

Active Recombinant Human ACHE Protein, His-tagged

Cat. No. ACHE-04H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human ACHE (32-614aa), fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.
Species	Human
Source	HEK293
ProteinLength	32-614aa
Description	Acetylcholinesterase hydrolyzes the neurotransmitter, acetylcholine at neuromuscular junctions and brain cholinergic synapses, and thus terminates signal transmission. It is also found on the red blood cell membranes, where it constitutes the Yt blood group antigen. Acetylcholinesterase exists in multiple molecular forms which possess similar catalytic properties, but differ in their oligomeric assembly and mode of cell attachment to the cell surface. It is encoded by the single ACHE gene, and the structural diversity in the gene products arises from alternative mRNA splicing, and post-translational associations of catalytic and structural subunits. The major form of acetylcholinesterase found in brain, muscle and other tissues is the hydrophilic species, which forms disulfide-linked oligomers with collagenous, or lipid-containing structural subunits. The other, alternatively spliced form, expressed primarily in the erythroid tissues, differs at the C-terminal end, and contains a cleavable hydrophobic peptide with a GPI-anchor site. It associates with the membranes through the phosphoinositide (PI) moieties added post-translationally. AChE activity may

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

	constitute a sensitive biomarker of RBC ageing in vivo, and thus, may be of aid in understanding the effects of transfusion.
Form	Liquid
Bio-activity	Specific activity is > 6,000 nmol/min/mg, and is defined as the amount of enzyme that cleaves 1.0 nmol acetylthiocholine per minute at pH7.5 at 25 centigrade.
Molecular Mass	65.6 kDa (592aa)
AA Sequence	<p>EGREDAELLVTVRGGRLRGIRLKTGGPVSAFLGIPFAEPPMGPRRFLPPEPKQPW SGVVDATTFQSVCYQYVDTLYPGFEGTEMWNPNRELSCLYLNWVTPYPRPTSP TPVLVWIYGGGFYSGASSLDVYDGRFLVQAERTVLVSMNYRVGAFGLALPGSREA PGNVGLLDQRLALQWVQENVAAFGGDPTSVTLFGESAGAASVGMHLLSPPSRGLF HRAVLQSGAPNGPWATVGMGEARRRATQLAHLVGCPPGGTGGNDTELVACLRTR PAQVLVNHEWHVLPQESVFRFSFVPVVDGDFLSDTPEALINAGDFHGLQVLVGVVK DEGSYFLVYGAPGFSKDNESLISRAEFLAGVRVGVQVSDLAEEAVVLHYTDWLHP EDPARLREALSDVVGDHNVCPVAQLAGRLAAQGARVYAYVFEHRASTLSWPLWM GVPHGYEIEFIFIGIPLDPSRNYTAEKIFAQRLMRYWANFARTGDPNEPRDPKAPQW PPYTAGAQQYVSLDLRPLEVRRGLRAQACAFWNRFLPKLLSATDTLDEAERQWKAE FHRWSSYMVHWKNQFDHYSKQDRCSL</p>
Endotoxin	< 1 EU/μg of protein (determined by LAL method)
Purity	> 95% by SDS-PAGE
Applications	SDS-PAGE, Enzyme Activity
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.

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Concentration 0.25 mg/mL (determined by Absorbance at 280nm)

Storage Buffer Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

GENE INFORMATION

Gene Name [ACHE acetylcholinesterase \(Cartwright blood group\) \[Homo sapiens \(human\) \]](#)

Official Symbol [ACHE](#)

Synonyms ACHE; acetylcholinesterase (Cartwright blood group); YT; ACEE; ARACHE; N-ACHE; acetylcholinesterase; Yt blood group; acetylcholinesterase (Yt blood group); apoptosis-related acetylcholinesterase; EC 3.1.1.7

Gene ID [43](#)

mRNA Refseq [NM_000665](#)

Protein Refseq [NP_000656.1](#)

MIM [100740](#)

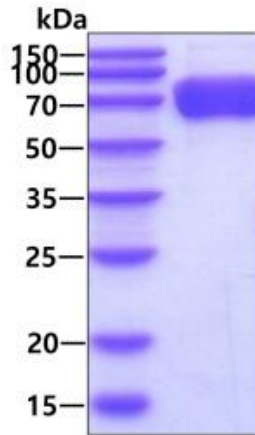
UniProt ID [P22303](#)

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SDS-PAGE



3 μ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain

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