



# Recombinant Rat Acetylcholinesterase (Ache)

<b>Product Code</b>	CSB-EP001154RA-B
<b>Storage</b>	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
<b>Uniprot No.</b>	P37136
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Rattus norvegicus (Rat)
<b>Purity</b>	≥85% (SDS-PAGE)
<b>Sequence</b>	EGREDPQLL VRVRGGQLRG IRLKAPGGPV SAFLGIPFAE PPVGSRRFMP PEPKRPWSGI LDATTFQNVV YQYVDTLYPG FEGTEMWNPV RELSEDCLYL NVWTPYPRPT SPTPVLIIYI GGGFYSGASS LDVYDGRFLA QVEGTVLVSM NYRVGTFGFL ALPGSREAPG NVGLLDQRLA LQWVQENIAA FGGDPMSVTL FGESAGAASV GMHILSLPSR SLFHRAVLQS GTPNGPWATV SAGEARRRAT LLARLVGCPP GGAGGNDTEL ISCLRTRPAQ DLVDHEWHVL PQESIFRFSF VPVVDGDFLS DTPDALINTG DFQDLQVLVG VVKDEGSYFL VYGVPGFSKD NESLISRAQF LAGVRIGVPQ ASDLAAEAVV LHYTDWLHPE DPAHLRDAMS AVVGDHNVVC PVAQLAGRLA AQQARVYAYI FEHRASTLTW PLWVGVPVHG Y EIEFIFGLPL DPSLNVTVEE RIFAQRLMQY WTNFARTGDP NDPRDSKSPR WPPYTAAQQ YVSLNLKPLE VRRGLRAQTC AFWNRFLPKL LSATDTLDEA ERQWKAEFHR WSSYMVHWKN QFDHYSKQER CSDL
<b>Source</b>	E.coli
<b>Target Names</b>	Ache
<b>Protein Names</b>	Recommended name: Acetylcholinesterase Short name= AChE EC= 3.1.1.7
<b>Expression Region</b>	32-614
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	Tag type will be determined during the manufacturing process.
<b>Protein Length</b>	Full Length of Mature Protein
<b>Target Details</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.

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**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

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**Shelf Life**

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.