

Product datasheet for **RG238720**

Acetylcholinesterase (ACHE) (NM_001282449) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Acetylcholinesterase (ACHE) (NM_001282449) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Acetylcholinesterase
Synonyms:	ACEE; ARACHE; N-ACHE; YT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG238720 representing NM_001282449.
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGAGGCCCGCCAGTGTCTGCTGCACACGCCTTCCCTGGCTTCCCCTCTTCTCTCTCTCTCTGG
CTCCTGGGTGGAGGAGTGGGGCTGAGGGCCGGGAGGATGCAGAGCTGCTGGTGACGGTGGTGGGGGC
CGGCTGCGGGGCATTGCGCTGAAGACCCCGGGGCCCTGTCTGCTTTCTGGGCATCCCTTTGCG
GAGCCACCCATGGGACCCCGTCGTTTTCTGCCACCGGAGCCCAAGCAGCCTTGGTCAGGGGTGGTAGAC
GCTACAACCTTCCAGAGTGTCTGCTACCAATATGTGGACACCCTATACCCAGTTTTGAGGGCACCGAG
ATGTGGAACCCCAACCGTGAGCTGAGCGAGGACTGCCTGTACCTCAACGTGTGGACACCATACCCCGG
CCTACATCCCCACCCCTGTCTCTGCTGGATCTATGGGGTGGCTTCTACAGTGGGGCCTCTCTTTG
GACGTGTACGATGGCCGTTCTTGGTACAGGCCGAGAGGACTGTGCTGGTGTCCATGAACACCGGGTG
GGAGCCTTTGGCTTCTGGCCCTGCCGGGAGCCGAGAGGCCCGGGCAATGTGGGTCTCTGGATCAG
AGGCTGGCCCTGCAGTGGGTGCAGGAGAACGTGGCAGCCTTCGGGGTGACCCGACATCAGTGACGCTG
TTTGGGGAGAGCGGGAGCCGCTCGGTGGGCATGCACCTGCTGTCCCCGCCAGCCGGGGCTGTTC
CACAGGGCCGTGCTGCAGAGCGGTGCCCAATGGACCCTGGGCCACGGTGGGCATGGGAGAGGCCCGT
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CTGGAGGTGCGCGGGGGCTGCGCGCCAGGCCTGCGCCTTCTGGAACCGCTTCTCCCCAAATTGCTC
AGCGCCACCGACGCTCGACGAGGCGGAGCGCCAGTGAAGGCCGAGTTCACCCGCTGGAGCTCTAC
ATGGTGCAGTGAAGAACCAGTTCGACCACTACAGCAAGCAGGATCGCTGCTCAGACCTG
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAAAC
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Protein Sequence:

>Peptide sequence encoded by RG238720
 Blue=ORF Red=Cloning site Green=Tag(s)

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MRPPQCLLHTPSLASPLLLLLLWLLGGGVGAEGREDAELLVTVRGGRLRGIRLKTGGPVSAFLGIPFA
EPPMGPRRFLPPEPKQPWSGVVDATTFQSVCYQYVDL YPGFEGTEMWNP NRELSEDCL YLNVWTPYPR
PTSPTPVLWVIYGGGFYSGASSLDVYDGRFLVQAERTVLVSMNYRVGAFGLALPGSREAPGNVLLDQ
RLALQWQENVAAFGGDPTSVTLFGESAGAASVGMHLLSPPSRGLFHRAVLQSGAPNGPWATVGMGEAR
RRATQLAHLVGCPPGGTGGNDTELVACLRTRPAQVLVNHEWHVLPQESVFRFSFVVPVVDGDFLSDTPEA
LINAGDFHGLQLAGRLAAQGARVYAYVFEHRASTLSWPLWMGVPHGYEIEFIFGIPLDPSRNYTAEKI
FAQRLMRYWANFARTGDPNEPRDPKAPQWPPYTAGAQYVSLDLRPLEVRRGLRAQACAFWNRFLPKLL
SATDTLDEAERQWKAEFHRWSSYMVHWKNQFDHYKQDRCSDL
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIRSNATVEHLHPMGDNDLDGSFTRTFLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA
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Restriction Sites:

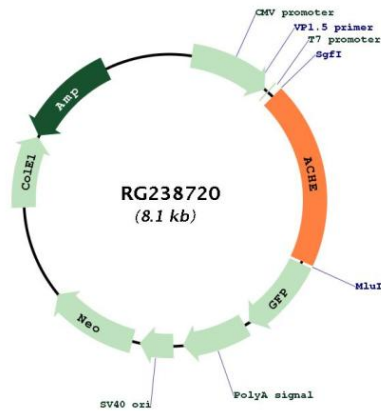
Sgfl-Mlul

Cloning Scheme:


ACCN:	NM_001282449
ORF Size:	1578 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
RefSeq:	NM_001282449.2
RefSeq Size:	2012 bp
RefSeq ORF:	1581 bp
Locus ID:	43
UniProt ID:	P22303
Cytogenetics:	7q22.1
Protein Families:	Druggable Genome
Protein Pathways:	Glycerophospholipid metabolism
MW:	58.8 kDa

Gene Summary:

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]

Product images:


Circular map for RG238720