

Abeta 38/40/42/43

Cat.No. 218 111; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/Storage	100 µg purified IgG, lyophilized. Azide was added before lyophilization. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 500 up to 1 : 1000 (see remarks) IP: not tested yet ICC: not tested yet IHC: 1 : 500 (see remarks) IHC-P/FFPE: 1 : 200 up to 1 : 500 (see remarks) ELISA: yes ; unlabeled only (see remarks)
Clone	NT78
Subtype	IgG2b (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 1 to 16 from human Abeta (UniProt Id: P05067)
Epitop	Epitop: AA 4 to 16 from human Abeta (UniProt Id: P05067)
Reactivity	Reacts with: human (P05067), mouse (P12023). Other species not tested yet.
Specificity	Specific for Abeta 38, 40, 42, 43.
Remarks	WB: Boil membrane after blotting for 3min. IHC: Formic acid treatment required recommended protocol. IHC-P: Formic acid treatment required. ELISA: Suitable as capture antibody for sandwich-ELISA with cat. no. 218 011BT as detector antibody (protocol for sandwich-ELISA).

TO BE USED IN VITRO / FOR RESEARCH ONLY

NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Amyloid deposits, also called plaques, of Alzheimer's patients consist of several protein components like the amyloid beta-peptides (**Abeta**, **Aβ**) 1-40/42/43 and additional C- and N-terminally modified fragments of Abeta as for instance Abeta pE3 and Abeta pE11.

An additional Abeta variant, **Abeta 38**, is more soluble compared to other Abeta species and is not found in plaques of sporadic Alzheimer's cases. However, it is detected in the blood-vessel walls of a subset of patients with severe cerebral amyloid angiopathy. It especially accumulates in brains of patients carrying mutations in the Abeta coding region.

Cleavage of amyloid precursor protein APP by β- and γ- secretases results in the generation of the Aβ

(βA4)peptide, whereas α-secretase cleaves within the Aβ sequence and prevents the formation of Abeta from APP.

Selected References SYSY Antibodies

Overexpression of glutamyl cyclase, the enzyme responsible for pyroglutamate A{beta} formation, induces behavioral deficits, and glutamyl cyclase knock-out rescues the behavioral phenotype in 5XFAD mice.

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Identification of low molecular weight pyroglutamate A{beta} oligomers in Alzheimer disease: a novel tool for therapy and diagnosis.

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Selected General References

Circulating immune complexes of Abeta and IgM in plasma of patients with Alzheimer's disease.

Marcello A, Wirths O, Schneider-Axmann T, Degerman-Gunnarsson M, Lannfelt L, Bayer TA

Journal of neural transmission (Vienna, Austria : 1996) (2009) 116(7): 913-20.

Immune response to Abeta-peptides in peripheral blood from patients with Alzheimer's disease and control subjects.

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Neuroscience letters (2004) 355(3): 226-30.

Dietary Cu stabilizes brain superoxide dismutase 1 activity and reduces amyloid Abeta production in APP23 transgenic mice.

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Correlative memory deficits, Abeta elevation, and amyloid plaques in transgenic mice.

Hsiao K, Chapman P, Nilsen S, Eckman C, Harigaya Y, Younkin S, Yang F, Cole G

Science (New York, N.Y.) (1996) 274(5284): 99-102.

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Journal of molecular biology (1996) 256(5): 870-7.

Water-soluble Abeta (N-40, N-42) oligomers in normal and Alzheimer disease brains.

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