

#3402 Store at -20°C

Myosin Va Antibody


Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-F	H M R	Endogenous	207	Rabbit	#Q99104	17918

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Frozen)

Dilution

1:1000
1:100
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Myosin Va Antibody detects endogenous levels of total myosin Va heavy chain. Based on sequence homology, the antibody is expected to detect all known myosin Va splice variants.

Species predicted to react based on 100% sequence homology:

Monkey, Chicken, Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human myosin Va.

Background

Myosin Va is a molecular motor protein involved in the transport of organelles, vesicles and other cellular cargo along actin filaments (reviewed in 1). The molecule consists of two identical heavy chains, which dimerize via helical domains in a coiled coil structure. The amino-terminal motor domains of the heavy chains contain both the ATPase and the actin-binding activities of myosin Va. The globular tail domains act in a regulatory capacity, binding the myosin Va cargo (2) or inhibiting motor activity by binding the head domains and preventing ATP consumption (3). Mutation of the murine dilute gene, which encodes myosin Va, causes defects in coat pigmentation as well as severe neurological defects (4). In melanocytes, the coiled coil structure of myosin Va is important in regulating the trafficking of melanosomes in conjunction with melanophilin and Rab27a (5). Myosin Va regulates trafficking and exocytosis of secretory granules in neuroendocrine cells (reviewed in 6) as well as RNA transport and distribution (7).

Background References

1. Desnos, C. et al. (2007) *Biol Cell* 99, 411-23.
2. Wu, X. et al. (1997) *J Cell Sci* 110 (Pt 7), 847-59.
3. Li, X.D. et al. (2006) *J Biol Chem* 281, 21789-98.
4. Mercer, J.A. et al. (1991) *Nature* 349, 709-13.
5. Hume, A.N. et al. (2006) *Mol Biol Cell* 17, 4720-35.
6. Eichler, T.W. et al. (2006) *Biochem Soc Trans* 34, 671-4.
7. Salerno, V.P. et al. (2008) *Cell Motil Cytoskeleton* 65, 422-33.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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