
Product Data Sheet

Product Name: Carbonic Anhydrase 1 Human

Cat. No.: GP21456

Batch No.: 1

Product Data

| | | | |
|---------------------|---|--------------------|-------------------------|
| Purity | >98% | Source | Escherichia Coli. |
| Physical Appearance | solid | Shipping Condition | Shipped with Ice Packs. |
| Synonyms | CA-1; CA1; CAI; CA-I; Carbonate dehydratase I; Carbonic anhydrase I; Carbonic anhydrase 1; Car1. | | |
| Amino Acid Sequence | MGSSHHHHHH SSGLVPRGSH MASPDWGYDD KNGPEQWSKL YPIANGNNQS PVDIKTSETK HDTSLKPISV SYNATAKEI INVGHSFHVN FEDNDNRSVL KGGPFSDSYR LFQFHFHWGS TNEHGSEHTV DGVKYSALH VAHWNSAKYS SLAEAASKAD GLAVIGVLMK VGEANPKLQK VLDALQAIKT KGKRAPFTNF DPSTLLPSSL DFWTYPGSLT HPPLYESVTW IICKESISVS SEQLAQFRSL LSNVEGDNAV PMQHNNRPTQ PLKGRTVRAS F. | | |
| Formulation | The Carbonic Anhydrase-1 protein solution contains 20mM Tris-HCl, pH-8, 1mM DTT and 10% Glycerol. | | |

Introduction

Carbonic anhydrase 1 is a zinc metalloenzyme that catalyses reversible hydration of CO₂ (CO₂ + H₂O ? HCO₃⁻ + H⁺). Carbonic anhydrase 1 is essential to many biological processes such as cellular respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. Carbonic anhydrase 1 is abundant in erythrocytes and an early marker for erythroid differentiation.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

Recombinant Human Carbonic anhydrase 1 produced in E.Coli is a single, non-

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glycosylated polypeptide chain containing 281 amino acids (1-261 a.a) and having a molecular mass of 31 kDa. Carbonic anhydrase 1 is fused to a20 amino acids His-Tag at N-terminus and purified by conventional chromatography techniques.

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