SANTA CRUZ BIOTECHNOLOGY, INC.

Myosin VIIa (A-16): sc-26709

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Myosins are molecular motors that move along filamentous Actin and influence cellular movements such as phagocytosis. There are seven classes of myosins in vertebrates, including Myosin II, and six unconventional Myosin classes, designated I, V, VI, VII, IX and X. Myosin VIIa is a plus end-directed motor that influences cilia formation and cell adhesion. Mutations in the human Myosin VIIa gene correlate with Usher syndrome, a disease characterized by congenital sensorineural deafness, vestibular dysfunction and retinitis pigmentosa.

REFERENCES

1. Weil, D., et al. 1995. Defective Myosin VIIa gene responsible for Usher syndrome type 1B. Nature 374: 60-61.
2. Weil, D., et al. 1996. Human Myosin VIIa responsible for the Usher 1B syndrome: a predicted membrane-associated motor protein expressed in developing sensory epithelia. Proc. Natl. Acad. Sci. USA 93: 3232-3237.
3. Weil, D., et al. 1997. The autosomal recessive isolated deafness, DFNB2, and the Usher 1B syndrome are allelic defects of the Myosin VIIa gene. Nat. Genet. 16: 191-193.
4. Maniak, M. 2001. Cell adhesion: ushering in a new understanding of Myosin VII. Curr. Biol. 11: R315-317.
5. Tuxworth, R.I., et al. 2001. A role for Myosin VII in dynamic cell adhesion. Curr. Biol. 11: 318-329.
6. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 276903. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: MYO7A (human) mapping to 11q13.5; Myo7a (mouse) mapping to 7 E2.

SOURCE

Myosin VIIa (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Myosin VIIa 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-26709 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.

RESEARCH USE

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

APPLICATIONS

Myosin VIIa (A-16) is recommended for detection of Myosin VIIa isoforms 1-7 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Myosin VIIa (A-16) is also recommended for detection of Myosin VIIa isoforms 1-7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Myosin VIIa siRNA (h): sc-43223, Myosin VIIa siRNA (m): sc-43224, Myosin VIIa shRNA Plasmid (h): sc-43223-SH, Myosin VIIa shRNA Plasmid (m): sc-43224-SH, Myosin VIIa shRNA (h) Lentiviral Particles: sc-43223-V and Myosin VIIa shRNA (m) Lentiviral Particles: sc-43224-V.

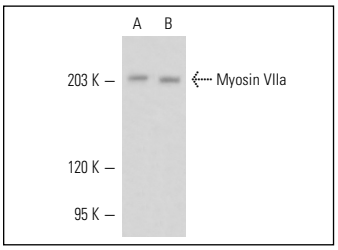
Molecular Weight of Myosin VIIa: 203 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NTERA-2 cl.D1 whole cell lysate or Y79 cell lysate: sc-2240.

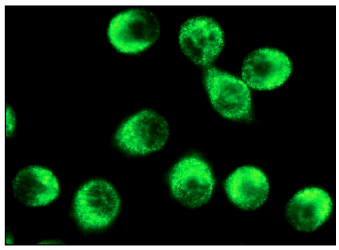
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Myosin VIIa (A-16): sc-26709. Western blot analysis of Myosin VIIa expression in NTERA-2 cl.D1 (**A**) and KNRK (**B**) whole cell lysates.



Myosin VIIa (A-16): sc-26709. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Nagy, I., et al. 2007. Transplantation of neural stem cells into the cochlea. HNO 55: 862-870.