

myopalladin (T-18): sc-79640

BACKGROUND

myopalladin, also known as MYPN or MYOP, is a 1,320 amino acid protein that localizes to both the cytoplasm and the nucleus and is a member of the Myotilin/palladin family. Expressed in fetal heart and adult skeletal muscle, myopalladin acts as a structural component of the sarcomere that tethers both skeletal and cardiac muscle to α -actinin. myopalladin contains five Ig (immunoglobulin)-like domains and is bound to the sarcomere in the central I-band region and at the Z-line periphery. Overexpression of myopalladin is thought to disrupt proper sarcomeric function, indicating that proper myopalladin levels are essential for sarcomeric integrity. Defects in the gene encoding myopalladin are associated with idiopathic dilated cardiomyopathy (DCM), a disease characterized by an enlarged heart that does not function properly. Three isoforms of myopalladin exist due to alternative splicing events.

REFERENCES

1. Bang, M.L., et al. 2001. Myopalladin, a novel 145-kilodalton sarcomeric protein with multiple roles in Z-disc and I-band protein assemblies. *J. Cell Biol.* 15: 413-427.
2. Ma, K. and Wang, K. 2002. Interaction of nebulin SH3 domain with Titin PEVK and myopalladin: implications for the signaling and assembly role of titin and nebulin. *FEBS Lett.* 532: 273-278.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608517. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Miller, M.K., et al. 2003. The muscle ankyrin repeat proteins: CARP, ankrd2/Arpp and DARP as a family of Titin filament-based stress response molecules. *J. Mol. Biol.* 333: 951-964.
5. Otey, C.A., et al. 2005. The palladin/Myotilin/myopalladin family of Actin-associated scaffolds. *Int. Rev. Cytol.* 246: 31-58.
6. Wimmers, K., et al. 2007. Associations of functional candidate genes derived from gene-expression profiles of prenatal porcine muscle tissue with meat quality and muscle deposition. *Anim. Genet.* 38: 474-484.
7. Duboscq-Bidot, L., et al. 2008. Mutations in the Z-band protein myopalladin gene and idiopathic dilated cardiomyopathy. *Cardiovasc. Res.* 77: 118-125.

CHROMOSOMAL LOCATION

Genetic locus: MYPN (human) mapping to 10q21.3; Mypn (mouse) mapping to 10 B4.

SOURCE

myopalladin (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of myopalladin of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-79640 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

myopalladin (T-18) is recommended for detection of myopalladin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

myopalladin (T-18) is also recommended for detection of myopalladin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for myopalladin siRNA (h): sc-75851, myopalladin siRNA (m): sc-75852, myopalladin shRNA Plasmid (h): sc-75851-SH, myopalladin shRNA Plasmid (m): sc-75852-SH, myopalladin shRNA (h) Lentiviral Particles: sc-75851-V and myopalladin shRNA (m) Lentiviral Particles: sc-75852-V.

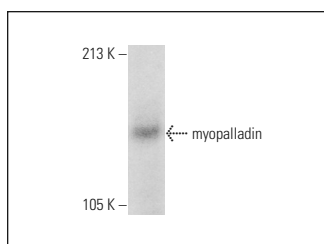
Molecular Weight of myopalladin: 145 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or rat heart extract: sc-2393.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



myopalladin (T-18): sc-79640. Western blot analysis of myopalladin expression in rat heart tissue extract.

RESEARCH USE

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