Datasheet for ABIN935038

# CA2 Protein (AA 1-260)

1 Image

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## Overview

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|---|---|
| Quantity: | 100 µg |
| Target: | CA2 |
| Protein Characteristics: | AA 1-260 |
| Origin: | Human |
| Source: | Escherichia coli (E. coli) |
| Protein Type: | Recombinant |
| Biological Activity: | Active |
| Application: | SDS-PAGE (SDS) |

## Product Details

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| Sequence: | MSHHWGYGKH NGPEHWHKDF PIAKGERQSP VDIDTHTAKY DPSLKPLSVS YDQATSLRIL NNGHAFNVEF DDSQDKAVLK GGPLDGTYRL IQFHFHWGSL DGQGSEHTVD KKKYAAELHL VHWNTKYGDF GKAVQQPDGL AVLGIFLKVG SAKPGLQKVV DVLDSIKTKG KSADFTNFDP RGLLPESLDY WTYPGSLTTP PLLECVTWIV LKEPISVSSE QVLKFRKLNF NGEGEPEELM VDNWRPAQPL KNRQIKASFK |
| Characteristics: | Purified recombinant Human Carbonic anhydrase II protein<br>Expression System: E.coli<br>Bioactivity: Specific activity is 50-70 nmoles/min/µg and was obtained by measuring the increase in the amount of p-nitropheno by its esterase activity. Specific activity is defined as the amount of p-nitrophenol that 1ug of enzyme can reduce at 25 °C for 1 minute.<br>Molecular weight on SDS-PAGE will appear higher. |
| Purity: | > 95 % pure |

## Target Details

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| Target: | CA2 |
| Alternative Name: | Carbonic anhydrase II (CA2 Products) |
| Background: | Carbonic anhydrase 2 (CA2) is one of fourteen forms of human alpha carbonic anhydrases. Carbonic anhydrase catalyzes reversible hydration of carbon dioxide. CA2 is a cytosolic enzyme with the highest activity among all known CAs. Mutations in the CA2 gene result in the CA2 deficiency syndrome, an autosomal recessive disorder that produces osteopetrosis, renal tubular acidosis and cerebral calcification. Recombinant human CA2 was expressed in E. coli and purified by using conventional chromatography.<br>Alternative Names: Car 2 protein, Carbonic anhydrase II protein, CA II protein, Car2 protein, CAC protein, CA-II protein, CA 2 protein, Carbonic anhydrase 2 protein, Carbonic anhydrase B protein, Carbonate dehydratase II protein, CAI protein, Carbonic anhydrase C protein, Carbonic dehydratase., CA2 protein |
| Molecular Weight: | 29.2 kDa (260 AA) |

## Application Details

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| Application Notes: | Carbonic anhydrase II protein has been used in SDS PAGE and may be suitable for use in other assays to be determined by the end user. |
| Assay Procedure: | 1. Prepare assay buffer into a suitable container: The final concentrations are 12.5 mM Tris, 75 mM NaCl, pH 7.5.<br>2. Dilute 4-Nitrophenyl-Acetate(4-NPA) to 2 mM in Assay Buffer.<br>3. Dilute recombinant CA2 protein with various concentrations (1 µg, 1 µg, 1 µg) in 50 µL assay buffer.<br>4. Load 50 uL of 2 mM 4-NPA into diluted recombinant CA2 solutions, and start the reaction by adding 50 uL of 2 mM Substrate.<br>5. Read at a wavelength of 405 nm (bottom read) in kinetic mode for 5 minutes. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Concentration: | 1 mg/mL |
| Buffer: | Supplied as a liquid in 20 mM Tris-HCl buffer, pH 8.0, containing 0 mM DTT, 50 mM NaCl, and 10 % glycerol. |

## Handling

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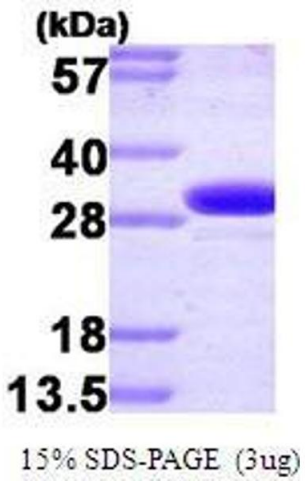
| Preservative: | Dithiothreitol (DTT) |
| Precaution of Use: | This product contains Dithiothreitol: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only. |
| Handling Advice: | Avoid repeated freeze/thaw cycles. |
| Storage: | RT/-20 °C |
| Storage Comment: | Store at 4 °C for short term storage (1/2 weeks). Aliquot and store at -20 °C or - 70 °C for long term storage. |

## Images




**SDS-PAGE**

**Image 1.** Figure annotation denotes ug of protein loaded and % gel used.