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Product datasheet for RC239114

Acetylcholinesterase (ACHE) (NM_001302621) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Acetylcholinesterase (ACHE) (NM_001302621) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Acetylcholinesterase
Synonyms:	ACEE; ARACHE; N-ACHE; YT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC239114 representing NM_001302621
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGGCCCCCGCAGTGTCTGCTGCACACGCCTTCCCTGGCTTCCCCACTCCTTCTCCTCCTCCTCTGGC
TCCTGGGTGGAGGAGTGGGGGCTGAGGGCCGGGAGGATGCAGAGCTGCTGGTGACGGTGCGTGGGGGCCG
GCTGCGGGGCATTCGCCTGAAGACCCCCGGGGGCCCTGTCTCTGCTTTCCTGGGCATCCCCTTTGCGGAG
CCACCCATGGGACCCCGTCGCTTTCTGCCACCGGAGCCCAAGCAGCCTTGGTCAGGGGTGGTAGACGCTA
CAACCTTCCAGAGTGTCTGCTACCAATATGTGGACACCCTATACCCAGGTTTTGAGGGCACCGAGATGTG
GAACCCCAACCGTGAGCTGAGCGAGGACTGCCTGTACCTCAACGTGTGGACACCATACCCCCGGCCTACA
TCCCCCACCCCTGTCCTCGTCTGGATCTATGGGGGTGGCTTCTACAGTGGGGCCTCCTCCTTGGACGTGT
ACGATGGCCGCTTCTTGGTACAGGCCGAGAGGACTGTGCTGGTGTCCATGAACTACCGGGTGGGAGCCTT
TGGCTTCCTGGCCCTGCCGGGGAGCCGAGAGGCCCCGGGCAATGTGGGTCTCCTGGATCAGAGGCTGGCC
CTGCAGTGGGTGCAGGAGAACGTGGCAGCCTTCGGGGGTGACCCGACATCAGTGACGCTGTTTGGGGAGA
GCGCGGGAGCCGCCTCGGTGGGCATGCACCTGCTGTCCCCGCCCAGCCGGGGCCTGTTCCACAGGGCCGT
GCTGCAGAGCGGTGCCCCCAATGGACCCTGGGCCACGGTGGGCATGGGAGAGGCCCGTCGCAGGGCCACG
CAGCTGGCCCACCTTGTGGGCTGTCCTCCAGGCGGCACTGGTGGGAATGACACAGAGCTGGTAGCCTGCC
TTCGGACACGACCAGCGCAGGTCCTGGTGAACCACGAATGGCACGTGCTGCCTCAAGAAAGCGTCTTCCG
GTTCTCCTTCGTGCCTGTGGTAGATGGAGACTTCCTCAGTGACACCCCAGAGGCCCTCATCAACGCGGGA
GACTTCCACGGCCTGCAGGTGCTGGTGGGTGTGGTGAAGGATGAGGGCTCGTATTTTCTGGTTTACGGGG
CCCCAGGCTTCAGCAAAGACAACGAGTCTCTCATCAGCCGGGCCGAGTTCCTGGCCGGGGTGCGGGTCGG
GGTTCCCCAGGTAAGTGACCTGGCAGCCGAGGCTGTGGTCCTGCATTACACAGACTGGCTGCATCCCGAG
GACCCGGCACGCCTGAGGGAGGCCCTGAGCGATGTGGTGGGCGACCACAATGTCGTGTGCCCCGTGGCCC
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GCTCTCCTGGCCCCTGTGGATGGGGGTGCCCCACGGCTACGAGATCGAGTTCATCTTTGGGATCCCCCTG
GACCCCTCTCGAAACTACACGGCAGAGGAGAAAATCTTCGCCCAGCGACTGATGCGATACTGGGCCAACT
TTGCCCGCACAGGGGATCCCAATGAGCCCCGAGACCCCAAGGCCCCACAATGGCCCCCGTACACGGCGGG
GGCTCAGCAGTACGTTAGTCTGGACCTGCGGCCGCTGGAGGTGCGGCGGGGGCTGCGCGCCCAGGCCTGC
GCCTTCTGGAACCGCTTCCTCCCCAAATTGCTCAGCGCCACCGCCTCGGAGGCTCCCAGCACCTGCCCAG
GCTTCACCCATGGGGAGGCTGCTCCGAGGCCCGGCCTCCCCCTGCCCCTCCTCCTCCTCCACCAGCTTCT
CCTCCTCTTCCTCTCCCACCTCCGGCGGCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

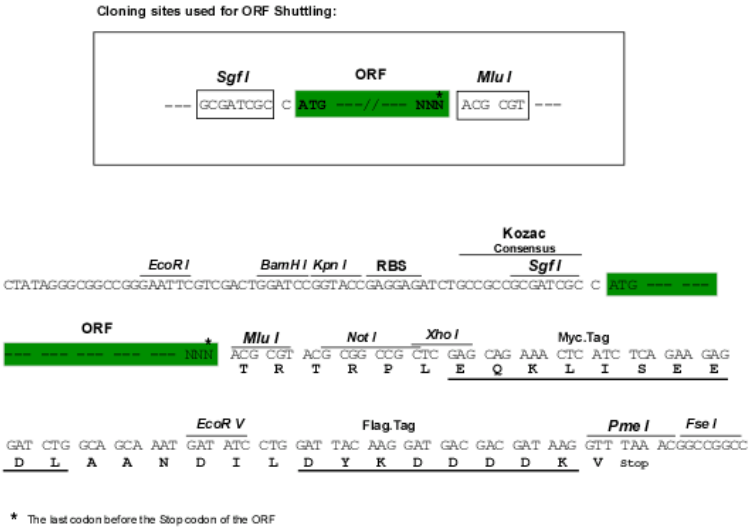
>RC239114 representing NM_001302621
Red=Cloning site Green=Tags(s)

MRPPQCLLHTPSLASPLLLLLLWLLGGGVGAEGREDAELLVTVRGGRLRGIRLKTPGGPVSAFLGIPFAE
PPMGPRRFLPPEPKQPWSGVVDATTFQSVCYQYVDTLYPGFEGTEMWNPNRELSEDCLYLNVWTPYPRPT
SPTPVLVWIYGGGFYSGASSLDVYDGRFLVQAERTVLVSMNYRVGAFGFLALPGSREAPGNVGLLDQRLA
LQWVQENVAAFGGDPTSVTLFGESAGAASVGMHLLSPPSRGLFHRAVLQSGAPNGPWATVGMGEARRRAT
QLAHLVGCPPGGTGGNDTELVACLRTRPAQVLVNHEWHVLPQESVFRFSFVPVVDGDFLSDTPEALINAG
DFHGLQVLVGVVKDEGSYFLVYGAPGFSKDNESLISRAEFLAGVRVGVPQVSDLAAEAVVLHYTDWLHPE
DPARLREALSDVVGDHNVVCPVAQLAGRLAAQGARVYAYVFEHRASTLSWPLWMGVPHGYEIEFIFGIPL
DPSRNYTAEEKIFAQRLMRYWANFARTGDPNEPRDPKAPQWPPYTAGAQQYVSLDLRPLEVRRGLRAQAC
AFWNRFLPKLLSATASEAPSTCPGFTHGEAAPRPGLPLPLLLLHQLLLLFLSHLRRL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001302621

ORF Size: 1851 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).

Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: NM_001302621.3

RefSeq Size: 2299 bp

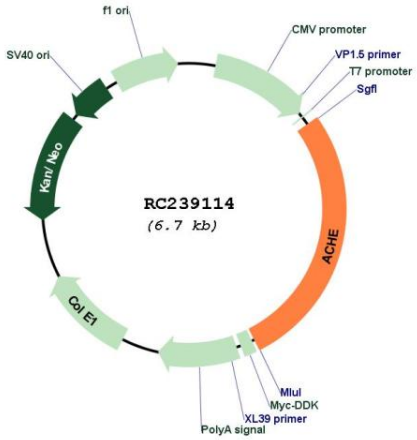
RefSeq ORF: 1854 bp

Locus ID: 43

UniProt ID: P22303

Cytogenetics:	7q22.1
Protein Families:	Druggable Genome
Protein Pathways:	Glycerophospholipid metabolism
MW:	67.4 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 RC239114