# Recombinant Human Carbonic Anhydrase 8/CA8 Protein (His Tag)

### Catalog No. PKSH031586

*Note:* Centrifuge before opening to ensure complete recovery of vial contents.

| Description                 |   |
|-----------------------------|---|
| Synonyms                    | Carbonic Anhydrase-Related Protein;CARP;Carbonic Anhydrase VIII;CA-<br>VIII;CA8;CALS;CAMRQ3;MGC120502;MGC99509  |
| Species                     | Human   |
| Expression Host             | E.coli  |
| Sequence                    | Met 1-Gln 290   |
| Accession                   | NP_004047.3   |
| Calculated Molecular Weight | 33.8 kDa  |
| Observed molecular weight   | 37 kDa  |
| Tag                         | C-His   |
| Bioactivity                 | Measured by its esterase activity. The specific activity is $> 100$ pmoles/min/µg.  |
| Properties                  |   |
| Purity                      | > 94 % as determined by reducing SDS-PAGE.  |
| Endotoxin                   | Please contact us for more information.   |
| Storage                     | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.       |
| Shipping                    | This product is provided as lyophilized powder which is shipped with ice packs.   |
| Formulation                 | Lyophilized from sterile PBS, 15% glycerol, pH 7.5<br>Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as<br>protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual. |
| Reconstitution              | Please refer to the printed manual for detailed information.  |
| Data                        |   |



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## Background

The carbonic anhydrases (or carbonate dehydratases) are classified as metalloenzyme for its zinc ion prosthetic group and

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form a family of enzymes that catalyze the rapid interconversion of carbon dioxide and water to bicarbonate and protons, a reversible reaction that takes part in maintaining acid-base balance in blood and other tissues. The carbonic anhydrasekl (CA) family consists of at least 11 enzymatically active members and a few inactive homologous proteins. Carbonic anhydrase protein (CA) VIII, which is a member of the CA gene family, has been shown to have no catalytic CA activity and its biological function is still unknown. Increased expression of CA-RP VIII was observed in 78% of colorectal carcinomas. It suggested that CA-RP VIII plays a role in the process of invasion in colorectal cancer.

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