

## Product Information

### Anti-phospho-APP [pThr<sup>668</sup>] produced in rabbit, affinity isolated antibody

Catalog Number **A9103**

Synonym: Anti-phospho-Amyloid  $\beta$  (A4) Precursor  
Protein [pThr]<sup>668</sup>

#### Product Description

Anti-phospho-APP [pThr<sup>668</sup>] is produced in rabbit using as immunogen a synthetic phosphorylated peptide derived from the region of human APP that contains Thr<sup>668</sup>. The sequence is conserved in mouse, rat and frog. The antiserum is affinity purified using epitope-specific affinity chromatography, and is preadsorbed to remove any reactivity toward a non-phosphorylated APP.

Anti-phospho-APP [pThr<sup>668</sup>] specifically recognizes human APP phosphorylated at Thr<sup>668</sup>. The antibody cross-reacts with human APP. Mouse, rat and frog APP are 100% homologous.

APP is a ubiquitously expressed transmembrane protein that is sequentially cleaved by  $\beta$ -secretase and  $\gamma$ -secretase to release extracellular peptides such as the  $\beta$ -amyloid peptides, which are deposited in the brain in Alzheimer's disease.

APP exists in several isoforms ranging from 100-140 kDa, and is phosphorylated on various residues within the extracellular and cytoplasmic domains, affecting the proteolytic processing and secretion of the protein. Thr<sup>668</sup> can be phosphorylated by cyclin-dependent kinase 5 (cdk5), GSK-3 $\beta$  and JNK, and may play an important role in neurite outgrowth of differentiating neurons.

#### Reagent

Supplied as a solution in Dulbecco's phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.3, with 50% glycerol, 1.0 mg/ml BSA (IgG and protease free) and 0.05% sodium azide

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

Store at -20 °C. Upon initial thawing, freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Do not store in frost-free freezers. Working dilution samples should be discarded if not used within 12 hours. The antibody is stable for at least 12 months when stored appropriately.

#### Product Profile

One vial is sufficient for 10 immunoblots.

Immunoblotting: a recommended working dilution of 1:1000 is determined using CAD cells transfected with wild type vs. T668A mutant APP.

**Note:** In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

#### References

1. Tarr, P.E., et al., Tyrosine phosphorylation of the  $\beta$ -amyloid precursor protein cytoplasmic tail promotes interaction with Shc., *J. Biol. Chem.*, **277**, 16798-16804 (2002).
2. Ando, K., et al., Phosphorylation-dependent regulation of the interaction of amyloid precursor protein with Fe65 affects the production of  $\beta$ -amyloid., *J. Biol. Chem.*, **276**, 40353-40361(2001).

3. Standen, C.L., et al., Phosphorylation of threonine (668) in the cytoplasmic domain of the Alzheimer's disease amyloid precursor protein by stress-activated protein kinase 1b (Jun N-terminal kinase-3)., *J. Neurochem.*, **76**, 316-320 (2001).
4. Selkoe, D.J., The cell biology of  $\beta$ -amyloid precursor protein and presenilin in Alzheimer's disease. *Trends Cell. Biol.*, **8**, 447-453 (1998).

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