



Recombinant Protein Technical Manual

Recombinant Mouse Carbonic Anhydrase IX/CA9 Protein (His Tag)(Active)

RPES0409

Product Data:

Product SKU: RPES0409

Size: 10µg

Species: Mouse

Expression host: HEK293 Cells

Uniprot: NP_647466.2

Protein Information:

Molecular Mass: 40.3 kDa

AP Molecular Mass: 45-50 kDa

Tag: C-His

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

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU per µg of the protein as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: RP2395K8.9, CAIX, Ca9, MN/CA9

Immunogen Information:

Sequence: Met 1-Asp 390

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.