

Dynamin I (4E67): sc-70995

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 found 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

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- Shpetner, H.S., et al. 1996. A binding site for SH3 domains targets Dynamin to coated pits. *J. Biol. Chem.* 271: 13-16.
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- 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.
- Wigge, P., et al. 1997. Inhibition of receptor-mediated endocytosis by the Amphiphysin SH3 domain. *Curr. Biol.* 7: 554-560.

CHROMOSOMAL LOCATION

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

SOURCE

Dynamin I (4E67) is a mouse monoclonal antibody raised against amino acids 1-750 of Dynamin I 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.

RESEARCH USE

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

APPLICATIONS

Dynamin I (4E67) is recommended for detection of Dynamin I of mouse, rat, human, canine and avian 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

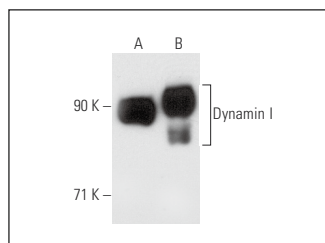
Molecular Weight of Dynamin I: 100 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, KNRK whole cell lysate: sc-2214 or SH-SY5Y cell lysate: sc-3812.

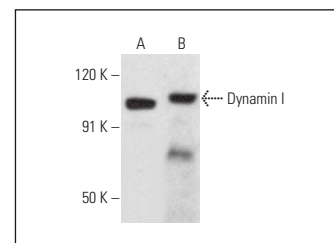
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Dynamin I (4E67): sc-70995. Western blot analysis of Dynamin I expression in SH-SY5Y whole cell lysate (A) and human cerebral cortex tissue extract (B).



Dynamin I (4E67): sc-70995. Western blot analysis of Dynamin I expression in NIH/3T3 (A) and KNRK (B) whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.