

Recombinant Human carbonic anhydrase III, muscle specific, His-tagged

Cat. No. CA3-35H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Carbonic anhydrase III produced in <i>E.Coli</i> , 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.
Species	Human
Source	E.coli
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 10 ⁴ and 10 ⁶ reactions per second. The active site of most carbonic anhydrases contains a zinc ion. CAIII is a cytoplasmic isoenzyme, but is released into the circulation following injury.
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 1x Laemmli Buffer: 25 mM Tris-HCl pH6.8; 50 mM DTT; 1% SDS; 0.1%

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Bromophenol Blue and 2.5% Glycerol.

Stability

CAIII although stable at 14°C for 1 week; should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name

CA3 carbonic anhydrase III, muscle specific [Homo sapiens]

Synonyms

CA3; carbonic anhydrase III, muscle specific; Car3; CAIII; Carbonic anhydrase 3; CA-III; Carbonate dehydratase III; Carbonic anhydrase III; carbonic anhydrase III, muscle specific; EC 4.2.1.1

Gene ID

761

mRNA Refseq

NM_005181

Protein Refseq

NP_005172

UniProt ID

P07451

Chromosome Location

8q13-q22

MIM

114750

Pathway

Nitrogen metabolism

Function

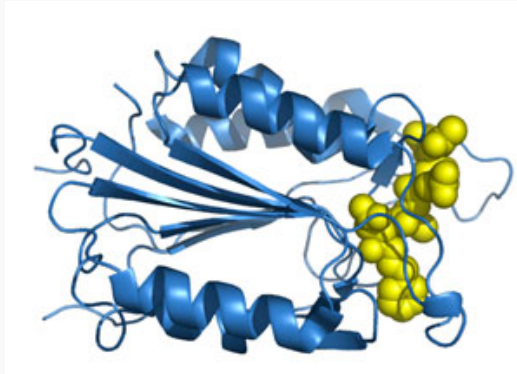
carbonate dehydratase activity; lyase activity; metal ion binding; nickel ion binding; zinc ion binding

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