Amyloid Beta 1-40 ($A\beta_{40}$) Monoclonal Antibody

ORDERING INFORMATION

Catalog No.: 57002 (clone Ab40.1)

Size: 100ug in PBS, pH 7.4. Purified by Protein G affinity chromatography.

BACKGROUND

Accumulation and aggregation of amyloid β (Aβ) in the brain is indicated as the trigger of a pathological cascade that causes Alzheimer disease (AD). The highly amyloidogenic 42-amino acid form of Aβ ($A\beta_{42}$) and aminoterminally truncated forms of Aβ ($A\beta_{x\text{-}42}$) are the predominant species of Aβ typically found in diffuse and senile plaques within the AD brain. There is a strong correlation between $A\beta_{40}$ positivity and mature plaques. In the AD cortex, diffuse plaques, representing the earliest stage of Aβ deposition, are positive for $A\beta_{42}$, but negative for $A\beta_{40}$.

SPECIFICATION SUMMARY

Antigen: Synthetic peptide corresponding to $A\beta_{35\text{-}40}$.

Host Species: Mouse

Antibody Class: IgG1

SPECIFICITY

This antibody specifically recognizes an epitope within $A\beta_{x\text{-}40}$. **NOTE: When administered to young Tg2576 mice with minimal Aβ deposition, this antibody reduced Aβ accumulation in the brain.**

APPLICATIONS

Immunoblotting, *Immunohistochemistry: Immunofluorescence, Immunoprecipitation,* Test at 1-10ug/ml.

Sandwich ELISA (works equally well as capture or detection antibody). These are recommended concentrations; enduser should determine optimal concentrations for their applications.

Sandwich ELISA protocol on next page. See specific product references below for more information.

DILUTION INSTRUCTIONS

Dilute in PBS or medium which is identical to that used in the assay system.

STORAGE AND STABILITY

This antibody is stable for at least one (1) year at -20°C.

PRODUCT REFERENCES

1. Levites Y et al. 2006. Anti-Aβ42 and Anti-Aβ40 specific monoclonal antibodies attenuate amyloid deposition in an Alzheimer's disease mouse model. J Clin Invest 116: 193-201.
2. Levites Y et al. 2006. Intracranial Adeno-Associated Virus-Mediated Delivery of Anti-Pan Amyloid β, Amyloidβ40, and Amyloid β42 Single-Chain Variable Fragments Attenuates Plaque Pathology in Amyloid Precursor Protein Mice. J Neurosci 26: 11923-11928.
3. Levites Y et al. 2006. Insights into the mechanisms of action of anti-Aβ antibodies in Alzheimer's disease mouse models. FASEB J 20: 2576-8.

QED Bioscience, Inc. 410 Axminister Dr, St. Louis, MO 63026
Phone: (800) 538-1145 Email: leincoglobal@leinco.com

Sandwich ELISA Protocol

96-well ELISA plates (Immulon HBX4) are coated with capture MAb at 2.5-5ug/well and incubated at 4^{o}C overnight. The next day 300ul of blocking buffer is added, and plates are again incubated at 4^{o}C overnight. The next day plates are washed in PBS and serial dilution of Aβ samples are added; plates are incubated overnight at 4^{o}C. The next day plates are washed in PBS, and HRP-conjugated detection Aβ MAb is added; plates are incubated for 4hrs at room temperature. Plates are washed in PBS-Tween and developed with TMB substrate for 5 mins.

QED Bioscience, Inc. 410 Axminister Dr, St. Louis, MO 63026
Phone: (800) 538-1145 Email: leincoglobal@leinco.com