

Myosin Va (K-14): sc-30494

BACKGROUND

Myosin Va, a member of the unconventional myosin family, is a non-muscle myosin that structurally combines elements from both non-muscle myosin type I and non-muscle myosin type II. 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 in the carboxy-terminal tail domain. The mouse Myosin Va gene is also known as the mouse dilute gene because mutations in this gene cause the coat color in mice to lighten. Mutations in the Myosin Va gene also result in the onset of severe neurological defects shortly after birth. Defects in the human Myosin Va gene, which maps to chromosome 15q21.2, have been implicated in Griscelli disease, a rare autosomal recessive disorder characterized by pigmentary dilution, variable cellular immunodeficiency and onset of acute, uncontrolled lymphocyte and macrophage activation.

REFERENCES

1. Engle, L.J., et al. 1994. Cloning, analysis, and chromosomal localization of myosin (MYH12), the human homologue to the mouse dilute gene. *Geno-mics* 19: 407-416.
2. Pastural, E., et al. 1997. Griscelli disease maps to chromosome 15q21 and is associated with mutations in the Myosin Va gene. *Nat. Genet.* 16: 289-292.
3. Wu, X., et al. 1998. Myosin Va associates with microtubule-rich domains in both interphase and dividing cells. *Cell Motil. Cytoskeleton* 40: 286-303.
4. Redowicz, M.J. 2001. Regulation of non-muscle myosins by heavy chain phosphorylation. *J. Muscle Res. Cell Motil.* 22: 163-173.
5. Tauhata, S.B., et al. 2001. High affinity binding of brain Myosin Va to F-Actin induced by calcium in the presence of ATP. *J. Biol. Chem.* 276: 39812-39818.

CHROMOSOMAL LOCATION

Genetic locus: MYO5A (human) mapping to 15q21.2; Myo5a (mouse) mapping to 9 D.

SOURCE

Myosin Va (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Myosin Va 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-30494 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 Va (K-14) is recommended for detection of Myosin Va of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Va siRNA (h): sc-35995, Myosin Va siRNA (m): sc-35996, Myosin Va shRNA Plasmid (h): sc-35995-SH, Myosin Va shRNA Plasmid (m): sc-35996-SH, Myosin Va shRNA (h) Lentiviral Particles: sc-35995-V and Myosin Va shRNA (m) Lentiviral Particles: sc-35996-V.

Molecular Weight of Myosin Va: 190 kDa.

Positive Controls: A-375 cell lysate: sc-3811, KNRK whole cell lysate: sc-2214 or HeLa whole cell lysate: sc-2200.

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) 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.

RESEARCH USE

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

PROTOCOLS

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



Try **Myosin Va (G-4): sc-365986**, our highly recommended monoclonal alternative to Myosin Va (K-14).