SANTA CRUZ BIOTECHNOLOGY, INC.

Dynamin II (h): 293T Lysate: sc-112881

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

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. 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. 1994. 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. Scaife, R.M., et al. 1997. The role of the PH domain and SH3 binding domains in Dynamin function. Cell. Signal. 9: 395-401.
7. 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.
8. Wigge, P., et al. 1997. Inhibition of receptor-mediated endocytosis by the Amphiphysin SH3 domain. Curr. Biol. 7: 554-560.

CHROMOSOMAL LOCATION

Genetic locus: DNM2 (human) mapping to 9p23.

PRODUCT

Dynamin II (h): 293T Lysate represents a lysate of human Dynamin II transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

Dynamin II (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Dynamin II antibodies. Recommended use: 10-20 µl per lane.

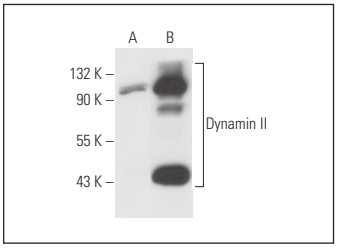
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Dynamin II (B-4): sc-166525. is recommended as a positive control antibody for Western Blot analysis of enhanced human Dynamin II expression in Dynamin IIg transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

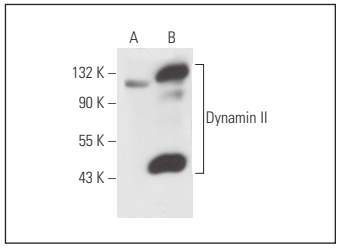
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Dynamin II (B-4): sc-166525. Western blot analysis of Dynamin II expression in non-transfected: sc-117752 (**A**) and human Dynamin II transfected: sc-112881 (**B**) 293T whole cell lysates.



Dynamin II (B-2): sc-166526. Western blot analysis of Dynamin II expression in non-transfected: sc-117752 (**A**) and human Dynamin II transfected: sc-112881 (**B**) 293T whole cell lysates.

PROTOCOLS

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