Recombinant Human Carbonic Anhydrase 9/CA9 Protein (Fc Tag)

Catalog Number: PKSH031872

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

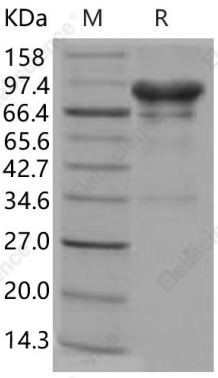
Description

Species	Human
Source	HEK293 Cells-derived Human Carbonic Anhydrase 9/CA9 protein Met 1-Asp 414, with an C-terminal hFc
Calculated MW	67.7 kDa
Observed MW	80-90 kDa
Accession	NP_001207.2
Bio-activity	Measured by its esterase activity. The specific activity is > 50 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.

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, 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 100 mM Glycine, 10 mM NaCl, 50 mM Tris, pH 7.5 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 90 % as determined by reducing SDS-PAGE.

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.

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