

Alzheimer's Disease Antibody Sampler Kit

Cat# AK0112

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

Alzheimer's Disease (AD) is one of the most common neurodegenerative diseases worldwide. Clinically, it is characterized by the presence of extracellular amyloid plaques and intracellular neurofibrillary tangles, which results in neuronal dysfunction and cell death. Central to this disease is the differential processing of the integral transmembrane glycoprotein Amyloid β (A β) precursor protein (APP) that exists as several isoforms. The amino acid sequence of APP contains the amyloid domain, which can be released by a two-step proteolytic cleavage. β -secretase (BACE) is an aspartic acid proteinase that catalyses the initial step in APP processing by cleaving and releasing a soluble, extracellular APP- β (sAPP β) ectodomain and generating a membrane-bound, carboxy-terminal fragment consisting of 99 amino acids (CTF99). Additional processing of CTF99 by γ -secretase generates the amyloid β -peptide (A β) that forms aggregates in the brains of AD patients. BACE is an attractive target for inhibitors in AD therapy since it catalyses the first and rate limiting step in amyloidogenic APP processing. Pro-BACE-1 is synthesized in the ER before it is transported to the trans-Golgi network to undergo maturation. The extracellular deposition and accumulation of the released A β fragments and an α -synuclein fragment known as the non-A β fragment, form the main components of amyloid plaques in AD. GSK-3 α regulates the production of A β peptides. Administration of therapeutic concentrations of lithium, a GSK-3 inhibitor, attenuates A β production by specifically inhibiting the cleavage of APP by γ -secretase, thereby blocking accumulation of A β peptides in the brains of mice that overproduce APP. AD is also characterized by the presence of neurofibrillary tangles. These tangles are the result of hyperphosphorylation and oligomerization of the microtubule associated protein Tau and lead to apoptosis of the neuron. In particular, phosphorylation of Tau Ser396 by GSK-3 or CDK5 destabilizes microtubules in AD. Additionally, neurofilaments

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340709	Neurofilament Polyclonal Antibody	20 μ L	WB, ELISA	Human, Mouse, Rat	Rabbit
A340685	Tau Polyclonal Antibody	20 μ L	WB, ELISA	Human, Mouse, Rat	Rabbit
A340132	BACE1 Polyclonal Antibody	20 μ L	WB, ELISA	Human, Mouse, Rat	Rabbit

A340684	SNCA Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
A340534	GSK3 alpha Polyclonal Antibody	20µL	WB, IHC, IP, ELISA	Human, Mouse, Rat	Rabbit
A340229	Phospho-GSK3 alpha (Ser21) Polyclonal Antibody	20µL	WB, IHC, IP, ELISA	Human, Mouse, Rat	Rabbit
A340535	GSK3 alpha/beta Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340536	GSK3 beta Polyclonal Antibody	20µL	WB, IHC, IP, ELISA	Human, Mouse, Rat	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.