

## Product datasheet for **TP311249M**

### Acetylcholinesterase (ACHE) (NM\_015831) Human Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human acetylcholinesterase (Yt blood group) (ACHE), transcript variant E4-E5, 100 µg
Species:	Human
Expression Host:	HEK293T
Expression cDNA	>RC211249 representing NM_015831
Clone or AA Sequence:	Red=Cloning site Green=Tags(s)

MRPPQCLLHTPSLASPLLLLLLWLLGGGVGAEGREDAELLVTVRGGRLRGIRLKTGGPVSAFLGIPFAE  
PPMGPRRFLPPEPKQPWSGVVDATTFQSVCYQYVDTLYPGFEGTEMWNPNRESEDCLYLNVWTPYPRPT  
SPTPVLWVIYGGGFYSGASSLDVYDGRFLVQAERTVLVSMNYRVGAFGLALPGSREAPGNVGLLDQRLA  
LQWVQENVAAFGGDPTSVTLFGESAGAASVGMHLLSPPSRGLFHRAVLQSGAPNGPWATVGMGEARRRAT  
QLAHLVGCPPGGTGGNDELVACLRTRPAQVLVNHVHVLQPESVFRFSFVPVVDGDFLSDTPEALINAG  
DFHGLQVLVGVVKDEGSYFLVYGAPGFSKDNESLISRAEFLAGVRVGPVQVSDLAAEAVLHYTDWLHPE  
DPARLREALSDVVDHNVCPVAQLAGRLAAQGARVYAYVFEHRASTLSWPLWMGVPHGYEIEFIFGIPL  
DPSRNYTAEKIFAQRLMRYWANFARTGDPNEPRDPKAPQWPPYTAGAQQYVSLDLRPLEVRRGLRAQAC  
AFWNRFLPKLLSATASEAPSTCPGFTHGEAAPRPLPLLLLLHQLLLLFLSHLRRL

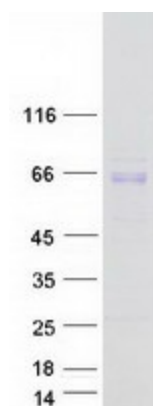
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-Myc/DDK
Predicted MW:	60.8 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Preparation:	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.



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<b>Stability:</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>RefSeq:</b>	<a href="#">NP_056646</a>
<b>Locus ID:</b>	43
<b>UniProt ID:</b>	<a href="#">P22303</a>
<b>RefSeq Size:</b>	2978
<b>Cytogenetics:</b>	7q22.1
<b>RefSeq ORF:</b>	1851
<b>Synonyms:</b>	ACEE; ARACHE; N-ACHE; YT
<b>Summary:</b>	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[provided by RefSeq, Sep 2019]
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Glycerophospholipid metabolism

**Product images:**

Coomassie blue staining of purified ACHE protein (Cat# [TP311249]). The protein was produced from HEK293T cells transfected with ACHE cDNA clone (Cat# [RC211249]) using MegaTran 2.0 (Cat# [TT210002]).