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Recombinant Human Carbonic anhydrase 2 Protein

Catalog No.: RP00034 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	760	P00918

Tags
No tag

Synonyms
CA2; CA-II; CAC; CAII; Car2; HEL-76; HEL-S-282; carbonic anhydrase 2;CA-II;CAC;CAII;Car2;HEL-76;HEL-S-282

Product Information

Source	Purification
E. coli	> 90% by SDS-PAGE.

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of 20mM Tris, 150mM NaCl, pH 8.0.Contact us for customized product form or formulation.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid votex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

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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. CA2 is a cytosolic enzyme with the highest activity among all known CAs. Mutations in the CA2 gene result in the CA II deficiency syndrome, an autosomal recessive disorder that produces osteopetrosis, renal tubular acidosis and cerebral calcification.

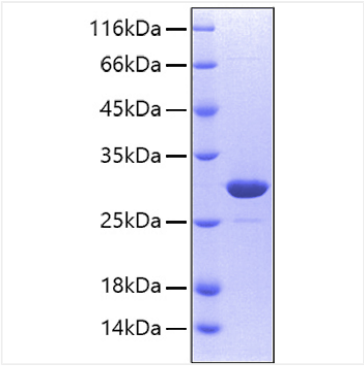
Basic Information

Description
Recombinant Human Carbonic anhydrase 2 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Ser2-Lys260) of human Carbonic anhydrase II (Accession #NP_000058.1).

Bio-Activity
Measured by its esterase activity. The specific activity is >840 pmoles/min/μg, as measured with 1 mM 4-Nitrophenyl acetate and 0.1 μg enzyme at 400 nm in 100 μL of 12.5 mM Tris, 75 mM NaCl, pH 7.5.

Storage
Store the lyophilized protein at -20℃ to -80 ℃ for long term.
After reconstitution, the protein solution is stable at -20 ℃ for 3 months, at 2-8 ℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human Carbonic anhydrase 2 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 30 kDa.