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## Product Data Sheet

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Product Name: CA1 Human, Active

Cat. No.: GP26133

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	withIcePacks
Synonyms	CA1, CA-I, CAB.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MASPDWGYDD KNGPEQWSKL YPIANGNNQS PVDIKTSETK HDTSLKPISV SYNATAKEI INVGHSFHVN FEDNDNRSVL KGGPFSDSYR LFQFHFHWGS TNEHGSEHTV DGVKYS AELH VAHWNSAKYS SLAEAASKAD GLAVIGVLMK VGEANPKLQK VLDALQAIKT KGKRAPFTNF DPSTLLPSSL DFWTYPGSLT HPPLYESVTW IICKESISVS SEQLAQFRSL LSNVEGDNAV PMQHNNRPTQ PLKGRTVRAS F.		
Formulation	CA1 Human protein (1mg/ml) is formulated in 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol.		

**Introduction**

CA, also known as carbonic anhydrase is an enzyme. Its main function revolves around the  $\text{CO}_2 + \text{H}_2\text{O} \rightleftharpoons \text{HCO}_3^- + \text{H}^+$  (conversion of carbon dioxide to bicarbonate & protons). CA has a zinc ion in its active site. The main function of CA is to keep acid-base balance in the blood stream and various tissues. This enzyme also assists Carbonic Anhydrase I to move  $\text{CO}_2$  to and from tissues.

**Biological Activity**

Specific activity is  $> 300 \text{ pmol/min/ug}$ , and is defined as the amount of enzyme that hydrolyze 1.0pmole of 4-nitrophenyl acetate to 4-nitrophenol per minute at pH 8.0 at 37C.

**Stability**

Store at  $46^\circ\text{C}$  if entire vial will be used within 2-4 weeks.

**Background**

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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CA1 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 281 amino acids (1-261) and having a molecular mass of 31.0 kDa. CA1 Humanis fused to a 20 amino acid His-Tag at N-terminus and purified by proprietary chromatographic techniques.

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