

# p-Dynamin I (Ser 795): sc-12937

## BACKGROUND

Dynamin I is a GTPase enzyme required for the retrieval of synaptic vesicles after exocytosis and functions in endocytosis by stimulating assembly of invaginating synaptic vesicles. Dynamin I is phosphorylated in nerve terminals exclusively in the cytosolic compartment and *in vitro* by protein kinase C (PKC). The phosphorylation site in PKC-phosphorylated Dynamin I is a single site at Serine 795, which is located near a binding site for the SH3 domain of p85, the regulatory subunit of phosphatidylinositol 3-kinase. Dephosphorylation is required for synaptic vesicle retrieval, suggesting that phosphorylation affects the subcellular localization of Dynamin I.

## REFERENCES

1. Koenig, J.H. and Ikeda, K. 1989. Disappearance and reformation of synaptic vesicle membrane upon transmitter release observed under reversible blockage of membrane retrieval. *J. Neurosci.* 9: 3844-3860.
2. Robinson, P.J. 1991. Dephosphin, a 96 kDa substrate of protein kinase C in synaptosomal cytosol, is phosphorylated in intact synaptosomes. *FEBS Lett.* 282: 388-392.

## CHROMOSOMAL LOCATION

Genetic locus: DNM1 (human) mapping to 9q34.11; Dnm1 (mouse) mapping to 2 B.

## SOURCE

p-Dynamin I (Ser 795) is available as either goat (sc-12937) or rabbit (sc-12937-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 795 phosphorylated Dynamin I of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12937 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-Dynamin I (Ser 795) is recommended for detection of Ser 795 phosphorylated Dynamin I of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

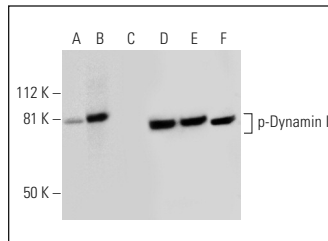
Suitable for use as control antibody for Dynamin I siRNA (h): sc-43737, Dynamin I siRNA (m): sc-35234, Dynamin I shRNA Plasmid (h): sc-43737-SH, Dynamin I shRNA Plasmid (m): sc-35234-SH, Dynamin I shRNA (h) Lentiviral Particles: sc-43737-V and Dynamin I shRNA (m) Lentiviral Particles: sc-35234-V.

Molecular Weight of p-Dynamin I: 100 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Western blot analysis of Dynamin I phosphorylation in untreated (A,D), Ser/Thr Phosphorylation Induction Cocktail (sc-362324) treated (B,E) and Ser/Thr Phosphorylation Induction Cocktail (sc-362324) and lambda protein phosphatase (sc-200312A) treated (C,F) SH-SY5Y whole cell lysates. Antibodies tested include p-Dynamin I (Ser 795)-R: sc-12937-R (A,B,C) and Dynamin I (D5): sc-12724 (D,E,F).

## SELECT PRODUCT CITATIONS

1. Tan, T.C., et al. 2003. Cdk5 is essential for synaptic vesicle endocytosis. *Nat. Cell Biol.* 5: 701-710.
2. Zhang, G.R., et al. 2005. Genetic enhancement of visual learning by activation of protein kinase C pathways in small groups of rat cortical neurons. *J. Neurosci.* 25: 8468-8481.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.


 MONOS  
Satisfaction  
Guaranteed

Try **p-Dynamin I (F-11): sc-377568** or **p-Dynamin I (E-9): sc-377563**, our highly recommended monoclonal alternatives to p-Dynamin I (Ser 795).