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 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ 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



> 97 % 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 anhydrasekl (CA) family consists of at least 11 enzymatically active members and a few inactive homologous proteins. CAXIV is a member of CA family that showed an overall similarity of 29–46% to other active CA isozymes. The highest percentage similarity was with a transmembrane CA isoform, CAXII. The CAXIV was found high concentrations in human heart, brain, liver, and skeletal muscle but lower in the colon, small intestine, urinary bladder, and kidney. No CAXIV mRNA was seen in the salivary gland and pancreas. CAXIV is a likely candidate for the extracellular CA postulated to have an important role in modulating excitatory synaptic transmission in brain.

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