Recombinant Human Carbonic anhydrase 12 Protein

Catalog No.: RP00157

Sequence Information

Species
Human

Gene ID
771

Swiss Prot
O43570

Tags
C-His

Synonyms
CA12,CA-XII,CAXII,HsT18816, T18816

Product Information

Source
HEK293 cells

Purification
≥ 90 % as determined by SDS-PAGE.

Calculated MW
31.03 kDa

Observed MW
35-40 kDa

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

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.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 vortex 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.

Background

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. CAs participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. CA12, also known as Car12 and carbonic anhydrase XII, is a type I membrane enzyme that is highly expressed in normal tissues, such as colon, kidney, prostate, intestine and activated lymphocytes and moderately expressed in pancreas, ovary, and testis. It has been found to be overexpressed in 10% of clear cell renal carcinomas.

Basic Information

Description
Recombinant Human Carbonic anhydrase 12 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Ala25-Gln291) of human Carbonic Anhydrase XII/CA12 (Accession #NP_001209.1) fused with a 6×His tag at the C-terminus.

Activity
Measured by its esterase activity. The specific activity is >48 pmoles/min/μg, as measured with 1 mM 4-Nitrophenyl acetate and 1 μg enzyme at 400 nm in 100 μL of 12.5 mM Tris, 75 mM NaCl, pH 7.5.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

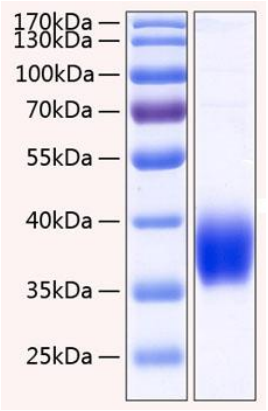
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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Please visit http://abclonal.com for a complete listing of recommended products.

Validation Data



Recombinant Human Carbonic anhydrase 12 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.