
Product Data Sheet

Product Name: CA13 Human
 Cat. No.: GP21460
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Carbonic AnhydraseXIII; Carbonate Dehydratase XIII; EC 4.2.1.1; CA-XIII;Carbonic; Anhydrase 13; CAXIII.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSPMGSMSRLSWG YREHNGPIHW KEFFPIADGD QQSPIEIKTK EVKYDSSLRP LSIKYDPSSA KIISNSGHSFNVDFTENK SVLRGGPLTG SYRLRQVHLH WGSADDHGSE HIVDGVSYAA ELHVVHWNSD KYPSFVEAAHEPDGLAVLGV FLQIGEPNSQ LQKITDTLDS IKEKGKQTRF TNFDLLSLLP PSWDYWTYPG SLTVPPLESVTWIVLKQPI NISSQQLAKF RSLLECTAEGE AAAFLVSNHR PPQPLKGRKV RASFH.		
Formulation	CA13 proteinsolution (0.5mg/ml) containing Phosphate buffered saline (pH7.4),10% glycerol and 1mM DTT.		

Introduction

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 (α, β, γ, δ and ε) have been found. These families have no significant amino acid sequence resemblance and in just about all cases are considered to be an example of convergent evolution. The α-CAs have been demonstrated in humans.

Biological Activity

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 37°C.

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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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

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

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