Aβ [1-42] ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified

REF Catalog no. 700254

(See product label for lot information)

Clone/PAD: H31L21
Isotype: IgG
Gene ID: 351
Protein Acc. no.: P05067
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/ml

Formulation
PBS + 0.09% sodium azide.

Immunogen
A peptide corresponding to amino acids 707-713 of P05067.

Immunogen sequence
VGGVVIA

Reactivity
This antibody reacts with human and mouse Abeta [1-42]. Based on sequence identity and similarity, reactivity to rat, primate, canine, bovine, equine, swine, hamster, and numerous other species is expected.

Specificity
Cross reactivity to Aβ [1-40] is not observed in sandwich ELISA. In addition, in antigen ELISA cross reactivity is not observed with Aβ [1-37], Aβ [1-38], Aβ [1-40], or Aβ [1-43] when used at low antibody concentrations (up to 30 ng/ml).

Storage
2-8°C for up to 1 mo, -20°C for long term storage. Avoid repeated freezing and thawing.

Expiration Date
Expires one year from date of receipt when stored as instructed.

Validated Applications:

	Species	Test Material	Concentration
Immunohistochemistry	human, mouse	brain	1 µg/ml
Sandwich ELISA	detector		0.1-0.2 µg/ml

Background
Alzheimer's Disease (AD) is characterized by the presence of extracellular plaques and intracellular neurofibrillary tangles (NFTs) in the brain (1,2). The major component of these plaques is Aβ peptide (β-amyloid), a 40 to 43 amino acid peptide cleaved from amyloid precursor protein (APP) by β-secretase (e.g., BACE) and a putative γ secretase (3-5). Increased release of the 'longer forms' of Aβ peptide, Aβ42 or Aβ43, which have a greater tendency to aggregate than Aβ40, occurs in individuals expressing certain genetic mutations, expressing certain ApoE alleles, or may involve other, still undiscovered, factors (4-6). Many researchers theorize that this increased release of Aβ42/Aβ43 leads to the abnormal deposition of Aβ and the associated neurotoxicity in the brains of affected individuals (7,8).

References

1. Bancher, C., et al. (1997) Mechanisms of cell death in Alzheimer's disease. J. Neural Transm. Suppl. 50:141-152.
2. Estus, S., et al. (1997) Aggregated amyloid-beta protein induces cortical neuronal apoptosis and concomitant "apoptotic" pattern of gene induction. J. Neurosci. 17:7736-7745.
3. Cotman, C.W. (1997) The beta-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.
4. Borchelt, D.R., et al. (1997) Accelerated amyloid deposition in the brains of transgenic mice coexpressing mutant presenilin 1 and amyloid precursor proteins. Neuron 19:939-945.
5. Savage, M.J., et al. (1998) Turnover of amyloid β-protein in mouse brain and acute reduction of its level by phorbol ester. J. Neurosci. 18:1743-1752.
6. Vassar, R., et al. (1999) β-Secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE. Science 286:735-741.
7. Lin, K.F., et al (2004) Modulation of calcium/calmodulin kinase-II provides partial neuroprotection against beta-amyloid peptide toxicity. Eur. J. Neurosci. 19(8):2047-2055.
8. Patel, N.S., et al (2005) Inflammatory cytokine levels correlate with amyloid load in transgenic mouse models of Alzheimer's disease. J Neuroinflammation 2:9.
9. Oakley, H. et al. (2006) Intraneuronal β-Amyloid Aggregates, Neurodegeneration, and Neuron Loss in Transgenic Mice with Five Familial Alzheimer's Disease Mutations: Potential Factors in Amyloid Plaque Formation. J. Neurosci. 26:10129-10140.

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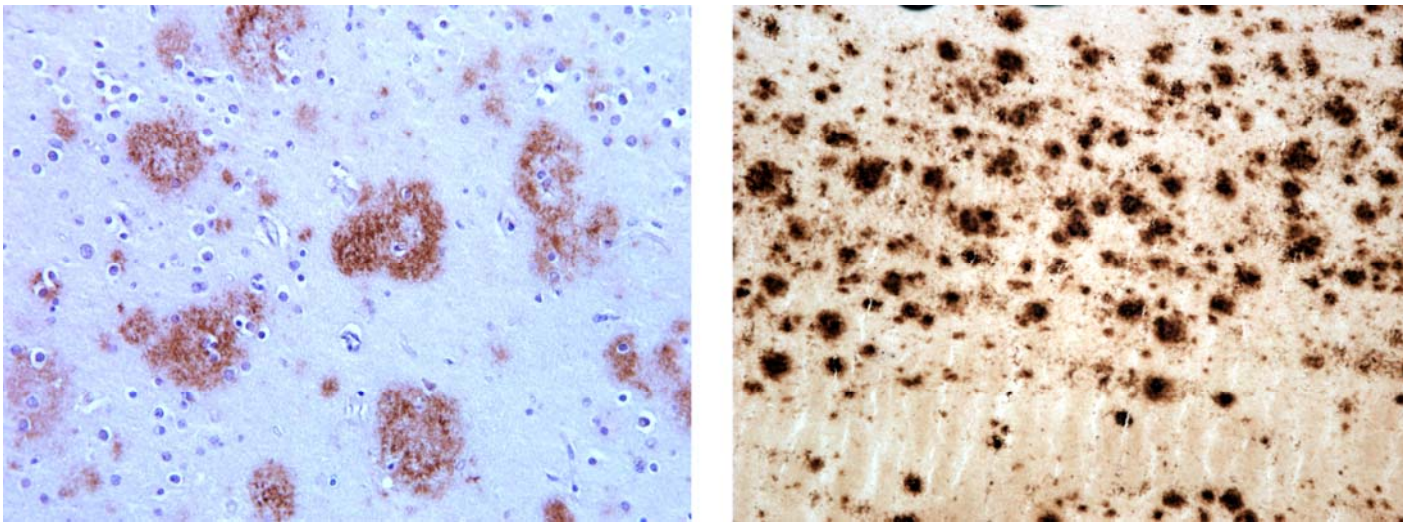
PI700254 (Rev 0210) DCC-10-0447 FORM-00089 (Rev 0.0)



Immunohistochemistry of human brain and transgenic mouse tissue labeled with rabbit anti-Aβ [1-42] (Cat. No. 700254).

FFPE human Alzheimer's brain (left) and transgenic mice that express FAD mutant APP and PS1 (right) were labeled with rabbit anti-Aβ [1-42] (1 µg/ml). Human tissues were detected with SuperPicTure™ Polymer DAB (Cat. No.87-8963). Mouse image was provided by Dr. Robert Vassar and prepared according to (9). Images were taken at 20x (left) or 10x (right) magnification. Note strong cytoplasmic staining in amyloid plaque.

Explanation of symbols

Symbol	Description	Symbol	Description
REF	Catalogue Number	LOT	Batch code
RUO	Research Use Only	IVD	*In vitro* diagnostic medical device
	Use by		Temperature limitation
	Manufacturer	EC REP	European Community authorised representative
[-]	Without, does not contain	[+]	With, contains
	Protect from light		Consult accompanying documents
	Directs the user to consult instructions for use (IFU), accompanying the product.		

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