



Dynamin (phospho Ser774) Antibody

Cat. No.: XPS-1006



Ψ Specifications

HOST SPECIES:	Sheep
SPECIES REACTIVITY:	Human, Mouse, Rat
IMMUNOGEN:	Dynamin (Ser774) polyclonal antibody was raised against a synthetic phosphopeptide corresponding to amino acids residues surrounding the phospho-Ser774 of human, mouse and rat dynamin.
TESTED APPLICATIONS:	IF, IHC, WB
APPLICATIONS:	Dynamin antibody for phospho-Ser774 dynamin labels the purified protein phosphorylated in vitro by Cdk5 but not PKC (Tan, et al. 2003). The labeling of the dynamin band in Western blots of rat brain was blocked by the phosphopeptide used as antigen but not by the corresponding dephosphopeptide. Sheep anti- Dynamin (Ser774) does not cross react with other purified substrates of CDK5 (e.g. amphiphysin and synapsin). Applications include Immunoblotting (IB), Immunofluorescence (IF), Immunohistochemistry (IHC), Western Blots (WB). Human, mouse and rat have 100% amino acid sequence identity with the antigen used to raise the antibody. When internally tested under ideal conditions the working dilutions were 1:1000 for IB and WB.
PREDICTED MOLECULAR WEIGHT:	95

Ψ Properties

PURIFICATION:	Affinity Purified
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CLONALITY:	Polyclonal
CONJUGATE:	Unconjugated
PHYSICAL STATE:	Liquid
STORAGE CONDITIONS:	For long term storage -80 °C is recommended, but shorter term storage at -20 °C is also acceptable as aliquots may be taken without freeze/thawing due to the presence of 50% glycerol. Stock solutions are stable for a minimum of 1 year at -20 °C.

Additional Info

OFFICIAL SYMBOL:	Dnm1
ACCESSION NO.:	P21575
PROTEIN GI NO.:	190358918
GENE ID:	140694
USER NOTE:	Optimal dilutions for each application to be determined by the researcher.

Background and References

BACKGROUND:	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.
REFERENCES:	1) Tan, T.C., Valova, V.A., Malladi, C.S., Graham, M.E., Berven, L.A., Jupp, O.J., Hansra, G, McClure, S.J., Surcevic, B, Boadle, R.A., Larsen, M.R., Cousin, M.A., Robinson, P.J., "Cdk5 is essential for synaptic vesicle endocytosis," <i>Nat. Cell Biol.</i> , 8 (2003) 701-710.
	2) Graham, M.E., O'Callaghan, D.W., McMahon, H.T., and Burgoyne, R.D., "Dynamin-dependent and dynamin-independent processes contribute to the regulation of single vesicle release kinetics and quantal size," <i>Proc. Natl. Acad. Sci. USA</i> , 99 (2002) 7124 - 7129.
	3) Tsuboi, T., Terakawa, S., Scalettar, B.A., Fantus, C., Roder, J., and Jeromin, A., "Sweeping model of dynamin activity - Visualization of coupling between exocytosis and endocytosis under an evanescent wave microscope with green fluorescent proteins," <i>J. Biol. Chem.</i> , 277 (2002) 15,957-15,961.
	4) Cousin, M.A., Tan, T.C., and Robinson, P.J., "Protein phosphorylation is required for endocytosis in nerve terminals: potential role for the dephosphins dynamin I and synaptojanin, but not AP180 or amphiphysin," <i>J. Neurochem.</i> , 76 (2001) 105-116.

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