# Human CA2/Carbonic anhydrase II Protein

**Cat. No.** CAS-HM102

## Description

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|---|---|
| **Source** | Recombinant Human CA2/Carbonic anhydrase II Protein is expressed from HEK293 with His tag at the C-terminus. |
| | It contains Ser2-Lys260. |
| **Accession** | P00918 |
| **Molecular Weight** | The protein has a predicted MW of 30.72 kDa. Due to glycosylation, the protein migrates to 31-35 kDa based on Bis-Tris PAGE result. |
| **Endotoxin** | Less than 1 EU per μg by the LAL method. |
| **Purity** | > 95% as determined by Bis-Tris PAGE |
| | > 95% as determined by HPLC |

## Formulation and Storage

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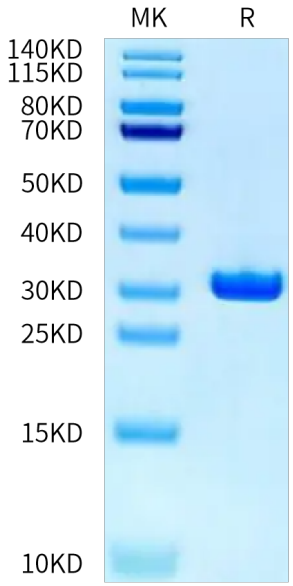
|---|---|
| **Formulation** | Lyophilized from 0.22 μm filtered solution in 20mM Tris, 150mM NaCl (pH 8.0). Normally 8% trehalose is added as protectant before lyophilization. |
| **Reconstitution** | Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions. |
| **Storage** | -20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles. |

## Background

Carbonic anhydrase II (CA II) is a zinc metalloenzyme that catalyzes the reversible interconversion of water and CO2 to bicarbonate and a proton. CA II is abundant in most cells, and plays a role in numerous processes including gas exchange, epithelial ion transport, respiration, extra- and intracellular pH control, and vascular regulation.

## Assay Data

**Bis-Tris PAGE**




Human CA2 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

**SEC-HPLC**

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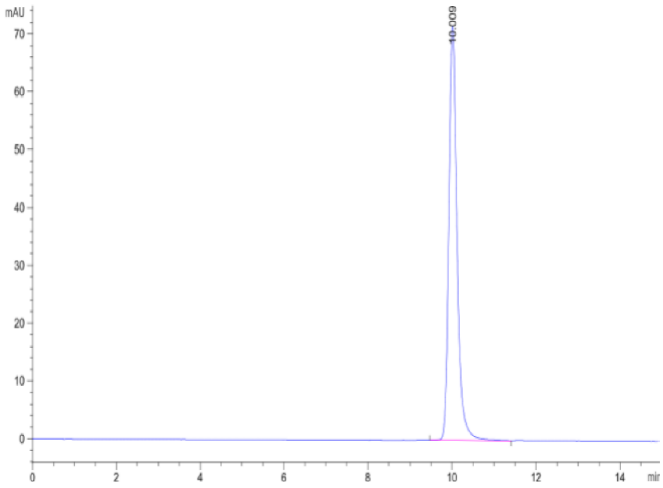
## Assay Data




The purity of Human CA2 is greater than 95% as determined by SEC-HPLC.

### Bioactivity Data

Measured by its esterase activity. The specific activity is > 400 pmol/min/μg.