

Myosin Vb (18): sc-135995



The Power to Question

BACKGROUND

Class V unconventional Myosins, which include Myosin Va and Myosin Vb, are nonfilamentous, Actin-binding enzymes that appear to be expressed ubiquitously. Myosin V proteins are regulated by their heavy chain phosphorylation, which occurs at the C-terminal tail domain. Myosin Vb, also known as MYO5B, is a 1,849 amino acid protein that may be involved in intracellular trafficking. Considered a Rab 8A interacting protein, Myosin Vb regulates intracellular trafficking of GluR from recycling endosomes (REs) to synaptic sites during long-term potentiation. Association with REs triggers rapid spine recruitment of endosomes and local exocytosis in spines. It is suggested that Myosin Vb is required for Insulin-induced Glut4 translocation in muscle cells.

REFERENCES

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- Roland, J.T., et al. 2007. Myosin Vb interacts with Rab 8A on a tubular network containing EHD1 and EHD3. *Mol. Biol. Cell* 18: 2828-2837.
- Ishikura, S., et al. 2008. Muscle cells engage Rab 8A and Myosin Vb in Insulin-dependent Glut4 translocation. *Am. J. Physiol., Cell Physiol.* 295: C1016-C1025.
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- Wang, Z., et al. 2008. Myosin Vb mobilizes recycling endosomes and AMPA receptors for postsynaptic plasticity. *Cell* 135: 535-548.
- Müller, T., et al. 2008. MYO5B mutations cause microvillus inclusion disease and disrupt epithelial cell polarity. *Nat. Genet.* 40: 1163-1165.
- Millman, E.E., et al. 2008. Rapid recycling of β -adrenergic receptors is dependent on the Actin cytoskeleton and Myosin Vb. *Traffic* 9: 1958-1971.
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CHROMOSOMAL LOCATION

Genetic locus: Myo5b (mouse) mapping to 18 E2.

SOURCE

Myosin Vb (18) is a mouse monoclonal antibody raised against amino acids 940-1051 of Myosin Vb of rat origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Myosin Vb (18) is recommended for detection of Myosin Vb of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Myosin Vb siRNA (m): sc-149761, Myosin Vb shRNA Plasmid (m): sc-149761-SH and Myosin Vb shRNA (m) Lentiviral Particles: sc-149761-V.

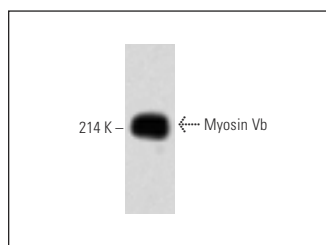
Molecular Weight of Myosin Vb: 214 kDa.

Positive Controls: rat testis extract: sc-2400.

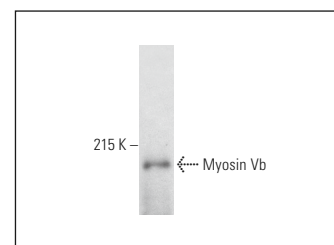
RECOMMENDED SUPPORT PRODUCTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



Myosin Vb (18): sc-135995. Western blot analysis of Myosin Vb expression in rat testis tissue extract.



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SELECT PRODUCT CITATIONS

- Harper, M.T., et al. 2013. Absence of platelet phenotype in mice lacking the motor protein Myosin Va. *PLoS ONE* 8: e53239.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.