

Dynamin II (B-2): sc-166526

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.

CHROMOSOMAL LOCATION

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

SOURCE

Dynamin II (B-2) 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 IgG₁ 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-166526 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Dynamin II (B-2) 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: Jurkat whole cell lysate:sc-2204, HeLa whole cell lysate: sc-2200 or c4 whole cell lysate: sc-364186.

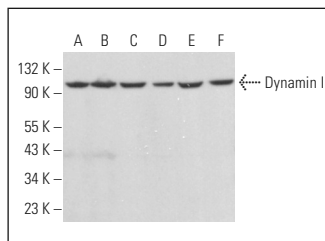
RESEARCH USE

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

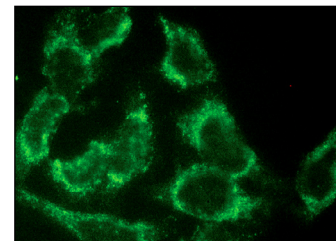
STORAGE

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

DATA



Dynamin II (B-2): sc-166526. Western blot analysis of Dynamin II expression in HeLa (A), Jurkat (B), c4 (C), NIH/3T3 (D), Neuro-2A (E) and C6 (F) whole cell lysates.



Dynamin II (B-2): sc-166526. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wu, M., et al. 2011. Membrane binding of plasmid DNA and endocytic pathways are involved in electrotransfection of mammalian cells. *PLoS ONE* 6: e20923.
2. Shi, D., et al. 2014. Reduction in Dynamin-2 is implicated in ischaemic cardiac arrhythmias. *J. Cell. Mol. Med.* 18: 1992-1999.
3. Martin, C., et al. 2017. Herpes simplex virus type 1 neuronal infection perturbs Golgi apparatus integrity through activation of Src tyrosine kinase and Dyn-2 GTPase. *Front. Cell. Infect. Microbiol.* 7: 371.
4. Ambady, P., et al. 2017. Enhancing the cytotoxicity of chemoradiation with radiation-guided delivery of anti-MGMT morpholino oligonucleotides in non-methylated solid tumors. *Cancer Gene Ther.* 24: 348-357.
5. Wüst, S., et al. 2018. Metabolic maturation during muscle stem cell differentiation is achieved by miR-1/133a-mediated inhibition of the Dlk1-Dio3 mega gene cluster. *Cell Metab.* 27: 1026-1039.e6.
6. Li, Q., et al. 2022. Dynamin-2 reduction rescues the skeletal myopathy of SPEG-deficient mouse model. *JCI Insight* 7: e157336.

PROTOCOLS

See our web site at 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.