NEUROSCIENCE

Key Antibodies for Studying Alzheimer's Disease

Application specific antibodies and reagents for neuroscience research

Alzheimer's disease (AD) is one of the more prevalent neurodegenerative diseases, causing dementia in over 12 million people worldwide. Impairment in glutamate signaling through abnormal processing of amyloid precursor protein (APP) and the hyperphosphorylation of tau proteins (resulting in neurofibrillary tangles) are two possible causes of Alzheimer's disease.

Currently, there is no simple test for diagnosing the disease. However, many scientists believe that there are biological markers which may help in detecting the disease at early onset, making preventative treatments more effective.

Proteins such as tau and amyloid-beta (1-42) are involved in the pathogenesis of Alzheimer's and are therefore important targets for researching this and related neurodegenerative diseases.

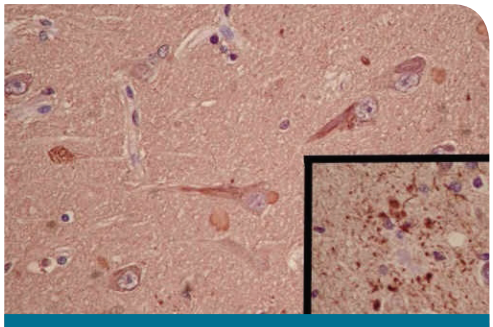
Bio-Rad offers a number of useful markers essential for AD research including:

- Wide range of essential biomarkers
- Amyloid-beta antibodies
- Tested in a variety of applications
- Guaranteed performance to specification

Featured Product:

Goat anti-human tau antibody (AHP738)

Tau is a heterogeneous, highly soluble group of microtubule-associated proteins. In healthy brain tissue tau is localized to the axons of neurons. Tau proteins are involved in the regulation of stability of axonal microtubules. Hyperphosphorylated tau is a major component of paired helical filaments in Alzheimer's disease brain. This hyperphosphorylation of tau results in the transformation of normal adult tau into PHF-tau (paired helical filament) and neurofibrillary tangles. These aberrant forms of tau proteins can affect cytoplasmic functions and interfere with axonal transport, which can lead to cell death.



Anti-human tau (AHP738) Immunohistochemical staining

Immunohistochemical detection of tau in a brain section from a patient with alzheimer's disease showing localization to neurofuinrillary tangles using goat anti-human tau antibody (AHP738)

Alzheimer's Disease

Bio-Rad offers a number of useful markers essential for AD research including those highlighted in the table below. Further products can be found on our website at **bio-rad-antibodies.com/neuroscience**

Specificity	Target	Clone	Species Reactivity	Applications	Host	Format	Size	Catalog Number
APOLIPOPROTEIN E (APOE)	Human	WUE-4		E, WB	Mouse	Pur.	0.1 mg	MCA5639GA
APP	Human	Poly		E, WB	Goat	Pur.	1 ml	0490-6100
APP	Human	Poly		IHC-F, E, IHC-P, WB	Goat	Serum	0.1 ml	AHP1253
APP	Human	Poly	Mk	IP*, IHC-P*, WB*	Rabbit	Serum	0.1 ml	AHP665
BACE1	Human	Poly	Rt, Mo	IHC-P*	Rabbit	Pur.	50 µg	AHP1119
BACE1	Human	Poly		IHC-P*	Goat	Serum	0.1 ml	AHP740
BETA AMYLOID (1-40)	Human	Poly		E, IHC-P*, WB	Rabbit	Serum	0.1 ml	AHP676
BETA AMYLOID (1-42)	Human	Poly		IHC-F, E, IHC-P*, WB	Rabbit	Serum	0.1 ml	AHP677
CLUSTERIN	Human	3R3/2		IHC-F, E, FC/ICC, WB	Mouse	Pur.	0.1 mg	MCA2612
GSK3 beta (pS9)	Rat	Poly	Co, Dg, Hu, Mo, Pr, Rt	WB	Rabbit	Pur.	0.1 ml	AHP1233
MAP TAU	Bovine	4F1, IgG1	Hu, Ck, Mk	IHC-P, WB	Mouse	Ascites, Serum	0.1 ml	6242-0206
PRESENILIN-1	Human	Poly	Mo, Rt	IHC-P*, WB	Rabbit	Pur.	0.1 mg	AHP1497
PRESENILIN-1	Human	Poly	Rt	IHC-F, E, IHC-P, WB	Goat	Serum	0.1 ml	AHP391
PRESENILIN-1	Human	Poly	Mk	IHC-F, IP, WB	Rabbit	Serum	0.1 ml	AHP667
PRESENILIN-2	Human	Poly	Mo	IHC-F, E, IHC-P	Goat	Serum	0.1 ml	AHP494
TAU	Human	Poly		IHC-P*, WB	Goat	Serum	0.1 ml	AHP738

Abbreviations: E = ELISA, IF/ICC = Immunofluorescence/Immunocytochemistry, IHC-F = Immunohistochemistry - Frozen (Cryostat), IHC-P = Immunohistochemistry - Paraffin, IP = Immunoprecipitation, Poly = Polyclonal, Pur. = Purified, WB = Western Blotting.

Ck = Chicken, Co = Cow, Dg = Dog, Hu = Human, Mk = Monkey, Mo = Mouse, Pr = Primate, Rt = Rat
* Requires special conditions – refer to datasheet

Visit **bio-rad-antibodies.com/neurology** for more information.

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