

# CA19-9 Human

CA19-9 Cancer Antigen Human  
NTP0013

## Product Overview

Name CA19-9 Human

### Description

CA19-9 Cancer Antigen Human

### Synonyms

Car3, CAIII, Carbonic anhydrase 3, EC 4.2.1.1, Carbonic anhydrase III, Carbonate dehydratase III, CA-III.

### Introduction

Carbonic anhydrase III is part of a multigene family that encodes carbonic anhydrase isozymes which are a class of metalloenzymes that catalyze the reversible hydration of carbon dioxide and are differentially expressed in various cell types. Carbonic anhydrase III expression is strictly tissue specific and present at high levels in skeletal muscle and much lower levels in cardiac and smooth muscle. CA3 catalyses swift conversion of carbon dioxide to bicarbonate and protons ( $\text{CO}_2 + \text{H}_2\text{O} = \text{HCO}_3 + \text{H}^+$ ). CA3 participates in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption and the formation of aqueous humor, cerebrospinal fluid, saliva and gastric juice. CA3 includes a zinc ion in its active site and maintains acid-base balance in blood and other tissues, and to help transport carbon dioxide of tissues.

### Source

Escherichia Coli.

### Physical Appearance

Sterile Filtered clear colorless solution.

### Formulation

The CA3 solution contains 20mM Tris-HCl pH-8, 1mM DTT and 10% glycerol.

### 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). Please avoid freeze-thaw cycles.

### Purity

Greater than 90% as determined by SDS-PAGE.

### Amino acid sequence

MAKEWGYASH NGPDHWHELF PNAKGENQSP IELHTKDIRH DPSLQPWSVS YDGGS AKTIL NNGKTCRVVF  
DDTYDRSMLR GGPLPGPYRL RQFHLHWGSS DDHGSEHTVD GVKYAAELHL VHWNPKYNTF KEALKQRDGI

AVIGIFLKIG HENGEFQIFL DALDKIKTKG KEAPFTKFDP SCLFPACRDY WTYQGSFTTP PCEECIVWLL  
LKEPMTVSSD QMAKLRSLLS SAENEPPVPL VSNWRPPQPI NNRVVRASFK.

#### **Precautions**

CA19-9 Human is for research use only and not for use in diagnostic or therapeutic procedures.