

β-Amyloid Antibody

✓ 100 μl
(10 western blots)

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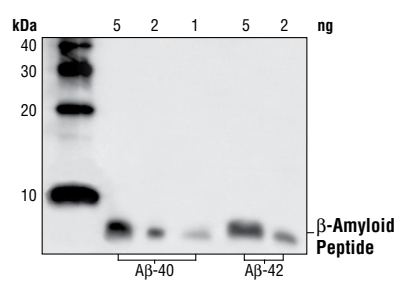
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P, IF-P Endogenous	H	5 kDa	Rabbit**

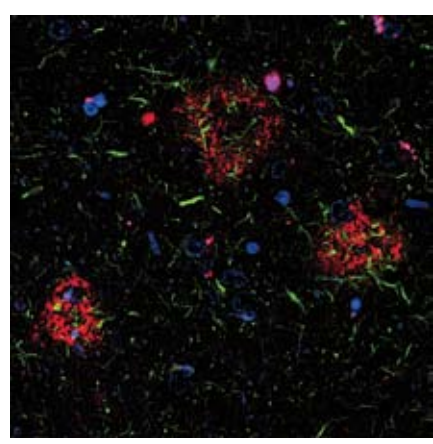
Background: Amyloid β (A4) precursor protein (APP) is a 100-140 kDa transmembrane glycoprotein existing as several isoforms (1). The amino acid sequence of APP contains the amyloid domain (A-β), which can be released by a two-step proteolytic cleavage (1). The extracellular deposition and accumulation of the released A-β 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 pathway of this protein (2-5). The phosphorylation at Thr668 (at a position corresponding to the APP695 isoform) by cyclin-dependent kinase is cell cycle dependent (G2/M-phase) (4). The APP Thr668 phosphorylated form exists in adult rat brain and correlates with cultured neuronal differentiation (5,6).

Specificity/Sensitivity: β-Amyloid Antibody detects several isoforms of β-amyloid peptide (Aβ), such as Aβ-40, Aβ-42 etc, regardless of phosphorylation state.

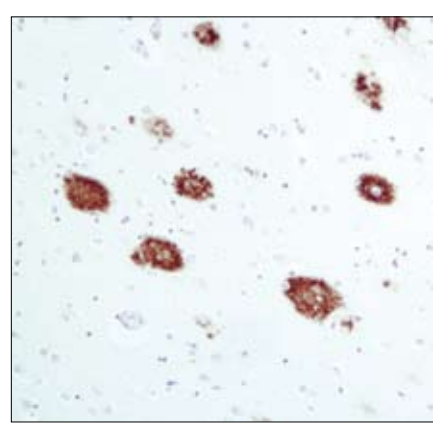
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues at the amino terminus of human beta-amyloid peptides. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of human A-β-40 and A-β-42 peptides (1-5 ng), using β-Amyloid Antibody.



Confocal immunofluorescent analysis of human Alzheimer's brain, using β-Amyloid Antibody (red) and Tau (Tau46) Mouse mAb #4019 (green). Blue pseudocolor = DRAQ5® 4084 (fluorescent DNA dye).



Immunohistochemical analysis of paraffin-embedded Alzheimer brain, using β-Amyloid Antibody.

Entrez-Gene ID #351
Swiss-Prot Acc. #P05067

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μg/ml BSA and 50% glycerol. 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
Immunohistochemistry (Paraffin)	1:200
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunofluorescence (IF-P)	1:250

For application specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

Background References:

- (1) Selkoe, D.J. (1996) *J. Biol. Chem.* 271, 18295-18298.
- (2) Caporaso, G.L. et al. (1992) *Proc. Natl. Acad. Sci. USA* 89, 3055-3059.
- (3) Hung, A.Y. and Selkoe, D.J. (1994) *EMBO J.* 13, 534-542.
- (4) Suzuki, T. et al. (1994) *EMBO J.* 13, 1114-1122.
- (5) Ando, K. et al. (1999) *J. Neurosci.* 19, 4421-4427.
- (6) Iijima, K.I. et al. (2000) *J. Neurochem.* 75, 1085-1091.

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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Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.