

Product Information

Anti-phospho-Dynamin [pSer⁷⁷⁴]

Developed in Sheep, Affinity Isolated Antibody

Product Number **P 1997**

Product Description

Anti-phospho-Dynamin [pSer⁷⁷⁴] is developed in sheep using a synthetic phosphopeptide corresponding to amino acids residues surrounding the phospho-Ser⁷⁷⁴ of dynamin as immunogen. The sequence is conserved in human, mouse, and rat. The antiserum is affinity purified using sequential chromatography on Protein A and phospho- and non-phospho-peptide affinity columns.

The antibody detects human, mouse, rat Dynamin [pSer⁷⁷⁴]. It has been used in immunoblotting, immunofluorescence and immunohistochemistry applications.

Dynamin is a member of a group of nerve terminal proteins called dephosphins that regulate synaptic vesicle endocytosis. Cyclin dependent protein kinase 5 phosphorylates dynamin at Ser⁷⁷⁴ and Ser⁷⁷⁸ that are the phosphorylation sites on dynamin phosphorylated *in vivo*. Phosphorylation of these sites on dynamin is thought to play a key role in synaptic vesicle trafficking.

Reagent

Anti-phospho-Dynamin [pSer⁷⁷⁴] is provided in 10 mM HEPES, pH 7.5, 150 mM NaCl, 100 µg/ml BSA and 50% glycerol

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.

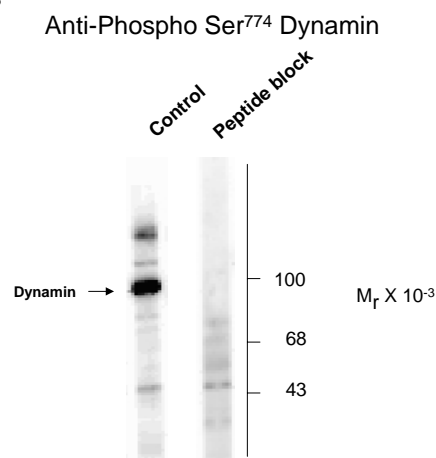
Product Profile

The supplied reagent is sufficient for 10 blots.

A recommended working dilution of 1:1000 is determined by immunoblotting using rat brain synaptosomal lysate.

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

Results



The figure shows immunoblot of 10 µg of rat brain synaptosomal lysate showing specific immunolabeling of dynamin phosphorylated at Ser⁷⁷⁴. The labeling by the antibody was specifically blocked by the Ser⁷⁷⁴ phosphopeptide used as antigen. The corresponding non-phosphopeptide did not block the immunolabeling (not shown).

References

1. Tan, T.C., et al., Cdk5 is essential for synaptic vesicle endocytosis, *Nat. Cell Biol.*, **8**, 701 – 710 (2003).
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3. Tsuboi, T. et al., Sweeping model of dynamin activity - Visualization of coupling between exocytosis and endocytosis under an evanescent wave microscope with green fluorescent proteins," J. Biol. Chem., **277** 15,957 – 15,961 (2002).
4. Cousin, M.A., et al., Protein phosphorylation is required for endocytosis in nerve terminals: potential role for the dephosphins dynamin I and synaptojanin, but not AP180 or amphiphysin, J. Neurochem., **76**, 105–116 (2001).

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