

Recombinant Mouse Carbonic Anhydrase IX/CA9 Protein

Catalog No.: RP01495

Sequence Information

Species **Gene ID**
Mouse 230099

Swiss Prot **Tags**
Q8VHB5 C-His

Synonyms

CAIX, CA9, CA-IX, G250, MN, P54, 58N, pMW1, CA9

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as
 determined by
 SDS-PAGE.

Calculated MW **Observed MW**
39.68 kDa 40–55 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.

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 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 ($\text{H}_2\text{O} + \text{CO}_2 = \text{H}^+ + \text{HCO}_3^-$) 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 Mouse Carbonic Anhydrase IX/CA9 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln32–Asp390) of mouse Carbonic Anhydrase IX/CA9 (Accession #NP_647466.2) fused with a 6×His tag at the C-terminus.

Activity

Measured by its esterase activity. The specific activity is >750 pmol/min/μg, as measured under the described conditions.

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°C

Operational Notes

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

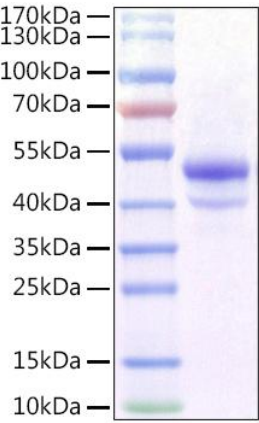
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Validation Data



Recombinant Mouse Carbonic Anhydrase IX/CA9 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.