Recombinant Human Carbonic anhydrase 9 Protein

Catalog No.: RP01428

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Sequence Information

Species
Human

Gene ID
768

Swiss Prot
Q16790

Tags
C-His&Avi

Synonyms
CA9,CAIX,MN, MN

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
43.62 kDa

Observed MW
55 kDa

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 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 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 (H2O + CO2 = H+ + HCO3−) 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 6×His, Avi tag at the C-terminus.

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.

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℃

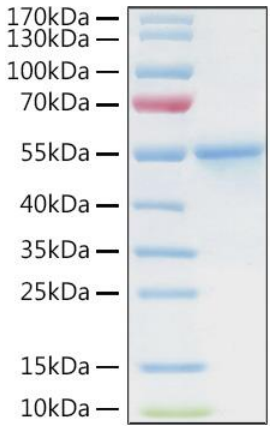
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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Validation Data



Recombinant Human Carbonic anhydrase 9 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.