

# Myosin XVIIIIB (C-17): sc-48595

## BACKGROUND

Myosin XVIIIIB (MYO18B) is a 2,567 amino acid, unconventional myosin heavy chain that is expressed mainly in human cardiac and skeletal muscles and, at much lower levels, in the testis. Myosin XVIIIIB is located in the cytoplasm of undifferentiated myoblast cells and has an N-terminal head domain functioning as a motor (with an ATP-binding site as well as an actin-binding region), a neck region containing an IQ motif, and a C-terminal tail with a short coiled-coil domain allowing for dimerization to form a two-headed structure. Sug1, a regulator of the 26S Proteasome, binds to the C-terminal tail of Myosin XVIIIIB. This Sug1 binding causes an upregulation of Myosin XVIIIIB. Myosin XVIIIIB is frequently deleted, mutated and/or hypermethylated in lung and ovarian cancers, suggesting its candidacy as a tumor suppressor. Furthermore, the Histones H3 and H4 play a role in the regulation of Myosin XVIIIIB expression, so histone deacetylation surrounding the promoter region may be involved in lung and ovarian carcinomas.

## REFERENCES

1. Nishioka, M., Kohno, T., Tani, M., Yanaihara, N., Tomizawa, Y., Otsuka, A., Sasaki, S., Kobayashi, K., Niki, T., Maeshima, A., Sekido, Y., Minna, J.D., Sone, S. and Yokota, J. 2002. MYO18B, a candidate tumor suppressor gene at chromosome 22q12.1, deleted, mutated and methylated in human lung cancer. *Proc. Natl. Acad. Sci. USA* 99: 12269-12274.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607295. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Salamon, M., Millino, C., Raffaello, A., Mongillo, M., Sandri, C., Bean, C., Negrisolo, E., Pallavicini, A., Valle, G., Zaccolo, M., Schiaffino, S. and Lanfranchi, G. 2003. Human MYO18B, a novel unconventional myosin heavy chain expressed in striated muscles moves into the myonuclei upon differentiation. *J. Mol. Biol.* 326: 137-149.

## CHROMOSOMAL LOCATION

Genetic locus: MYO18B (human) mapping to 22q12.1.

## SOURCE

Myosin XVIIIIB (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Myosin XVIIIIB 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-48595 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Myosin XVIIIIB (C-17) is recommended for detection of Myosin XVIIIIB isoforms 1 and 2 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Myosin XVIIIIB (C-17) is also recommended for detection of Myosin XVIIIIB isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

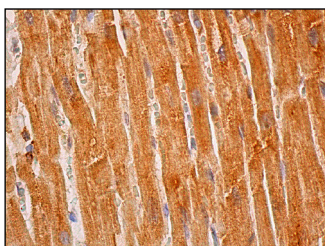
Suitable for use as control antibody for Myosin XVIIIIB siRNA (h): sc-61119, Myosin XVIIIIB shRNA Plasmid (h): sc-61119-SH and Myosin XVIIIIB shRNA (h) Lentiviral Particles: sc-61119-V.

Molecular Weight of Myosin XVIIIIB: 285 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Myosin XVIIIIB (C-17): sc-48595. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

## RESEARCH USE

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

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Try **Myosin XVIIIIB (D-11): sc-515011**, our highly recommended monoclonal alternative to Myosin XVIIIIB (C-17).