Revision 1

Phospho-APP (Thr668) Antibody

Store at -20C

#3823

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	100-140	Rabbit	#P05067	351

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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.

Specificity/Sensitivity

Phospho-APP (Thr668) Antibody detects different isoforms of endogenous amyloid β (A4) precursor protein only when phosphorylated at Thr668 (or the corresponding position on other isoforms).

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr668 of human APP695. Antibodies are purified by protein A and peptide affinity chromatography.

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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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Limited Uses

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