SANTA CRUZ BIOTECHNOLOGY, INC.

Myosin Va (G-4): sc-365986

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Myosin Va, a member of the unconventional myosin family, is a non-muscle myosin that structurally combines elements from both nonmuscle Myosin type I and nonmuscle 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. Genomics 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.

CHROMOSOMAL LOCATION

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

SOURCE

Myosin Va (G-4) is a mouse monoclonal antibody raised against a peptide mapping near the N-terminus of Myosin Va of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Myosin Va (G-4) is available conjugated to agarose (sc-365986 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365986 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365986 PE), fluorescein (sc-365986 FITC), Alexa Fluor® 488 (sc-365986 AF488), Alexa Fluor® 546 (sc-365986 AF546), Alexa Fluor® 594 (sc-365986 AF594) or Alexa Fluor® 647 (sc-365986 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365986 AF680) or Alexa Fluor® 790 (sc-365986 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365986 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

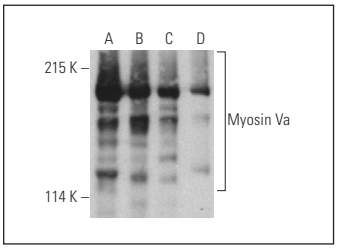
Myosin Va (G-4) is recommended for detection of Myosin Va of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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).

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.

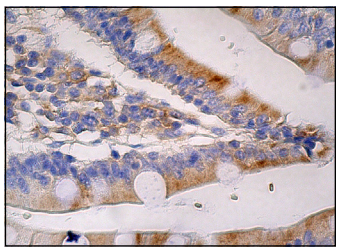
Molecular Weight of Myosin Va: 190 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, A-375 cell lysate: sc-3811 or C32 whole cell lysate: sc-2205.

DATA



Myosin Va (G-4): sc-365986. Western blot analysis of Myosin Va expression in C32 (**A**), A-375 (**B**) and U-87 MG (**C**) whole cell lysates and human brain tissue extract (**D**). Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Myosin Va (G-4): sc-365986. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Batra, J., et al. 2018. Protein interaction mapping identifies RBBP6 as a negative regulator of Ebola virus replication. Cell 175: 1917-1930.e13.
2. Lv, J., et al. 2020. Isoliquiritigenin inhibits melanogenesis, melanocyte dendricity and melanosome transport by regulating ERK-mediated MITF degradation. Exp. Dermatol. 29: 149-157.
3. Moore, A.S., et al. 2021. Actin cables and comet tails organize mitochondrial networks in mitosis. Nature 591: 659-664.
4. Wang, S., et al. 2022. Prolonged ethanol exposure modulates constitutive internalization and recycling of 5-HT1A receptors. J. Neurochem. 160: 469-481.
5. Gao, R., et al. 2023. Cryptochrome 1 activation inhibits melanogenesis and melanosome transport through negative regulation of cAMP/PKA/CREB signaling pathway. Front. Pharmacol. 14: 1081030.

STORAGE

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