

## Product Information

### Anti-phospho-Dynamin [pSer<sup>778</sup>]

Developed in Sheep, Affinity Isolated Antibody

Product Number **P 2122**

#### Product Description

Anti-phospho-Dynamin [pSer<sup>778</sup>] is developed in sheep using a synthetic phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser<sup>778</sup> of dynamin as immunogen. The antiserum is affinity purified using sequential chromatography on Protein A and phospho- and non-phospho-peptide affinity columns. The antibody for phospho-Ser<sup>778</sup> dynamin specifically recognizes the purified protein phosphorylated *in vitro* by Cdk5 but not PKC

The antibody detects human, mouse, rat phospho-Dynamin [pSer<sup>778</sup>]. It has been used in immunoblotting 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 Ser<sup>774</sup> and Ser<sup>778</sup> 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 [pSer<sup>778</sup>] 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.

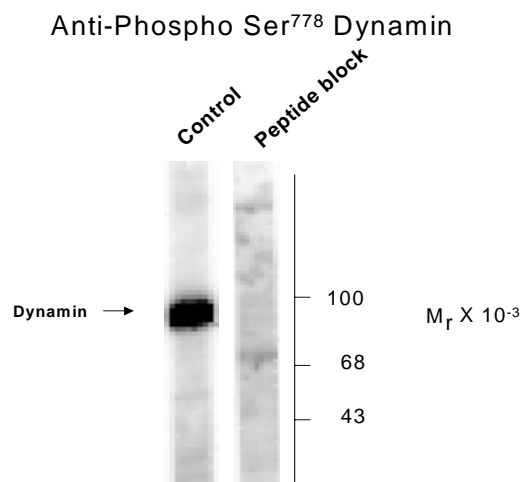
#### Product Profile

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 immunoblot of 10 µg of rat brain synaptosomal lysate showing specific immunolabeling of dynamin phosphorylated at Ser<sup>778</sup>. The labeling by the antibody was specifically blocked by the Ser<sup>778</sup> 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).
2. Graham, M.E., et al., Dynamin-dependent and dynamin-independent processes contribute to the regulation of single vesicle release kinetics and quantal size, *Proc. Natl. Acad. Sci. USA*, **99**, 7124-7129 (2002).

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).

AH/PHC 07/04

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.