

Recombinant Human ACHE Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. ACHE-1175H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	ACHE MS Standard C13 and N15-labeled recombinant protein (NP_056646) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
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 constitute a sensitive biomarker of RBC ageing in vivo, and thus, may be of aid in understanding the effects of transfusion

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Molecular Mass	67.38 kDa
AA Sequence	MRPPQCLLHTPSLASPLLLLLLWLLGGGVGAEGREDAELLVTVRGGRLRGIRLKT PGPVS AFLGIPFAEPPMGPRRFLPPEPKQPWSGVVDATTFQSVCYQYVDTLYPGFEG TEMWNP NRELSEDCLYLNWVTPYPRPTSPTPVLWVIYGGGFYSGASSLDVYDGRF LVQAERTVLVSMNYRVGAFGLALPGSREAPGNVGLLDQRLALQWVQENVAAFGG DPTSVTLFGESAGAASVGMHLLSPPSRGLFHRAVLQSGAPNGPWATVGMGEARRR ATQLAHLVGCPGGTGGNDTELVA CLRTRPAQVLVNHEWHVLPQESVFRFSFVPV VDGDFLSDTPEALINAGDFHGLQVLVG VVKDEGSYFLVYGAPGFSKDNESLISRAEF LAGVRVGVPQVSDLA AEAVVLHYTDWLHPEDPARLREALSDVVDHNVVCPVAQL AGRLAAQGARVYAYVFEHRASTLSWPLWMGVPHGYEIEFIFGIPLDPSRNYTAEKI FAQRLMRYWANFARTGDPNEPRDPKAPQWPPYTAGAQYVSLDLRPLEVRRGLR AQACAFWN RFLPKLLSATASEAPSTCPGFTHGEAAPRGLPLPLLLLHQLLLLFLSHL RRLTRTRPLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 µg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.
GENE INFORMATION	
Gene Name	ACHE acetylcholinesterase [Homo sapiens (human)]
Official Symbol	ACHE

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Synonyms	ACHE; acetylcholinesterase; acetylcholinesterase (YT blood group), acetylcholinesterase (Yt blood group), YT; Yt blood group; apoptosis-related acetylcholinesterase; YT; ACEE; ARACHE; N-ACHE;
Gene ID	43
mRNA Refseq	NM_015831
Protein Refseq	NP_056646
MIM	100740
UniProt ID	P22303
SDS-PAGE	