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Phospho-Ser778 Dynamin Antibody
Affinity purified sheep polyclonal antibody
Catalog # AN1008

Specification

Phospho-Ser778 Dynamin Antibody - Product Information

Application	**WB**
Primary Accession	P21575
Reactivity	**Rat**
Predicted	**Bovine, Chicken, Human, Mouse**
Host	**Sheep**
Clonality	**polyclonal**
Calculated MW	**95 KDa**

Phospho-Ser778 Dynamin Antibody - Additional Information

Gene ID	**140694**
Gene Name	**DNM1**

Other Names
Dynamin-1, B-dynamin, D100, Dynamin, brain, Dnm1, Dnm

Target/Specificity
Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser778 conjugated to KLH.

Dilution
WB~~ 1:1000

Format
Prepared from sheep serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity
Specific for the ~95k dynamin protein phosphorylated at Ser778. Labels the purified protein phosphorylated in vitro by cdk5 but not by PKC. Does not cross react with other purified substrates of cdk5 (e.g. amphiphysin and synapsin). Immunolabeling is blocked by λ-phosphatase treatment.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-Ser778 Dynamin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

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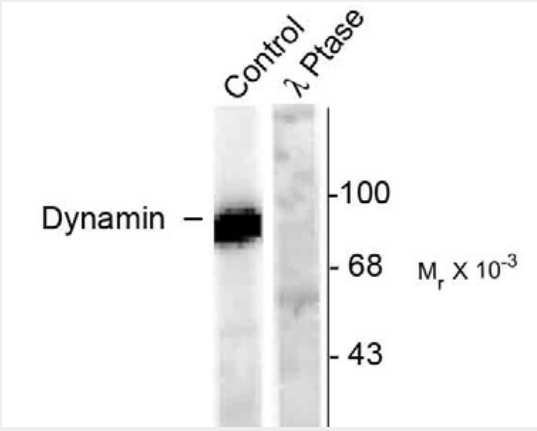
Phospho-Ser778 Dynamin Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Ser778 Dynamin Antibody - Images



Western blot of rat hippocampal lysate stimulated with forskolin showing specific immunolabeling of the ~95k dynamin phosphorylated at Ser778 (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the Anti-Ser778 dynamin. The immunolabeling is completely eliminated by treatment with λ-Ptase.

Phospho-Ser778 Dynamin Antibody - Background

Dynamin is a member of a group of nerve terminal proteins called dephosphins that regulate synaptic vesicle endocytosis (Cousin et al., 2001; Graham et al., 2002; Tsuboi et al., 2002). Cyclin dependent protein kinase 5 phosphorylates dynamin at Ser774 and Ser778 that are the phosphorylation sites on dynamin phosphorylated in vivo (Tan et al., 2003). Phosphorylation of these sites on dynamin is thought to play a key role in synaptic vesicle trafficking.

Phospho-Ser778 Dynamin Antibody - References

Cousin MA, Tan TC, Robinson PJ (2001) 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.
Graham ME, O'Callaghan DW, McMahon HT, Burgoyne RD (2002) 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.
Tan TC, Valova VA, Malladi CS, Graham ME, Berven LA, Jupp OJ, Hansra G, McClure SJ, Sarcevic B, Boadle RA, Larsen MR, Cousin MA, Robinson PJ (2003) cdk5 is essential for synaptic vesicle endocytosis. Nat Cell Biol 5:701-710.
Tsuboi T, Terakawa S, Scalettar BA, Fantus C, Roder J, Jeromin A (2002) Sweeping model of dynamin activity - Visualization of coupling between exocytosis and endocytosis under an evanescent wave

microscope with green fluorescent proteins. J Biol Chem 277:15957-15961.