

Dynamin II (5E4C2F3): sc-81150

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. Scaife, R., et al. 1994. Growth 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 domains 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 (5E4C2F3) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 520-744 of Dynamin II of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

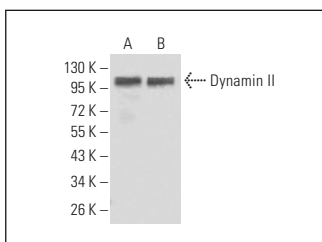
Dynamin II (5E4C2F3) is recommended for detection of Dynamin II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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: SK-N-SH cell lysate: sc-2410, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

DATA



Dynamin II (5E4C2F3): sc-81150. Western blot analysis of Dynamin II expression in SK-N-SH (A) and NIH/3T3 (B) whole cell lysates.

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.