Carbonic Anhydrase 3 Protein, Human (His)

Cat. No.:	HY-P7719
Synonyms:	rHuCarbonic Anhydrase 3, His; Carbonic Anhydrase 3; Carbonate Dehydratase III; Carbonic Anhydrase III; CA3
Species:	Human
Source:	E. coli
Accession:	NP_005172.1 (A1-K260)
Gene ID:	761
Molecular Weight:	28-30 kDa

PROPERTIES

AA Sequence	M A K E W G Y A S H N G P D H W H E L F P N A K G E N Q S P V E L H T K D I R H D P S L Q P W S V S Y D G G S A K T I L N N G K T C R V V F D D T Y D R S M L R G G P L P G P Y R L R Q F H L H W G S S D D H G S E H T V D G V K Y A A E L H L V H W N P K Y N T F K E A L K Q R D G I A V I G I F L K I G H E N G E F Q I F L D A L D K I K T K G K E A P F T K F D P S C L F P A C R D Y W T Y Q G S F T T P P C E E C I V W L L L K E P M T V S S D Q M A K L R S L L S S A E N E P P V P L V S N W R P P Q P I N N R V V R A S F K
Biological Activity	Measured by its esterase activity.The specific activity is >5 pmoles/min/μg.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 25mM Tris, 150 mM NaCl, pH 8.5.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Carbonic anhydrase III (CAIII) is a metabolic enzyme and a regulator for intracellular pH. CAIII is an ~30-kDa cytosolic protein present at high levels in liver, adipocytes, and skeletal muscles. It is a low activity enzyme among CA isozymes but is resistant to most sulfonamide inhibitors. CAIII may facilitate rapid conversion of glycolytic intermediates to oxaloacetate and citrate and stimulate their incorporation into fatty acids[2].

REFERENCES

[1]. Brian P.Mahon, et al. Chapter 5 - Carbonic Anhydrase III. Carbonic Anhydrases as Biocatalysts, 2015, Pages 91-108.

[2]. Han-Zhong Feng, et al. Carbonic Anhydrase III Is Expressed in Mouse Skeletal Muscles Independent of Fiber Type-Specific Myofilament Protein Isoforms and Plays a Role in Fatigue Resistance. Front Physiol. 2016 Dec 15;7:597.

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