

## 32-6688: CA13 Human

**Application :** Functional Assay

**Alternative Name :** Carbonic Anhydrase XIII, Carbonate Dehydratase XIII, EC 4.2.1.1, CA-XIII, Carbonic, Anhydrase 13, CAXIII.

### Description

Source: Escherichia Coli.

Sterile Filtered clear solution.

Carbonic Anhydrase XIII, also known as CA13 is a member of the alpha-carbonic anhydrase family, which catalyzes the rapid interconversion of carbon dioxide and water to bicarbonate and protons, a reversible reaction which occurs relatively slowly in the absence of catalyst. Furthermore, the active site of nearly all carbonic anhydrases contains a zinc ion; they have been classified as metalloenzymes. At least five distinct CA families ( , , , and ) have been found. These families have no significant a.a sequence resemblance and in just about all cases are considered to be an example of convergent evolution. The -CAs have been demonstrated in humans.

CA13 Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 285 amino acids (1-262a.a) and having a molecular mass of 31.8kDa.CA13 is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

### Product Info

**Amount :** 2 µg / 10 µg

**Purification :** Greater than 90.0% as determined by SDS-PAGE.

**Content :** CA13 protein solution (0.5mg/ml) containing Phosphate buffered saline (pH7.4),10% glycerol and 1mM DTT.

**Storage condition :** 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.

**Amino Acid :** MGSSHHHHHH SSGLVPRGSP MGSMRSLSWG YREHNGPIHW KEFFPIADGD QQSPIEIKTK  
EVKYDSSLRP LSIKYDPSSA KIISNSGHSF NVDFDDTENK SVLRGGPLTG SYRLRQVHLH  
WGSADDHGSE HIVDGVSYAA ELHVHWNDS KYPSEVEAAH EPDGLAVLGV FLQIGEPNSQ  
LQKITDTLDS IKEKGKQTRF TNFDLLSLLP PSWDYWTYPG SLTVPLLES VTWIVLKQPI  
NISSQQLAKF RSLCTAEGE AAAFLVSNHR PPQPLKGRKV RASFH.

### Application Note

Specific activity is > 2,500 pmol/min/ug, and is defined as the amount of enzyme that hydrolyze 1.0 pmole of 4-nitrophenyl acetate to 4-nitrophenol per minute at pH 7.5 at 37C.