

Dynamin III (H-58): sc-292232

BACKGROUND

Dynamin III (DNM3, Dyna III, T Dynamin) is a microtubule-associated, force-producing GTPase that can form helical structures around the neck of vesicles. GTP hydrolysis-dependent extension of the helical structure releases the vesicle. Dynamin III contains a pair of phosphorylation sites at Ser 759 and Ser 763. Both 3.0 and 7.2 kb Dynamin III transcripts are detectable in brain. The 3.0 kb Dynamin III transcript is also detectable in testis. The 7.2 kb Dynamin III transcript is brain-specific for a protein thought to influence synaptogenesis in the CNS through recycling, neurotransmitter reuptake and growth factor-receptor signaling, in a thyroid hormone-dependent manner. A 6 kb antisense transcript (Dnm3os) contained within an intron of the mouse Dnm3 gene may be under transregulation by twist during mouse development. Dynamin III and Dnm3os transcripts overlap during embryogenesis and in adult tissues, except that Dynamin III is abundant in adult brain and testis whereas Dnm3os is abundant in embryos and gravid uterus.

REFERENCES

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3. Larsen, M.R., et al. 2004. Improved detection of hydrophilic phosphopeptides using graphite powder microcolumns and mass spectrometry: evidence for *in vivo* doubly phosphorylated dynamin I and dynamin III. *Mol. Cell Proteomics* 3: 456-465.
4. Rappoport, J.Z., et al. 2004. Understanding living clathrin-coated pits. *Traffic* 5: 327-337.
5. Schafer, D.A. 2004. Regulating actin dynamics at membranes: a focus on dynamin. *Traffic* 5: 463-469.
6. Praefcke, G.J., et al. 2004. The dynamin superfamily: universal membrane tubulation and fission molecules? *Nat. Rev. Mol. Cell Biol.* 5: 133-147.
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8. Loebel, D.A., et al. 2005. A conserved noncoding intronic transcript at the mouse Dnm3 locus. *Genomics* 85: 782-789.

CHROMOSOMAL LOCATION

Genetic locus: DNM3 (human) mapping to 1q24.3; Dnm3 (mouse) mapping to 1 H2.1.

SOURCE

Dynamin III (H-58) is a rabbit polyclonal antibody raised against amino acids 753-810 mapping near the C-terminus of Dynamin III 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.

APPLICATIONS

Dynamin III (H-58) is recommended for detection of Dynamin III 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).

Dynamin III (H-58) is also recommended for detection of Dynamin III in additional species, including bovine and porcine.

Suitable for use as control antibody for Dynamin III siRNA (h): sc-41208, Dynamin III siRNA (m): sc-41209, Dynamin III shRNA Plasmid (h): sc-41208-SH, Dynamin III shRNA Plasmid (m): sc-41209-SH, Dynamin III shRNA (h) Lentiviral Particles: sc-41208-V and Dynamin III shRNA (m) Lentiviral Particles: sc-41209-V.

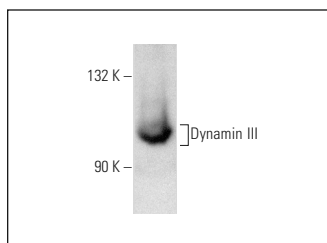
Molecular Weight of Dynamin III: 98 kDa.

Positive Controls: mouse brain extract: sc-2235.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Dynamin III (H-58): sc-292232. Western blot analysis of Dynamin III expression in mouse brain tissue extract.

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.