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*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.
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 104 and 106 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%

Tel: 1-631-559-9269 1-516-512-3133
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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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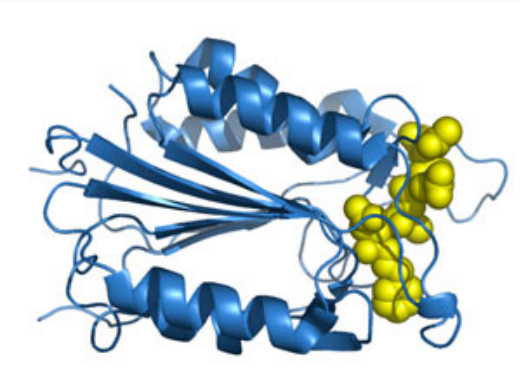
PDB rendering based on 1flj.	

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