Carbonic Anhydrase VIII/CA8 Protein, Mouse (His)

Cat. No.:	HY-P76765
Synonyms:	Carbonic Anhydrase-Related Protein; CARP; Carbonic Anhydrase VIII; CA8; CALS
Species:	Mouse
Source:	E. coli
Accession:	P28651 (M1-Q291)
Gene ID:	12319
Molecular Weight:	Approximately 35 kDa

PROPERTIES

AA Sequence	MADLSFIEDA VAFPEKEEDE EEEEEEGVEW GYEEGVEWGL VFPDANGEYQ SPINLNSREA RYDPSLLDVR LSPNYVVCRD CEVTNDGHTI QVILKSKSVL SGGPLPQGQE FELYEVRFHW GRENQRGSEH TVNFKAFPME LHLIHWNSTL FGSIDEAVGK PHGIAIIALF VQIGKEHVGL KAVTEILQDI QYKGKSKTIP CFNPNTLLPD PLLRDYWVYE GSLTIPPCSE GVTWILFRYP LTISQMQIEE FRRLRTHVKG AELVEGCDGI LGDNFRPTQP LSDRVIRAAF Q
Biological Activity	Measured by its ability to hydrolyze 4-nitrophenyl acetate to 4-nitrophenol per minute. The specific activity is 396.0323 pmoL/min/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Carbonic Anhydrase VIII (CA8) protein, in accordance with available information, lacks carbonic anhydrase catalytic activity,

distinguishing it from other members of the carbonic anhydrase enzyme family. Notably, CA8 is expressed exclusively in Purkinje cells, emphasizing its cell-specific distribution within the central nervous system. The absence of catalytic activity in CA8 suggests that its role may extend beyond the classical enzymatic functions associated with carbonic anhydrases. The unique expression pattern in Purkinje cells indicates a specialized role for CA8 in these neurons, warranting further investigation into its specific molecular and physiological functions within this distinct cellular context. Elucidating the role of CA8 in Purkinje cells may provide valuable insights into its contributions to neuronal processes and potential implications for neurological functions. (

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