

## 32-6684: CA1 Human, Active

**Application :** Functional Assay

**Alternative Name :** CA1, CA-I, CAB.

### Description

Source: Escherichia Coli.

Sterile Filtered clear solution.

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.

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 Human is fused to a 20 amino acid His-Tag at N-terminus and purified by proprietary chromatographic techniques.

### Product Info

**Amount :** 2  $\mu\text{g}$  / 10  $\mu\text{g}$

**Purification :** Greater than 95.0% as determined by SDS-PAGE.

**Content :** CA1 Human protein (1mg/ml) is formulated in 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol.

**Storage condition :** Store at 4°C if entire vial will be used within 2-4 weeks.

**Amino Acid :** MGSSHHHHHH SSSLVPRGSH MASP DWGYDD KNGPEQWSKL YPIANGNNQS PVDIKTSETK  
HDTSLKPISV SYNPAKAI INVGHSHFVN FEDNDNRSVL KGGPFSDSYR LFQHFHWGS TNEHGSEHTV  
DGVKYS AELH VAHWNSAKYS SLAEAASKAD GLAVIGVLMK VGEANPKLQK VLDALQAIKT KGKRAPFTNF  
DPSTLLPSSL DFWTYPGSLT HPPLYESVTW IICKESISVS SEQLAQFRSL LSNVEGDNAV PMQHNNRPTQ  
PLKGRTVRAS F.

### Application Note

Specific activity is > 300pmol/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.