

Human Carbonic Anhydrase VIII / CA8 Protein (His Tag)

Catalog Number: 10469-H08E



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CA-VIII; CALS; CAMRQ3; CARP; MGC120502; MGC99509

Protein Construction:

A DNA sequence encoding the human CA8 (NP_004047.3) (Met 1-Gln 290) was expressed, with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 94 % as determined by SDS-PAGE

Bio Activity:

Measured by its esterase activity . The specific activity is >100 pmoles/min/μg.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met 1

Molecular Mass:

The recombinant human CA8 comprises 296 amino acids and has a predicted molecular mass of 33.8 kDa. It migrates as an approximately 37 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, 15% glycerol, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

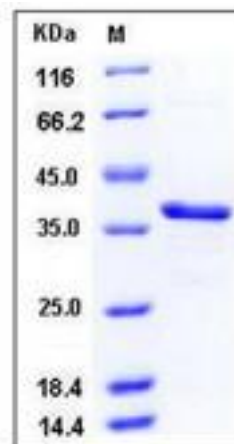
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 (CA) family consists of at least 11 enzymatically active members and a few inactive homologous proteins. Carbonic anhydrase protein (CA) VIII, which is a member of the CA gene family, has been shown to have no catalytic CA activity and its biological function is still unknown. Increased expression of CA-RP VIII was observed in 78% of colorectal carcinomas. It suggested that CA-RP VIII plays a role in the process of invasion in colorectal cancer.

References

1. Lehtonen J, *et al.* (2004) Characterization of CA XIII, a Novel Member of the Carbonic Anhydrase Isozyme Family. *The Journal of Biological Chemistry*. 279: 2719-27.
2. Lindskog S. (1997) Structure and mechanism of carbonic anhydrase. *Pharmacology & Therapeutics*. 74(1): 1-20.
3. Miyaji E, *et al.* (2003) Overexpression of carbonic anhydrase-related protein VIII in human colorectal cancer. *The Journal of Pathology*. 201(1): 37-45.

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For US Customer: Fax: 267-657-0217

• Tel: 215-583-7898

Global Customer: Fax :+86-10-5862-8288

• Tel:+86-400-890-9989

• <http://www.sinobiological.com>