Creative Enzymes®

# Recombinant Human Carbonic Anhydrase I Protein

*Cat. No. RHCA-100*

*Lot. No.* (See product label)

## Introduction

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| ***Description*** | Carbonic Anhydrase (CA) catalyzes the reversible reaction of CO2 + H2O = HCO3- + H+, which is fundamental to many processes such as respiration, renal tubular acidification and bone resorption. Topics in a CA meeting (6th International Conference on the CAs, June 20-25, 2003, Slovakia) ranged from use of CAs as markers for tumor and hypoxia in clinic, as nutritional supplement in milk, and as a tool for CO2 removal and mosquito control in industry. CA1 is a cytosolic enzyme with the highest levels in erythrocytes and is a very early marker for erythroid differentiation. The activity of CA1 can also be measured by its ability to catalyze the reaction CO2 + H2O → HCO3- + H+, using a published method. |
| ***Synonyms*** | CA1; CA-I; Car1; Carbonate dehydratase I; carbonic anhydrase 1; Carbonic anhydrase B; Carbonic Anhydrase I; carbonic anhydrase ICAB; carbonic dehydratase; EC 4.2.1.1 |

## Product Information

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| ***Species*** | Human |
| ***Source*** | E. coli |
| ***Form*** | Supplied as a 0.2 μm filtered solution in Tris and NaCl. |
| ***EC Number*** | EC 4.2.1.1 |
| ***Molecular Weight*** | 30 kDa |
| ***Purity*** | >95% |
| ***Activity*** | >10 pmol/min/μg |
| ***Endotoxin Level*** | <1.0 EU per 1 μg of the protein by the LAL method. |

## Storage and Shipping Information

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| ***Storage*** | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 °C as supplied. 3 months, -20 to -70 °C under sterile conditions after opening. |