

Recombinant Human CA9 protein, His-tagged

Cat. No. CA9-256H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human CA9 (Gln138-Asp414) protein was fused to His-tag at C-terminus and expressed in human 293 cells (HEK293).

Species Human

Source HEK293

ProteinLength Gln138-Asp414

Description

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes. CAs form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons (or vice versa), a reversible reaction that occurs rather slowly in the absence of a catalyst. One of the functions of the enzyme in animals is to interconvert carbon dioxide and bicarbonate to maintain acid-base balance in blood and other tissues, and to help transport carbon dioxide out of tissues. The active site of most carbonic anhydrases contains a zinc ion. There are at least five distinct CA families (α , β , γ , δ and ϵ).

Carbonic anhydrase 9 (CA9/CAIX) is also known as Membrane antigen MN (MN), Renal cell carcinoma-associated antigen G250, which belongs to the alpha-carbonic anhydrase family. CA9/CAIX with an optimal activity at pH 6.49. Reversible hydration of carbon dioxide. CA IX participates in pH regulation. CA9 may be involved in the control of cell proliferation and transformation. CA-IX appears to be a novel specific biomarker for a cervical neoplasia.

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Predicted N Terminal	Gln138
Form	Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 30.9 kDa. The protein migrates as 36 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU per µg by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	CA9
Official Symbol	CA9
Synonyms	CA9; carbonic anhydrase IX; carbonic anhydrase 9; CAIX; carbonic dehydratase; MN; RCC associated protein G250; pMW1; CA-IX; P54/58N; membrane antigen MN; carbonate dehydratase IX; RCC-associated antigen G250; RCC-associated protein

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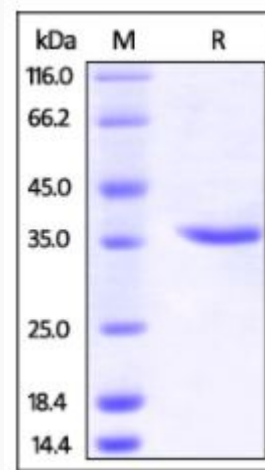
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G250; renal cell carcinoma-associated antigen G250

Gene ID	768
mRNA Refseq	NM_001216
Protein Refseq	NP_001207
MIM	603179
UniProt ID	Q16790

SDS-PAGE of CA9-256H



Human CA9, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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