

# Dynamin II (B-4): sc-166525

## BACKGROUND

Members of the Dynamin family, including Dynamin I and Dynamin II, are GTPase, microtubule-associated proteins which are involved in endocytosis, synaptic transmission and neurogenesis. Dynamin I is localized to the central nervous system, while Dynamin II exhibits ubiquitous distribution with highest expression in testis. Both Dynamin proteins contain SH3 and proline-rich domains that mediate interactions between the dynamins and effectors of their GTPase activity. The interactions with these effectors, which include microtubules, acidic phospholipids and SH3 domain-containing proteins, are required for rapid endocytosis. Dynamin I appears to be recruited to Clathrin coated pits by SH3 domain interaction with amphiphysin, a protein highly expressed in brain.

## REFERENCES

1. Sontag, J.M., et al. 1994. Differential expression and regulation of multiple dynamins. *J. Biol. Chem.* 269: 4547-4554.
2. Scafe, R., et al. 1994. Grow factor-induced binding of dynamin to signal transduction proteins involves sorting to distinct and separate proline-rich dynamin sequences. *EMBO J.* 13: 2574-2582.
3. Cook, T.A., et al. 1995. Identification of Dynamin II, an isoform ubiquitously expressed in rat tissues. *Proc. Natl. Acad. Sci. USA* 91: 644-648.
4. Shpetner, H.S., et al. 1996. A binding site for SH3 Dynamin targets dynamin to coated pits. *J. Biol. Chem.* 271: 13-16.
5. Okamoto, P.M., et al. 1997. Role of the basic, proline-rich region of Dynamin in Src homology 3 domain binding and endocytosis. *J. Biol. Chem.* 272: 11629-11635.
6. Grabs, D., et al. 1997. The SH3 domain of amphiphysin binds the proline-rich domain of Dynamin at a single site that defines a new SH3 binding consensus sequence. *J. Biol. Chem.* 272: 13419-13425.

## CHROMOSOMAL LOCATION

Genetic locus: DNM2 (human) mapping to 9p23; Dnm2 (mouse) mapping to 9 A3.

## SOURCE

Dynamin II (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 840-870 at the C-terminus of Dynamin II of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166525 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Dynamin II (B-4) is recommended for detection of Dynamin II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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); may cross-react with Dynamin III.

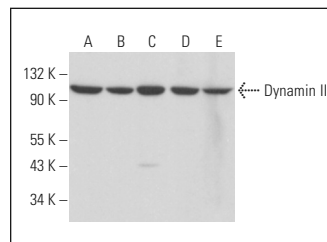
Dynamin II (B-2) is also recommended for detection of Dynamin II in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Dynamin II siRNA (h): sc-35236, Dynamin II siRNA (m): sc-35237, Dynamin II shRNA Plasmid (h): sc-35236-SH, Dynamin II shRNA Plasmid (m): sc-35237-SH, Dynamin II shRNA (h) Lentiviral Particles: sc-35236-V and Dynamin II shRNA (m) Lentiviral Particles: sc-35237-V.

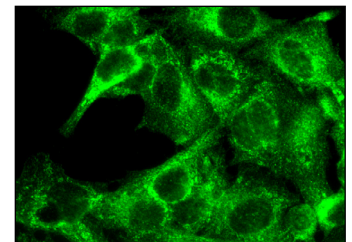
Molecular Weight of Dynamin II: 100 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HEL 92.1.7 cell lysate: sc-2270 or c4 whole cell lysate: sc-364186.

## DATA



Dynamin II (B-4): sc-166525. Western blot analysis of Dynamin II expression in Hep G2 (A), Jurkat (B), HEL 92.1.7 (C), c4 (D) and F9 (E) whole cell lysates.



Dynamin II (B-4): sc-166525. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Poswiata, A., et al. 2022. Endocytic trafficking of GAS6-AXL complexes is associated with sustained AKT activation. *Cell. Mol. Life Sci.* 79: 316.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Dynamin II (G-4): sc-166669** for Dynamin II antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.