

Code No. 10323

**Anti-Human  
Amyloid  $\beta$  (N) (82E1) Mouse IgG MoAb**Volume : 50  $\mu$ g  
Lot No : 0F-422

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**Introduction** : 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 and a putative 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. Many researchers theorize that it is this increased release of  $A\beta_{42}/A\beta_{43}$  which leads to the abnormal deposition of  $A\beta$  and the associated neurotoxicity in the brains of affected individuals.

This antibody specifically reacts human  $A\beta$  N-terminal end, therefore it is very useful to detect APP fragments generated by  $\beta$ -secretase cleavage.

**Antigen** : Synthetic peptide for Human Amyloid (1-16) (DAEFRHDSGYEVHHQK)

**Source** : Mouse-Mouse hybridoma (supernatant)  
(X63-Ag8.653  $\times$  BALB/c mouse spleen cells)

**Clone** : 82E1      **Subclass** : IgG<sub>1</sub>

**Purification** : Affinity purified with antigen peptide

**Form** : Lyophilized product from 1% BSA in PBS containing 0.05% NaN<sub>3</sub>

**How to use** : 0.5mL distilled water will be added to the product (The conc. comes up 100  $\mu$ g/mL)

**Dilution** : PBS (pH7.4) containing 1% BSA, 0.05% NaN<sub>3</sub>

**Stability** : Lyophilized product, 5 years at 2 – 8  
: Solution, 2 years at -20

**Application** : This antibody can be stained in formalin fixed paraffin embedded tissues after formic acid treatment\*<sup>1</sup> by several immunohistochemical techniques such as Avidin Biotin Complex (ABC) Method. The optimal dilution is about 1 $\mu$ g/ml, however, the dilution rate should be optimized by each laboratories.

\*1: rinsing by running water after formic acid treatment for 5 minutes following de-paraffin.

- : This antibody can be used for western blotting in concentration of about 1 $\mu$ g/mL.
- : This antibody can be used for Immunoprecipitation.

**Specificity** : Human Amyloid $\beta$  N-terminal specific.  
Reacts with both soluble and fibrillar  $A\beta$  to a similar degree  
Non reacts with non-cleaved APP  
Non cross reacts with mouse and rat.

**Reference** : Horikoshi Y, Sakaguchi G, Becker AG, Gray AJ, Duff K, Aisen PS, Yamaguchi H, Maeda M, Kinoshita N, Matsuoka Y. Development of  $A\beta$  terminal end-specific antibodies and sensitive ELISA for  $A\beta$  variant. *Biochem Biophys Res Commun.* 319(3):733-7, 2004.

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