

## Recombinant Human CA9 Protein, His-tagged

**Cat. No.** CA9-116H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Product Overview</b> | Recombinant human CA9 protein with His tag was expressed in HEK293.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>ProteinLength</b>    | 459                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | <p>Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and in their subcellular localization. CA IX is a transmembrane protein and is one of only two tumor-associated carbonic anhydrase isoenzymes known. It is expressed in all clear-cell renal cell carcinoma, but is not detected in normal kidney or most other normal tissues. It may be involved in cell proliferation and transformation. This gene was mapped to 17q21.2 by fluorescence in situ hybridization, however, radiation hybrid mapping localized it to 9p13-p12.</p> |
| <b>Form</b>             | Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Molecular Mass</b>   | 30.9 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>AA Sequence</b>      | MAPLCSPWLPLLIPAPAPGLTVQLLLSLLLLVPVHPQRLPRMQEDSPLGGGSSGED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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DPLGEEDLPSEEDSPREEDPPGEEDLPGEEDLPGEEDLPEVKPKSEEEGSLKLEDL  
 PTVEAPGDPQEPQNNNAHRDKEGDDQSHWRYGGDPPWPRVSPACAGRFQSPVDIR  
 PQLAAFCPALRPLELLGFQLPPLPELRLRNNGHSVQLTLPPGLEMALGPGREYRALQ  
 LHLHWGAAGRPGSEHTVEGHRFP AEIHVVHLSTAFARVDEALGRPGLAVLA AFLE  
 EGPEENSAYEQLLSRLEEIAEEGSETQVPGLDISALLPSDFSRYFQYEGSLTTPPCA  
 QGVIWTVFNQTVMLSAKQLHTLSDTLWGP GDSRLQLNFRATQPLNGRVIEASFPAG  
 VDSSPRAAEPVQLNSCLAAGDILALVFGLLFAVTSVAFLVQMRRQHRRG TKGGVSY  
 RPAEVAETGA

|                       |                                                                                                                                                                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>         | > 98%                                                                                                                                                                                                                                                                                    |
| <b>Applications</b>   | WB; ELISA; FACS; FC                                                                                                                                                                                                                                                                      |
| <b>Stability</b>      | This bioreagent is stable at 4 centigrade (short-term) and -70 centigrade(long-term). After reconstitution, sample may be stored at 4 centigrade for 2-7 days and below -18 centigrade for future use.                                                                                   |
| <b>Storage</b>        | At -20 centigrade.                                                                                                                                                                                                                                                                       |
| <b>Concentration</b>  | 1 mg/mL                                                                                                                                                                                                                                                                                  |
| <b>Storage Buffer</b> | PBS (pH 7.4-7.5). Sterile-filtered colorless solution.                                                                                                                                                                                                                                   |
| <b>Reconstitution</b> | Reconstitute in sterile distilled H <sub>2</sub> O to no less than 100 µg/mL; dilute reconstituted stock further in other aqueous solutions if needed. Please review COA for lot-specific instructions. Final measurements should be determined by the end-user for optimal performance. |

## GENE INFORMATION

**Gene Name** CA9 carbonic anhydrase IX [ Homo sapiens (human) ]

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|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Official Symbol</b> | CA9                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>        | 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; |
| <b>Gene ID</b>         | 768                                                                                                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>     | NM_001216                                                                                                                                                                                                                                                                                   |
| <b>Protein Refseq</b>  | NP_001207                                                                                                                                                                                                                                                                                   |
| <b>MIM</b>             | 603179                                                                                                                                                                                                                                                                                      |
| <b>UniProt ID</b>      | Q16790                                                                                                                                                                                                                                                                                      |

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