

# Recombinant Human CA8 Protein

**Cat. No.** CA8-813H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <b>Product Overview</b> | Recombinant Human CA8(Ala2-Gln290) was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ProteinLength</b>    | 2-290 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | <p>The protein encoded by this gene was initially named CA-related protein because of sequence similarity to other known carbonic anhydrase genes. However, the gene product lacks carbonic anhydrase activity (i.e., the reversible hydration of carbon dioxide). The gene product continues to carry a carbonic anhydrase designation based on clear sequence identity to other members of the carbonic anhydrase gene family. The absence of CA8 gene transcription in the cerebellum of the lurcher mutant in mice with a neurologic defect suggests an important role for this acatalytic form. Mutations in this gene are associated with cerebellar ataxia, mental retardation, and dysequilibrium syndrome 3 (CMARQ3). Polymorphisms in this gene are associated with osteoporosis, and overexpression of this gene in osteosarcoma cells suggests an oncogenic role. Alternative splicing results in multiple transcript variants.</p> |
| <b>Form</b>             | <p>20mM Tris-HCl, 500mM NaCl, 1mM DTT, pH 8.5. Avoid repeated freeze-thaw cycles.</p> <p>Stable for at least 3 months from receipt of products under proper storage and handling conditions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Molecular Mass</b>   | 34 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

 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>     | < 0.1 EU per g protein as determined by LAL test           |
| <b>Purity</b>        | >95% as determined by SDS-PAGE and Coomassie blue staining |
| <b>Concentration</b> | >50 ug/mL as determined by microplate BCA method           |

## GENE INFORMATION

|                        |                                                                                                                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | CA8 carbonic anhydrase VIII [ Homo sapiens ]                                                                                                                                                     |
| <b>Official Symbol</b> | CA8                                                                                                                                                                                              |
| <b>Synonyms</b>        | CA8; carbonic anhydrase VIII; CALS; carbonic anhydrase-related protein; CARP; CA-related protein; carbonate dehydratase; carbonic anhydrase-like sequence; CAMRQ3; CA-VIII; MGC99509; MGC120502; |
| <b>Gene ID</b>         | 767                                                                                                                                                                                              |
| <b>mRNA Refseq</b>     | NM_004056                                                                                                                                                                                        |
| <b>Protein Refseq</b>  | NP_004047                                                                                                                                                                                        |
| <b>MIM</b>             | 114815                                                                                                                                                                                           |
| <b>UniProt ID</b>      | P35219                                                                                                                                                                                           |

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