

Recombinant Human Carbonic anhydrase 9 Protein

Catalog No.: RP01428 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	768	Q16790

Tags

C-His&Avi

Synonyms

CA9;CAIX;MN; MN

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Endotoxin

Please contact us for more information.


Formulation

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

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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

Contact

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Background

Carbonic anhydrases IX (CA IX), also known as membrane antigen MN or CA9, is a member of the carbonic anhydrase (CA) family and may be involved in cell proliferation and cellular transformation. CAs are zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide ($\text{H}_2\text{O} + \text{CO}_2 = \text{H}^+ + \text{HCO}_3^-$) and thus participate in a variety of biological and physical processes. CA IX protein is expressed primarily in carcinoma cells lines, and the expression is cell density dependent and has been shown to be strongly induced by hypoxia, accordingly facilitates adaptation of tumor cells to hypoxic conditions. It is involved in tumorigenesis through many pathways, such as pH regulation and cell adhesion control. CA IX is used as a marker of tumor hypoxia and as a new therapeutic target for many human carcinomas and cancers.

Basic Information

Description

Recombinant Human Carbonic anhydrase 9 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln38-Asp414) of human Carbonic Anhydrase IX/CA9 (Accession #NP_001207.2) fused with a 6xHis□Avi tag at the C-terminus.

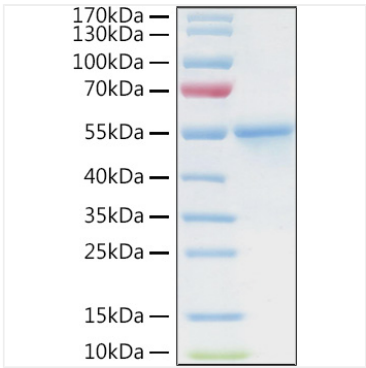
Bio-Activity

Measured by its esterase activity. The specific activity is >84 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.

Storage

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

Validation Data



Recombinant Human Carbonic anhydrase 9
Protein was determined by SDS-PAGE with
Coomassie Blue, showing a band at 55kDa.