

# Katanin p80 B1 (C-12): sc-107229

## BACKGROUND

Microtubules are polymers of  $\alpha$  and  $\beta$  subunits that form the mitotic spindle and assist in the organization of membranous organelles during interphase. Katanin is a heterodimer complex that severs microtubules in an ATP-dependent manner. The severing of microtubules by the Katanin complex may promote reorganization of cellular microtubule arrays and release of microtubules from the centrosome following nucleation. The Katanin complex is composed of a 60 kDa subunit (Katanin p60 A1) and a 80 kDa accessory protein (Katanin p80 B1). Katanin p60 A1 is responsible for the severing and disassembly of microtubules, while Katanin p80 B1 targets the complex to the centrosome.

## REFERENCES

1. McNally, F.J. and Vale, R.D. 1993. Identification of katanin, an ATPase that severs and disassembles stable microtubules. *Cell* 75: 419-429.
2. McNally, F.J., et al. 1996. Katanin, the microtubule-severing ATPase, is concentrated at centrosomes. *J. Cell Sci.* 109: 561-567.
3. Hartman, J.J., et al. 1998. Katanin, a microtubule-severing protein, is a novel AAA ATPase that targets to the centrosome using a WD40-containing subunit. *Cell* 93: 277-287.
4. Ahmad, F.J., et al. 1999. An essential role for katanin in severing microtubules in the neuron. *J. Cell Biol.* 145: 305-315.
5. McNally, K.P., et al. 2000. Two domains of p80 katanin regulate microtubule severing and spindle pole targeting by p60 katanin. *J. Cell Sci.* 113: 1623-1633.
6. Karabay, A., et al. 2004. Axonal growth is sensitive to the levels of katanin, a protein that severs microtubules. *J. Neurosci.* 24: 5778-5788.
7. Toyo-Oka, K., et al. 2005. Recruitment of katanin p60 by phosphorylated NDEL1, an LIS1 interacting protein, is essential for mitotic cell division and neuronal migration. *Hum. Mol. Genet.* 14: 3113-3128.

## CHROMOSOMAL LOCATION

Genetic locus: KATNB1 (human) mapping to 16q21; Katnb1 (mouse) mapping to 8 D1.

## SOURCE

Katanin p80 B1 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Katanin p80 B1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107229 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Katanin p80 B1 (C-12) is recommended for detection of Katanin p80 B1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with family members Katanin p60 A1, Katanin p60 AL1 or Katanin p60 AL2.

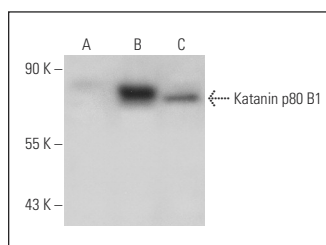
Katanin p80 B1 (C-12) is also recommended for detection of Katanin p80 B1 in additional species, including equine, bovine and avian.

Suitable for use as control antibody for Katanin p80 B1 siRNA (h): sc-93267, Katanin p80 B1 siRNA (m): sc-146344, Katanin p80 B1 shRNA Plasmid (h): sc-93267-SH, Katanin p80 B1 shRNA Plasmid (m): sc-146344-SH, Katanin p80 B1 shRNA (h) Lentiviral Particles: sc-93267-V and Katanin p80 B1 shRNA (m) Lentiviral Particles: sc-146344-V.

Molecular Weight of Katanin p80 B1: 80 kDa.

Positive Controls: Katanin p80 B1 (h): 293T Lysate: sc-175702 or IMR-32 cell lysate: sc-2409.

## DATA



Katanin p80 B1 (C-12): sc-107229. Western blot analysis of Katanin p80 B1 expression in non-transfected 293T: sc-117752 (A), human Katanin p80 B1 transfected 293T: sc-175702 (B) and IMR-32 (C) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Katanin p80 B1 (C-4): sc-377226**, our highly recommended monoclonal alternative to Katanin p80 B1 (C-12).