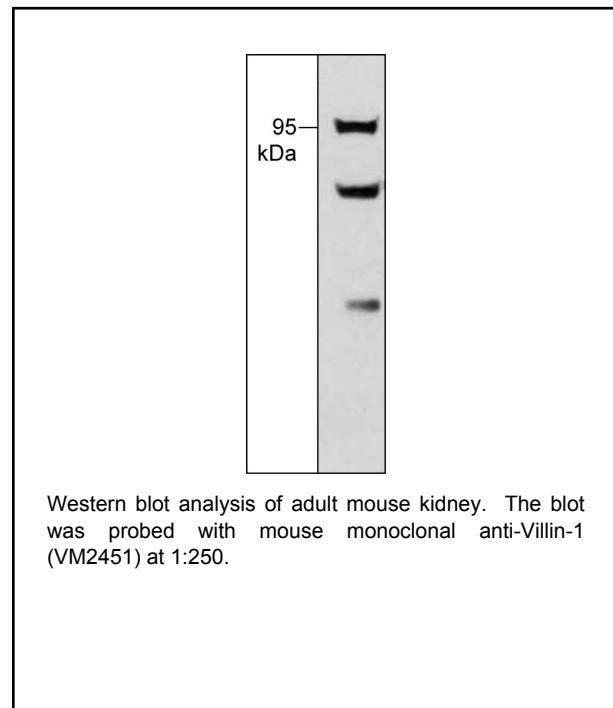


Background

Villin is a member of a conserved family of actin-associated proteins, such as gelsolin, adseverin, and scinderin, widely expressed from slime molds to humans. These proteins belong to the group of actin-severing proteins that contain 3–6 repeats of a conserved domain. Similar to other family members, villin caps, nucleates, and severs actin filaments, and these functions are confined to the villin repeats (S1–S6). In addition, villin contains a carboxyl-terminal domain (S7) called the headpiece, which provides villin the ability to cross-link actin filaments. Villin is tyrosine-phosphorylated in vitro and in vivo by c-Src kinase similar to gelsolin, fragmin, and CapG. Villin is phosphorylated at multiple tyrosine sites in the N-terminal and C-terminal domains. Tyrosine phosphorylation of villin releases its auto-inhibited conformation allowing it to sever actin at physiologically relevant calcium concentrations, and induce changes in cell shape and cell motility.



Background References

- Tomar, A. et al. (2004) Mol. Biol. Cell 15:4807.
 Tomar, A. et al. (2006) J. Biol. Chem. 281(42):31972.

Applications

WB 1:1000
 ELISA 1:2000

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

Specificity

The antibody detects a 95 kDa* protein corresponding to villin on SDS-PAGE immunoblots of mouse kidney.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

End user should determine optimal dilution for their particular applications and experiments.
 Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Immunogen

Uniprot ID: P09327

Clone (M245) was generated from a recombinant full length human villin protein. This sequence is conserved in rat and mouse villins.

Buffer and Storage

Mouse monoclonal antibody purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Related Products

- AP1651 Actin (N-terminal region) Rabbit Polyclonal
 AP1671 Actin (Tyr-53), phospho-specific Rabbit Polyclonal
 AM2021 Actin (C-terminal region) Mouse Monoclonal
 CP1131 Cofilin 1 (N-terminus) Rabbit Polyclonal
 CP1151 Cofilin 1 (Ser-3), phospho-specific Rabbit Polyclonal

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