

Acetylcholinesterase/ACHE Protein, Mouse (HEK293, His)

Cat. No.:	HY-P72811
Synonyms:	Acetylcholinesterase; AChE
Species:	Mouse
Source:	HEK293
Accession:	NP_033729.1 (E32-L614)
Gene ID:	11423
Molecular Weight:	Approximately 80 kDa

PROPERTIES

AA Sequence	<p> E G R E D P Q L L V R V R G G Q L R G I R L K A P G G P V S A F L G I P F A E P P V G S R R F M P P E P K R P W S G V L D A T T F Q N V C Y Q Y V D T L Y P G F E G T E M W N P N R E L S E D C L Y L N V W T P Y P R P A S P T P V L I W I Y G G G F Y S G A A S L D V Y D G R F L A Q V E G A V L V S M N Y R V G T F G F L A L P G S R E A P G N V G L L D Q R L A L Q W V Q E N I A A F G G D P M S V T L F G E S A G A A S V G M H I L S L P S R S L F H R A V L Q S G T P N G P W A T V S A G E A R R R A T L L A R L V G C P P G G A G G N D T E L I A C L R T R P A Q D L V D H E W H V L P Q E S I F R F S F V P V V D G D F L S D T P E A L I N T G D F Q D L Q V L V G V V K D E G S Y F L V Y G V P G F S K D N E S L I S R A Q F L A G V R I G V P Q A S D L A A E A V V L H Y T D W L H P E D P T H L R D A M S A V V G D H N V V C P V A Q L A G R L A A Q G A R V Y A Y I F E H R A S T L T W P L W M G V P H G Y E I E F I F G L P L D P S L N Y T T E E R I F A Q R L M K Y W T N F A R T G D P N D P R D S K S P Q W P P Y T T A A Q Q Y V S L N L K P L E V R R G L R A Q T C A F W N R F L P K L L S A T D T L D E A E R Q W K A E F H R W S S Y M V H W K N Q F D H Y S K Q E R C S D L </p>
Biological Activity	Measured by its ability to cleave Acetylthiocholine. The specific activity is > 250 nmoL/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
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

Acetylcholinesterase (ACHE) protein, with its diverse functional repertoire, exhibits acetylcholinesterase activity, identical protein binding activity, and the ability for protein self-association. Its involvement in positive regulation of cold-induced thermogenesis positions it upstream of critical processes such as acetylcholine catabolic processes, acetylcholine receptor signaling pathways, and the regulation of receptor recycling. ACHE is found in various cellular components, including the basement membrane, cell surface, and neuromuscular junction. Its expression spans across multiple structures, including the alimentary system, genitourinary system, musculature, nervous system, and sensory organs. Notably, human orthologs of ACHE are implicated in significant health conditions such as Alzheimer's disease, epilepsy, and myasthenia gravis, highlighting the importance of this protein in various physiological contexts. Broad expression patterns further emphasize its fundamental role in multiple tissues, particularly in the cerebellum and thymus.

Caution: Product has not been fully validated for medical applications. For research use only.

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