

Dynamin (E-11): sc-17807

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.

CHROMOSOMAL LOCATION

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

SOURCE

Dynamin (E-11) is a mouse monoclonal antibody raised against amino acids 567-866 mapping at the C-terminus of Dynamin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Dynamin (E-11) is available conjugated to agarose (sc-17807 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17807 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17807 PE), fluorescein (sc-17807 FITC), Alexa Fluor® 488 (sc-17807 AF488), Alexa Fluor® 546 (sc-17807 AF546), Alexa Fluor® 594 (sc-17807 AF594) or Alexa Fluor® 647 (sc-17807 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17807 AF680) or Alexa Fluor® 790 (sc-17807 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Dynamin (E-11) is recommended for detection of Dynamin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).

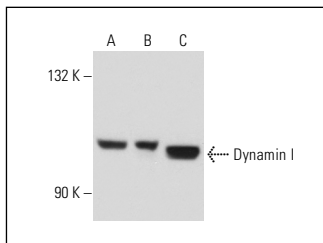
Molecular Weight of Dynamin: 100 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, IMR-32 cell lysate: sc-2409 or Dynamin I (h): 293T Lysate: sc-117282.

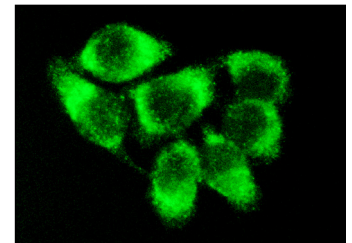
RECOMMENDED SUPPORT REAGENTS

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 (E-11): sc-17807. Western blot analysis of Dynamin I expression in non-transfected 293T: sc-117752 (A), human Dynamin I transfected 293T: sc-117282 (B) and SK-N-SH (C) whole cell lysates.



Dynamin (E-11): sc-17807. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Vandenberghe, W., et al. 2005. Interaction with the unfolded protein response reveals a role for stargazin in biosynthetic AMPA receptor transport. *J. Neurosci.* 25: 1095-1102.
2. Nogueras-Ortiz, C., et al. 2017. Retromer stops β-arrestin 1-mediated signaling from internalized cannabinoid 2 receptors. *Mol. Biol. Cell* 28: 3554-3561.
3. Kumar, V., et al. 2019. Disruption of APOL1-miR193a axis induces disorganization of podocyte Actin cytoskeleton. *Sci. Rep.* 9: 3582.
4. Jung, S.R., et al. 2021. Lithium enhances exercise-induced glycogen breakdown and Insulin-induced AKT activation to facilitate glucose uptake in rodent skeletal muscle. *Pflugers Arch.* E-published.

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.

PROTOCOLS

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

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