

Myosin VI (K-20): sc-23568

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 MYO6 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 MYO6 cause autosomal dominant nonsyndromic sensorineural deafness in humans. Human Myosin VI is expressed in fetal cochlea and brain, as well as adult brain.

REFERENCES

1. Avraham, K.B., et al. 1997. Characterization of unconventional MYO6, the human homologue of the gene responsible for deafness in Snell's waltzer mice. *Hum. Mol. Genet.* 6: 1225-1231.
2. Wells, A.L., et al. 1999. Myosin VI is an actin-based motor that moves backwards. *Nature* 401: 505-508.
3. Self, T., et al. 1999. Role of Myosin VI in the differentiation of cochlear hair cells. *Dev. Biol.* 214: 331-341.
4. Ahituv, N., et al. 2000. Genomic structure of the human unconventional Myosin VI gene. *Gene* 261: 269-275.
5. Buss, F., et al. 2001. Myosin VI isoform localized to clathrin-coated vesicles with a role in clathrin-mediated endocytosis. *EMBO J.* 20: 3676-3684.
6. Rock, R.S., et al. 2001. Myosin VI is a processive motor with a large step size. *Proc. Natl. Acad. Sci. USA* 98: 13655-13659.

CHROMOSOMAL LOCATION

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

SOURCE

Myosin VI (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near 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.

Blocking peptide available for competition studies, sc-23568 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Myosin VI (K-20) 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).

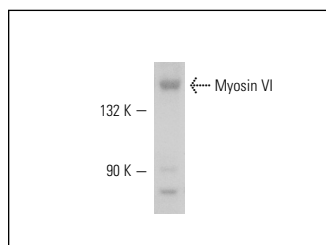
Myosin VI (K-20) is also recommended for detection of Myosin VI in additional species, including equine, canine, bovine, porcine and avian.

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.

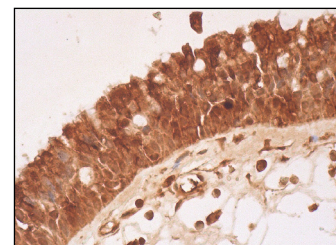
Molecular Weight of Myosin VI: 140 kDa.

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

DATA



Myosin VI (K-20): sc-23568. Western blot analysis of Myosin VI expression in rat liver tissue extract.



Myosin VI (K-20): sc-23568. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing cytoplasmic and nuclear staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Chen, Y.F., et al. 2009. Motor protein-dependent membrane trafficking of KCl cotransporter-4 is important for cancer cell invasion. *Cancer Res.* 69: 8585-8593.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **Myosin VI (A-9): sc-393558** or **Myosin VI (G-6): sc-398609**, our highly recommended monoclonal alternatives to Myosin VI (K-20).