Recombinant Human CA9 Protein, His-tagged, Alexa Fluor 555 conjugated

Cat. No. CA9-256HAF555 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Alexa Fluor 555 conjugated 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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Form	Lyophilized
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.
N-terminal Sequence Analysis	Gln 138
Endotoxin	< 1.0 EU/ μg by the LAL method.
Purity	> 95 % as determined by SDS-PAGE
Characteristic	Disulfide-linked homodimer Labeled with Alexa Fluor 555 via amines With an excitation and emission maximum of 555/565 nm, Alexa Fluor 555 can be efficiently excited using a 543 nm He-Ne laser line and detected under standard TRITC/Cy3 filters.
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.
Storage Buffer	Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5, 10% trehalose.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 μg/μL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

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Conjugation	Alexa Fluor 555

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 G250; renal cell carcinoma-associated antigen G250
Gene ID	768
mRNA Refseq	NM_001216
Protein Refseq	NP_001207
MIM	603179
UniProt ID	Q16790

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