

# MYLPF (D-13): sc-168685

## BACKGROUND

MYLPF (myosin light chain, phosphorylatable, fast skeletal muscle), also known as fast skeletal myosin light chain 2 or MLC2B, is a 169 amino acid protein that is expressed in fetal and adult skeletal muscle. A calcium binding protein, MYLPF contains three EF hand domains and is encoded by a gene that maps to human chromosome 16p11.2. Chromosome 16 encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, though through the CREBBP gene which encodes a critical CREB binding protein. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene.

## REFERENCES

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- Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
- Kuhlenbäumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. *Neurology* 58: 1273-1276.
- Sachdev, S., et al. 2003. Human fast skeletal myosin light chain 2 cDNA: isolation, tissue specific expression of the single copy gene, comparative sequence analysis of isoforms and evolutionary relationships. *DNA Seq.* 14: 339-350.
- Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. *Curr. Gastroenterol. Rep.* 6: 467-473.
- Mathew, C.G., et al. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13 Spec No 1: R161-R168.

## CHROMOSOMAL LOCATION

Genetic locus: MYLPF (human) mapping to 16p11.2; Mylpf (mouse) mapping to 7 F3.

## SOURCE

MYLPF (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MYLPF 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.

Blocking peptide available for competition studies, sc-168685 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MYLPF (D-13) is recommended for detection of MYLPF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); may cross-react with MYL10 of human, mouse and rat origin.

MYLPF (D-13) is also recommended for detection of MYLPF in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for MYLPF siRNA (h): sc-93432, MYLPF siRNA (m): sc-149754, MYLPF shRNA Plasmid (h): sc-93432-SH, MYLPF shRNA Plasmid (m): sc-149754-SH, MYLPF shRNA (h) Lentiviral Particles: sc-93432-V and MYLPF shRNA (m) Lentiviral Particles: sc-149754-V.

Molecular Weight of MYLPF: 19 kDa.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.