

# β-Amyloid (1-40 Specific) (D8Q71) Rabbit mAb



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**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications W, IF-F Endogenous	Species Cross-Reactivity* H, (M, R, Mk, B)	Molecular Wt. 4 kDa	Isotype Rabbit IgG**
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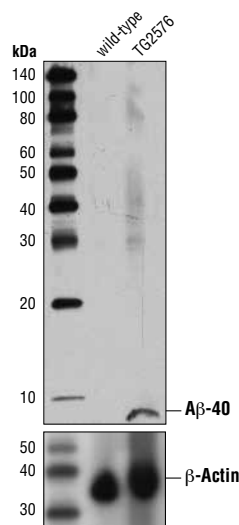
**Background:** Amyloid β (Aβ) precursor protein (APP) is a 100-140 kDa transmembrane glycoprotein that exists as several isoforms (1). The amino acid sequence of APP contains the amyloid domain, which can be released by a two-step proteolytic cleavage (1). The extracellular deposition and accumulation of the released Aβ fragments form the main components of amyloid plaques in Alzheimer's disease (1). APP can be phosphorylated at several sites, which may affect the proteolytic processing and secretion of this protein (2-5). Phosphorylation at Thr668 (a position corresponding to the APP695 isoform) by cyclin-dependent kinase is cell-cycle dependent and peaks during G2/M phase (4). APP phosphorylated at Thr668 exists in adult rat brain and correlates with cultured neuronal differentiation (5,6).

**Specificity/Sensitivity:** β-Amyloid (1-40 Specific) (D8Q71) Rabbit mAb recognizes the Aβ-40 isoform of the β-amyloid peptides. This antibody does not cross-react with other β-amyloid peptides.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues at the carboxy terminus of human β-amyloid (1-40) peptide.

**Background References:**

- (1) Selkoe, D.J. (1996) *J Biol Chem* 271, 18295-8.
- (2) Caporaso, G.L. et al. (1992) *Proc Natl Acad Sci USA* 89, 3055-9.
- (3) Hung, A.Y. and Selkoe, D.J. (1994) *EMBO J* 13, 534-42.
- (4) Suzuki, T. et al. (1994) *EMBO J* 13, 1114-22.
- (5) Ando, K. et al. (1999) *J Neurosci* 19, 4421-7.
- (6) Iijima, K. et al. (2000) *J Neurochem* 75, 1085-91.t



Western blot analysis of brain extracts from 13-month old wild-type and TG2576 mice using β-Amyloid (1-40 Specific) (D8Q71) Rabbit mAb (upper) and β-Actin (D6A8) Rabbit mAb #8457 (lower).

Entrez Gene ID #351  
UniProt ID #P05067

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunofluorescence (IF-F)	1:800

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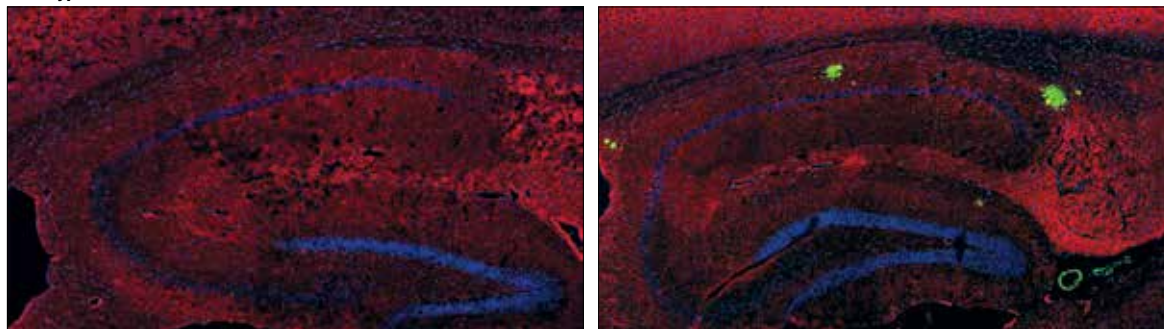
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**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

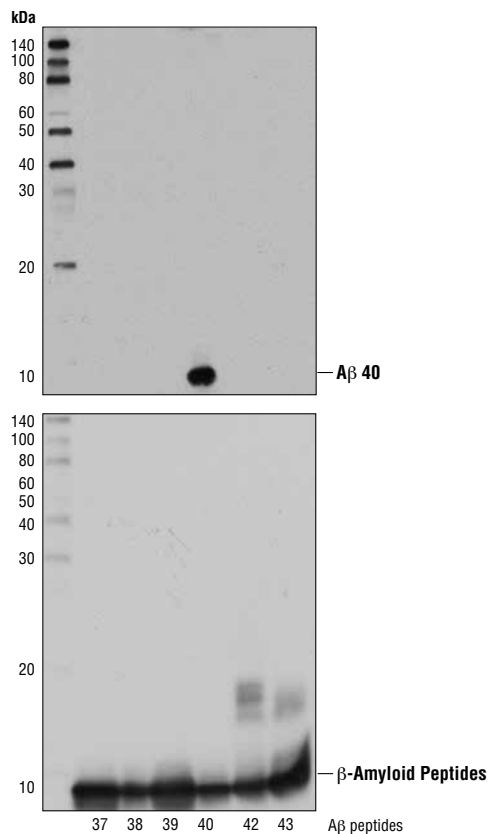
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wild-type

TG2576



Confocal immunofluorescent analysis of hippocampus from wild-type (left) and TG2576 (right) mice using  $\beta$ -Amyloid (1-40 Specific) (D8Q71) Rabbit mAb (green) and  $\beta$ 3-Tubulin (TU-20) Mouse mAb #4466 (red). Blue pseudocolor = DRAQ5<sup>®</sup> #4084 (fluorescent DNA dye).



Western blot analysis of human  $A\beta$ -37,  $A\beta$ -38,  $A\beta$ -39,  $A\beta$ -40,  $A\beta$ -42 and  $A\beta$ -43 peptides (10 ng) using  $\beta$ -Amyloid (1-40 Specific) (D8Q71) Rabbit mAb (upper) and  $\beta$ -Amyloid (D54D2) XP<sup>®</sup> Rabbit mAb #8243 (lower).