

# Myosin VI (H-215): sc-50461

## BACKGROUND

Myosin VI (MYO6), a molecular motor involved in intracellular vesicle and organelle transport, is the only myosin motor that binds to the pointed end of actin. This unique myosin has only one light chain in the lever-arm domain and has highly irregular stepping with a wide range of step sizes, unlike that of other characterized myosins. It associates with Clathrin-coated vesicles and disabled 2, indicating a role for Myosin VI in endocytosis. Mouse Myosin VI is expressed within the sensory hair cells of the cochlea. Human Myosin VI is mapped to the centromeric region of chromosome 6, a region that shows syntenic homology with the corresponding mouse chromosome 9 region, where the Snell's Waltzer mutation is located. The behavioral effects of the mouse Snell's Waltzer mutation are lack of responsiveness to sound, hyperactivity, head tossing and circling, due to the disorganization and fusing of stereocilia bundles within the inner ear. Defects of Myosin VI cause autosomal dominant nonsyndromic sensori-neural deafness in humans. Human Myosin VI is expressed in fetal cochlea and brain, as well as in adult brain.

## CHROMOSOMAL LOCATION

Genetic locus: MYO6 (human) mapping to 6q14.1; Myo6 (mouse) mapping to 9 E1.

## SOURCE

Myosin VI (H-215) is a rabbit polyclonal antibody raised against amino acids 1071-1285 mapping at the C-terminus of Myosin VI 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.

## RESEARCH USE

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

## APPLICATIONS

Myosin VI (H-215) is recommended for detection of Myosin VI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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 VI (H-215) is also recommended for detection of Myosin VI in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Myosin VI siRNA (h): sc-37133, Myosin VI siRNA (m): sc-37134, Myosin VI shRNA Plasmid (h): sc-37133-SH, Myosin VI shRNA Plasmid (m): sc-37134-SH, Myosin VI shRNA (h) Lentiviral Particles: sc-37133-V and Myosin VI shRNA (m) Lentiviral Particles: sc-37134-V.

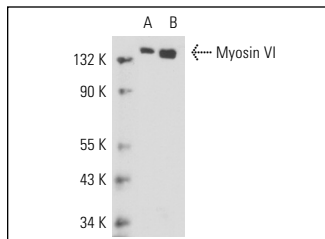
Molecular Weight of Myosin VI: 150 kDa.

Positive Controls: rat liver extract: sc-2395, H4 cell lysate: sc-2408 or DU 145 cell lysate: sc-2268.

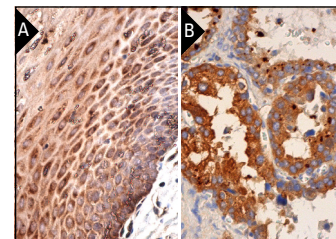
## STORAGE

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

## DATA



Myosin VI (H-215): sc-50461. Western blot analysis of Myosin VI expression in H4 (A) and DU 145 (B) whole cell lysates.



Myosin VI (H-215): sc-50461. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells (A) and human seminal vesicle tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Hayashi, T., et al. 2008. Hesr1 and Hesr2 may act as early effectors of Notch signaling in the developing cochlea. *Dev. Biol.* 316: 87-99.
- Hayashi, T., et al. 2008. Fgf20 is required for sensory epithelial specification in the developing cochlea. *J. Neurosci.* 28: 5991-5999.
- Gao, N. and Kaestner, K.H. 2010. Cdx2 regulates endo-lysosomal function and epithelial cell polarity. *Genes Dev.* 24: 1295-1305.
- Feuillet, S., et al. 2010. Filamin-A and Myosin VI colocalize with fibrillary Tau protein in Alzheimer's disease and FTDP-17 brains. *Brain Res.* 1345: 182-189.
- Dawson, H.J., et al. 2013. Myosin VI and associated proteins are expressed in human macrophages but do not play a role in foam cell formation in THP-1 cells. *Int. J. Vasc. Med.* 2013: 516015.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **Myosin VI (A-9): sc-393558** or **Myosin VI (G-6): sc-398609**, our highly recommended monoclonal alternatives to Myosin VI (H-215).