

Acetylcholinesterase (ACHE) Active Protein | ACHE active protein

Active Acetylcholinesterase (ACHE)

CATALOG # AAA161851	HOST 293F cell	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Acetylcholinesterase (ACHE); Active Acetylcholinesterase (ACHE); Acetylcholinesterase; ACHE active protein (eukaryotic; 293F cell); Mouse; ARACHe; N-AChE; YT4; ACHE active protein

PRODUCT SPECIFICATIONS

Host	293F cell
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Glu32~Leu6 14
Applicable Applications for ACHE active protein	Activity Assay, Cell Culture
Species	Mouse
Expression System	Eukaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	5.9
Research Area	Signal transduction, Enzyme & Kinase, Metabolic pathway, Hematology, Neuro science
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

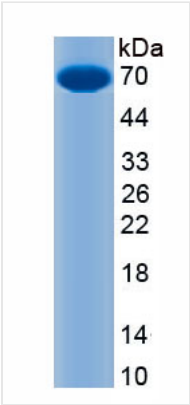
IMAGES

Specific Activity (nmol/min/ug)=
$$\frac{\text{Adjusted } V_{\text{max}}^* \text{ (OD/min)} \times \text{well volume (L)} \times 10^9 \text{ nmol/mol}}{\text{ext. coeff}^{**} \text{ (M}^{-1}\text{cm}^{-1}) \times \text{path corr.}^{***} \text{ (cm)} \times \text{amount of enzyme (ug)}}$$

*Adjusted for Substrate Blank
**Using the extinction coefficient 13260 M⁻¹cm⁻¹
***Using the path correction 0.320 cm

Bioactivity

The classical role of ACHE is to terminate cholinergic neurotransmission by hydrolysis of acetylcholine (ACH). ACHE is thought to be involved in the pathology of Alzheimer's disease (AD) by accelerating the assembly of A beta peptides into fibrillar species through forming complexes with A beta via the peripheral anionic site on ACHE. ACHE inhibitors have been used to delay symptoms of AD patients by virtue of their ability to enhance ACH availability, as well as reduce amyloidogenesis and subsequent neurotoxicity. Its involvement in the cholinergic anti-inflammatory pathway connects ACHE with a possible marker of low-grade systemic inflammation in obesity, hypertension, coronary heart disease, and AD. The activity of recombinant mouse ACHE was measured by its ability to cleave Acetylthiocholine in the assay buffer 0.1 M sodium phosphate, 0.05% (w/v) Brij-35, pH 7.5. 50 uL of various concentrations of rmACHE (diluted by Assay Buffer) was added into the 96-well clear plate and the reaction was started by the addition of 50 ul substrate mixture of 200 uM acetylthiocholine and 100 uM DTNB. The final well serves as a negative control with no rmACHE, replaced with 50ul assay buffer and 50 ul substrate mixture. Read plate in kinetic mode for 5 minutes at an absorbance of 405 nm. The specific activity of recombinant mouse ACHE is >2200 nmol/min/ug.



SDS-PAGE
Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for ACHE active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	586597902
NCBI GeneID	11423
NCBI Accession #	NP_001276939.1
NCBI GenBank Nucleotide #	NM_001290010.1
UniProt Accession #	P21836
Molecular Weight	~ Da
NCBI Official Full Name	acetylcholinesterase
NCBI Official Synonym Full Names	acetylcholinesterase
NCBI Official Symbol	Ache
NCBI Protein Information	acetylcholinesterase
UniProt Protein Name	Acetylcholinesterase
UniProt Gene Name	Ache
UniProt Synonym Gene Names	AChE

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.