# Recombinant Human CA9 Protein, His-tagged, Alexa Fluor 647 conjugated

**Cat. No.** CA9-256HAF647 **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Alexa Fluor 647 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).<br>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<br>Labeled with Alexa Fluor 647 via amines<br>Excitation = 650 nm<br>Emission = 668 nm |
| **Storage** | For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.<br>Please avoid repeated freeze-thaw cycles.<br>This product is stable after storage at:<br>-20 to -70 centigrade for 12 months in lyophilized state;<br>-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 647 |

## GENE INFORMATION

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| **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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