SANTA CRUZ BIOTECHNOLOGY, INC.

Dynamin II (C-18): sc-6400

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Dynamin II of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6400 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Dynamin II (C-18) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with Dynamin III.

Dynamin II (C-18) is also recommended for detection of Dynamin II in additional species, including equine, canine, bovine, porcine and avian.

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: rat brain extract: sc-2392, rat testis extract: sc-2400 or HeLa whole cell lysate: sc-2200.

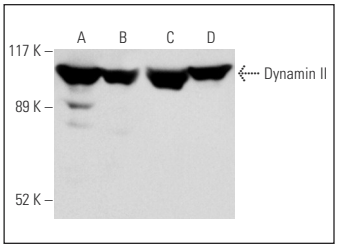
STORAGE

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

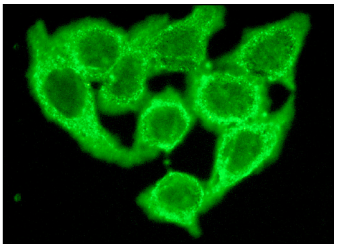
RESEARCH USE

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

DATA



Dynamin II (C-18): sc-6400. Western blot analysis of Dynamin II expression in rat brain (**A**) and testis (**B**) tissue extracts and in HeLa (**C**) and NIH/3T3 (**D**) whole cell lysates.



Dynamin II (C-18): sc-6400. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Elhamdani, A., et al. 2000. Enhancement of the dense-core vesicle secretory cycle by glucocorticoid differentiation of PC12 cells: characteristics of rapid exocytosis and endocytosis. J. Neurosci. 20: 2495-2503.
2. Kolokoltsov, A.A., et al. 2007. Small interfering RNA profiling reveals key role of clathrin-mediated endocytosis and early endosome formation for infection by respiratory syncytial virus. J. Virol. 81: 7786-7800.
3. Liu, Y.W., et al. 2008. Isoform and splice-variant specific functions of dynamin-2 revealed by analysis of conditional knock-out cells. Mol. Biol. Cell 19: 5347-5359.
4. Spoden, G., et al. 2008. Clathrin- and caveolin-independent entry of human papillomavirus type 16—involvement of tetraspanin-enriched microdomains (TEMs). PLoS ONE 3: e3313
5. Büchse, T., et al. 2011. CIN85 interacting proteins in B cells-specific role for SHIP-1. Mol. Cell. Proteomics 10: M110.
6. Bittner, M.A., et al. 2013. A nibbling mechanism for clathrin-mediated retrieval of secretory granule membrane after exocytosis. J. Biol. Chem. 288: 9177-9188.
7. Yamada, H., et al. 2013. Stabilization of actin bundles by a dynamin 1/cortactin ring complex is necessary for growth cone filopodia. J. Neurosci. 33: 4514-4526.
8. Tanifuji, S., et al. 2013. Dynamin isoforms decode action potential firing for synaptic vesicle recycling. J. Biol. Chem. 288: 19050-19059.
9. Wang, Q.C., et al. 2014. Dynamin 2 regulates actin-mediated spindle migration in mouse oocytes. Biol. Cell 106: 193-202.