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California Bioscience

Product Datasheet

Product Name	Carbonic Anhydrase III Human Recombinant
Cata No	CB500449
Source	*Escherichia Coli.*
Synonyms	Car3, CAIII, Carbonic anhydrase 3, EC 4.2.1.1, Carbonic anhydrase III, Carbonate dehydratase III, CA-III.

Description

Carbonic anhydrase (carbonate dehydratase) is a family of metalloenzymes (enzymes that contain one or more metal atoms as a functional component of the enzyme) that catalyze the rapid (and reversible) conversion of carbon dioxide to bicarbonate and protons, a reaction that occurs rather slowly in the absence of a catalyst. Carbonic anhydrase greatly increases the rate of the reaction, with typical catalytic rates of the different forms of this enzyme ranging between 104 and 106 reactions per second. The active site of most carbonic anhydrases contains a zincion. CAIII is a cytoplasmic isoenzyme, but is released into the circulation following injury.
Carbonic anhydrase III Human Recombinant produced in E.Coli, and having a molecular mass of 33.9 kDa. CAIII is expressed with an amino-terminal hexahistidine tag.
The CA-III is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered blue solution.

Purity

Greater than 95.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Formulation

Supplied in 10mM Tris-HCl (pH 8), 250mM NaCl, 0.5mM DTT, 1.5mM Cysteine, and 50% Glycerol.

Stability

CAIII although stable at 4℃ for 1 week, should be stored desiccated below -18℃.
For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).
Please prevent freeze-thaw cycles.