

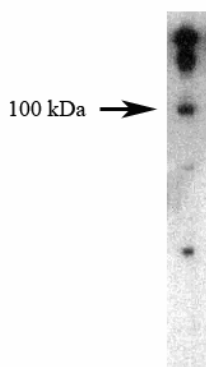
Technical Data Sheet

Purified Mouse Anti-Dynamin II**Product Information**

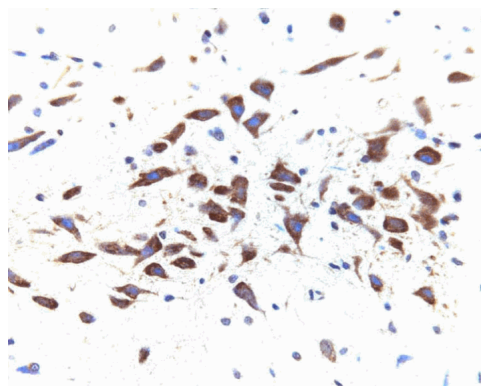
Material Number:	610264
Size:	150 µg
Concentration:	250 µg/ml
Clone:	27/Dynamin II
Immunogen:	Rat Dynamin II aa. 274-555
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human Tested in Development: Rat, Mouse
Target MW:	100 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Dynamin is a membrane-associated GTPase that binds to GTP, microtubules, and phospholipids. Northern blot analysis has shown dynamin to be present in most tissues but at an amount about 20-fold lower than that in brain. There are at least two distinct dynamin genes in mammals. Transcripts of both dynamin genes are alternatively spliced at two or more sites. The first site is identical in both dynamins, whereas, the second site differs. The two gene products are known as Dynamin I and Dynamin II and show 79% identity. Dynamin I is expressed almost exclusively in the central nervous system while Dynamin II expression is ubiquitous. The two proteins are highly homologous in the N-terminal region, while the C-terminal domain shows significant divergence. The GTPase activity of Dynamin I is stimulated several fold by binding to microtubules, phospholipids, and membranous vesicles. Dynamin I is a good substrate of PKC in vitro as well as in vivo in resting nerve terminals. In vitro, phosphorylation occurs at the C-terminus of Dynamin I and this enhances the GTPase activity more than 10-fold. However, Dynamin II is not a substrate of PKC and its activity does not appear to be affected by phosphorylation. These data suggest that the function of the common N-terminal domain between Dynamin I and II may be differentially specified by distinct C-terminal domains.



Western blot analysis of Dynamin II on a HeLa cell lysate (Human cervical epitheloid carcinoma; ATCC CCL-2) using 1 µg/mL of the Mouse Anti-Dynamin II antibody.



Immunohistochemical staining for Dynamin II on a rat brain section, zinc-fixed paraffin-embedded (40X magnification).

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes**Application**

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	Not Recommended

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Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
611449	HeLa Cell Lysate	500 µg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Cook TA, Urrutia R, McNiven MA. Identification of dynamin 2, an isoform ubiquitously expressed in rat tissues. *Proc Natl Acad Sci U S A*. 1994; 91(2):644-648. (Biology)

Kessels MM, Engqvist-Goldstein AE, Drubin DG. Association of mouse actin-binding protein 1 (mAbp1/SH3P7), an Src kinase target, with dynamic regions of the cortical actin cytoskeleton in response to Rac1 activation. *Mol Biol Cell*. 2000; 11(1):393-412. (Biology: Immunofluorescence)

Kranenburg O, Verlaan I, Moolenaar WH. Dynamin is required for the activation of mitogen-activated protein (MAP) kinase by MAP kinase kinase. *J Biol Chem*. 1999; 274(50):35301-35304. (Biology: Western blot)

McNiven MA, Kim L, Krueger EW, Orth JD, Cao H, Wong TW. Regulated interactions between dynamin and the actin-binding protein cortactin modulate cell shape. *J Cell Biol*. 2000; 151(1):187-198. (Biology: Immunoprecipitation, Western blot)

Sontag JM, Fykse EM, Ushkaryov Y, Liu JP, Robinson PJ, Sudhof TC. Differential expression and regulation of multiple dynamins. *J Biol Chem*. 1994; 269(6):4547-4554. (Biology)