

## Active Recombinant Human CA9 protein, His-tagged

**Cat. No.** CA9-3365H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Active Recombinant Human CA9 protein(Q16790)(59-414 aa), fused with N-terminal His tag, was expressed in HEK293.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ProteinLength</b>    | 59-414 aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Form</b>             | PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Bio-activity</b>     | <p>Carbonic Anhydrase IX (CA9) also known as membrane antigen MN and renal cell carcinoma (RCC) associated antigen G250, is a transmembrane enzyme expressed primarily in carcinoma cells. It is one of the best markers for hypoxia and for RCC. rhCA9 corresponds to the extracellular portion of human CA9. It catalyzes the reversible reaction of <math>\text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3^- + \text{H}^+</math>, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption. The recombinant human CA9 activity was measured by its ability to hydrolyze 4-Nitrophenyl acetate (4-NPA) to 4-Nitrophenol. The reaction was performed in 12.5 mM Tris, 75 mM NaCl, pH 7.5 (Assay Buffer), initiated by addition 50 <math>\mu\text{L}</math> of various concentrations of CA9 (diluted by Assay Buffer) to 50 <math>\mu\text{L}</math> of 2 mM Substrate 4-NPA (100 mM stock in Acetone, diluted by deionized water). Incubated at 37°C for 5min, then read at a wavelength of 400 nm.</p> |
| <b>Molecular Mass</b>   | 40.4kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

|                       |                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>      | <1.0EU per 1µg (determined by the LAL method).                                                                                           |
| <b>Purity</b>         | > 90%                                                                                                                                    |
| <b>Storage</b>        | Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Store at -20°C for 12 months. Aliquot and store at -80°C for 12 months. |
| <b>Reconstitution</b> | Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.                                                     |

## GENE INFORMATION

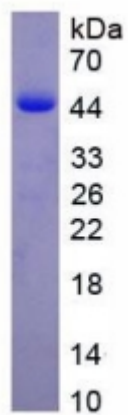
|                        |                                                                                                                                                                                                                                                                                             |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CA9 carbonic anhydrase IX [ Homo sapiens ]                                                                                                                                                                                                                                                  |
| <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                                                                                                                                                                                                                                                                                      |

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

## SDS-PAGE



Tel: 1-631-559-9269 1-516-512-3133

Email: [info@creative-biomart.com](mailto:info@creative-biomart.com) Fax: 1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA