

Myosin XVIIIIB (D-11): sc-515011

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 2-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., et al. 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. Yokota, J., et al. 2003. Genetic alterations responsible for metastatic phenotypes of lung cancer cells. *Clin. Exp. Metastasis* 20: 189-193.

CHROMOSOMAL LOCATION

Genetic locus: MYO18B (human) mapping to 22q12.1; Myo18b (mouse) mapping to 5 F.

SOURCE

Myosin XVIIIIB (D-11) is a mouse monoclonal antibody raised against amino acids 1801-1930 mapping within an internal region of Myosin XVIIIIB of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Myosin XVIIIIB (D-11) is available conjugated to agarose (sc-515011 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515011 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515011 PE), fluorescein (sc-515011 FITC), Alexa Fluor® 488 (sc-515011 AF488), Alexa Fluor® 546 (sc-515011 AF546), Alexa Fluor® 594 (sc-515011 AF594) or Alexa Fluor® 647 (sc-515011 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515011 AF680) or Alexa Fluor® 790 (sc-515011 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Myosin XVIIIIB (D-11) is recommended for detection of Myosin XVIIIIB isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

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.

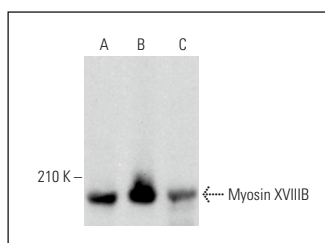
Molecular Weight of Myosin XVIIIIB: 285 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, Sol8 cell lysate: sc-2249 or A-10 cell lysate: sc-3806.

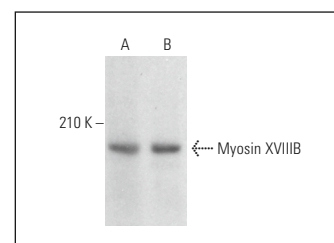
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Myosin XVIIIIB (D-11): sc-515011. Western blot analysis of Myosin XVIIIIB expression in C2C12 (A), Sol8 (B) and A-10 (C) whole cell lysates.



Myosin XVIIIIB (D-11): sc-515011. Western blot analysis of Myosin XVIIIIB expression in RAW 264.7 (A) and WEHI-231 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Latham, S.L., et al. 2020. Myosin-18B regulates higher-order organization of the cardiac sarcomere through thin filament cross-linking and thick filament dynamics. *Cell Rep.* 32: 108090.
2. Cao, C., et al. 2021. Myosin18B predicts favorable prognosis of cutaneous squamous-cell carcinoma. *Genes Genomics* 43: 371-378.

STORAGE

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