BACKGROUND

Acetylcholinesterase (AChE) hydrolyzes acetylcholine at synaptic junctions. Alternative mRNA splicing gives rise to three forms of AChE. The T form, also known as the asymmetric form, is soluble and is present in synapses. The H form is also known as the globular form and is present on the outer surfaces of cell membranes. The R form is not known to be a functional species. AChE globular form subunits are GPI-anchored to cell membranes and asymmetric subunits are anchored to basal lamina components by a collagen tail. The catalytic subunits of AChE are oligomers composed of disulfide-linked homodimers. The loss of AChE from cholinergic and non-cholinergic neurons in the brain is seen in patients with Alzheimer’s disease. However, AChE activity is increased around amyloid plaques, which may be due to a disturbance in calcium homeostasis involving the opening of L-type voltage-dependent calcium channels.

CHROMOSOMAL LOCATION

Genetic locus: AChE (human) mapping to 7q22.1; AChE (mouse) mapping to 5G2.

SOURCE

AChE (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AChE of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6430 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

AChE (C-16) is recommended for detection of AChE of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AChE (C-16) is also recommended for detection of AChE in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AChE siRNA (h): sc-29628, AChE siRNA (m): sc-29629, AChE shRNA Plasmid (h): sc-29628-SH, AChE shRNA Plasmid (m): sc-29629-SH, AChE shRNA (h) Lentiviral Particles: sc-29628-V and AChE shRNA (m) Lentiviral Particles: sc-29629-V.

Molecular Weight (predicted) of AChE: 68 kDa.

Molecular Weight (average of observed) of AChE: 71 kDa.

Positive Controls: SW-13 cell lysate: sc-24778, PC-12 cell lysate: sc-2250 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS


RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

Try AChE (A-11): sc-373901, our highly recommended monoclonal alternative to AChE (C-16).