
Product Data Sheet

Product Name: ACHE Human
 Cat. No.: GP26121
 Batch No.: 1

Product Data

Purity >98% Source HEK293 Cells.

Physical Appearance solid Shipping Condition withIcePacks

Synonyms AChE, ACEE, ACES_HUMAN, Acetylcholinesterase, ACHE, ARACHE, N-ACHE, VT, Acetylcholinesterase isoform E4-E6

Amino Acid Sequence
 DGSEGREDAE LLVTVRGGRL RGIRLKTGG PVSAFLGIPF AEPPMGPRRF
 LPPEPKQPWS GVVDATTFQS VCYQYVDTLY PGFEGTEMWN PNRESEDCL
 YLNVWTPYPR PTSPTPVLVW IYGGGFYSGA SSLDVYDGRF LVQAERTVLV
 SMNYRVGAFG FLALPGSREA PGNVGLLDQR LALQWVQENV AAFGGDPTSV
 TLFGESAGAA SVGMHLLSPP SRGLFHRAVL QSGAPNGPWA TVGMGEARRR
 ATQLAHLVGC PPGGTGGNDT ELVACLRTTRP AQVLVNHEWH VLPQESVFRF
 SFVPVVDGDF LSDTPEALIN AGDFHGLQVL VGVVKDEGSY FLVYGAPGFS
 KDNESSLISRA EFLAGVRVGV PQVSDLAEEA VVLHYTDWLH PEDPARLREA
 LSDVVGDNHV VCPVAQLAGR LAAQGARVYA YVFEHRASTL SWPLWMGVPH
 GYEIEFIFGI PLDPSRNYTA EEKIFAQRLM RYWANFARTG DPNEPRDPKA
 PQWPPYTAGA QQYVSLDLRP LEVRRGLRAQ ACAFWNRFLP KLLSATDTLD
 EAERQWKAEF HRWSSYMVHW KNQFDHYSKQ DRCSDLHHHH HH

Formulation The ACHE solution (0.25mg/ml) contains 10% Glycerol and Phosphate-Buffered Saline (pH 7.4).

Introduction

Acetylcholinesterase (ACHE) belongs to the type-B carboxylesterase/lipase family. ACHE catalyzes the breakdown of acetylcholine and other choline esters that play a role as neurotransmitters. During neurotransmission, ACh is released from the presynaptic neuron into the synaptic cleft and binds ACh receptors on the post-synaptic membrane, transmitting the signal from the nerve. ACHE is located on the post-synaptic membrane, terminates the signal transmission by hydrolyzing ACh.

Biological Activity

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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Specific activity is > 6,000 nmol/min/ug. Defined by the amount of enzyme that cleaves 1 nmole of acetylthiocholine per minute at pH 7.5 at 25°C.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

ACHE Human Recombinant produced in HEK cells is a single, glycosylated, polypeptide chain (32-614 a.a) containing a total of 592 amino acids, having a molecular mass of 65.6 kDa. ACHE is fused to a 6 amino acid His-tag at C-terminus, and is purified by proprietary chromatographic techniques.

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