

## 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 µg / 10 µg

**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 SSGLVPRGSH MASP DWGYDD KNGPEQWSKL YPIANGNNQS PVDIKTSETK  
HDTSLKPISV SYNPAKAI INVGHSHFVN FEDNDNRSVL KGGPFSDSYR LFQHFHWGS TNEHGSEHTV  
DGVKYSALH VAWNSAKYS SLAEAAASKAD 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 37°C.