

## Mouse (monoclonal) Anti-Human Aβ [1-20] Unconjugated

## PRODUCT ANALYSIS SHEET

Catalog Number: AHB0272

**Lot Number:** See product label

**Quantity/Volume:**  $100 \mu g/0.2 \text{ mL}$ 

Clone Number: 7N22

**Isotype:** IgG1  $\kappa$  (mouse)

**Form of Antibody:** Purified immunoglobulin in phosphate buffered saline, pH 7.2.

**Preservation:** 0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance.

Handle with care and dispose of properly.)

**Purification:** Purified from ascites by affinity chromatography.

**Immunogen:** The immunogen used in the production of this monoclonal antibody is a chemically

synthesized peptide corresponding to amino acid residues 1-20 of Aβ (β-amyloid)

peptide.

**Specificity:** Alzheimer's Disease (AD) is characterized by the presence of extracellular plaques and

intracellular neurofibrillary tangles (NFTs) in the brain. The major protein component of these plaques is  $\beta$  amyloid peptide (A $\beta$ ), a 40 to 43 amino acid peptide cleaved from amyloid precursor protein by  $\beta$ -secretase (e.g., BACE) and a  $\gamma$ -secretase. Increased release of the 'longer forms' of A $\beta$  peptide, A $\beta$ 42 or A $\beta$ 43, which have a greater tendency to aggregate than A $\beta$ 40, occurs in individuals expressing certain genetic mutations, expressing certain ApoE alleles, or may involve other, still undiscovered, factors. Soluble amyloid oligomers are considered as the principal pathogenic species

and are involved in the pathogenesis of the many neurodegenerative diseases.

This antibody recognizes human A $\beta$  as well as human amyloid precursor protein (APP).

**Species Reactivity:** Human.

**Applications:** This antibody is suitable for use in Western blotting and ELISA.

**Suggested Working** 

**Dilutions:** 

For Western blotting, the recommended concentration is 1 µg/mL. The optimal antibody

concentration should be determined for each specific application.

**Recommended Positive** 

**Control:** 

Human SHSY5Y cells.

Storage: Store at 2-8°C. For long term storage, aliquot into small volumes and store at -20°C.

Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

This product is for research use only. Not for use in diagnostic procedures.

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## **References:**

Cotman, C.W. (1997) The β-amyloid peptide, peptide self-assembly, and the emergence of biological activities. A new principle in peptide function and the induction of neuropathology. Ann. N. Y. Acad. Sci. 814:1-16.

Estus, S., et al. (1997) Aggregated  $\beta$ -amyloid protein induces cortical neuronal apoptosis and concomitant "apoptotic" pattern of gene induction. J. Neurosci. 17:7736-7745.

Vassar, R., et al. (1999) β-secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE. Science 286 (22):735-741.

Andreasen, N., et al. (1999) Cerebrospinal fluid  $\beta$ -amyloid (1-42) in Alzheimer disease: differences between early- and late-onset Alzheimer disease and stability during the course of disease. Arch. Neurol. 56(6):673-680.

Kayed, R., et al. (2003) Common structure of soluble amyloid oligomers implies common mechanism of pathogenesis. Science 300:486-489.

Shorter, J. and S. Lindquist (2004) Hsp104 catalyzes formation and elimination of self-replicating Sup35 prion conformers. Science 304:1793-1797.

Glabe, C.G. (2004) Conformation-dependent antibodies target diseases of protein misfolding. Trends Biochem. Sci. 29:542-547.

## **Related Products:**

Human Aβ40 ELISA kit	Cat. #	KHB3481/2
Human Aβ42 ELISA kit	Cat. #	KHB3441/2
Human APPα ELISA kit	Cat. #	KHB0051
Rabbit (polyclonal) Anti-Aβ40, cleavage specific antibody	Cat. #	44-348
Rabbit (polyclonal) Anti-Aβ42, cleavage specific antibody	Cat. #	44-344
Rabbit (polyclonal) Anti-Aβ43, cleavage specific antibody	Cat. #	44-340
Anti-Oligomer Antibody (A11)	Cat. #	AHB0052
Mouse anti-human APP antibody (clone: mAbP2-1)	Cat. #	44-100
Human Tau (total) ELISA kit	Cat. #	KHB0041/2
Human Tau [pS396] ELISA kit	Cat. #	KHB7031
Human α-synuclein ELISA kit	Cat. #	KHB0061
Mouse Aβ40 ELISA kit	Cat. #	KMB3481

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