

#12541 Store at -20°C

Sharpin (D4P5B) Rabbit mAb

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H Mk	Endogenous	43	Rabbit IgG	#Q9H0F6	81858

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Immunoprecipitation

1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Sharpin (D4P5B) Rabbit mAb recognizes endogenous levels of total Sharpin protein. This antibody does not cross-react with HOIL-1/RBCK1.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro313 of human Sharpin protein.

Background

Shank-associated RH domain-interacting protein (*Sharpin*), also known as *SIPL1*, is a highly conserved gene among many mammalian species and is ubiquitously expressed in various types of cells and tissues. Sharpin harbors multiple functional motifs including an amino terminal coiled-coil (CC) domain, which has been shown to mediate the interaction between Sharpin and the scaffold protein SHANK (1). The other two domains, ubiquitin-like domain (UBL) and NPL4 zinc finger domain (NZF), facilitate ubiquitin-mediated protein recognition and degradation (2). Recent studies have shown that both UBL and NZF domains are essential for Sharpin to exert its function in part through ubiquitin-mediated mechanisms (3-5). Although Sharpin was initially identified as a scaffold protein within the postsynaptic density of neurons (1), recent studies have identified Sharpin as a novel modulator of immune and inflammatory diseases. An emerging mechanistic model suggests that Sharpin functions as an important adaptor component of the Linear Ubiquitin Chain Assembly Complex (LUBAC) that modulates activation of the canonical NF-κB signaling pathway (3,4,6,7), thereby regulating cell survival and apoptosis, cytokine production, and lymphoid tissue development. Indeed, mice with spontaneous mutations in the *Sharpin* gene develop chronic proliferative dermatitis that is characterized by eosinophilic inflammation of the skin and dysregulated lymphoid tissue development (8).

Background References

1. Lim, S. et al. (2001) *Mol Cell Neurosci* 17, 385-97.
2. Grabbe, C. and Dikic, I. (2009) *Chem Rev* 109, 1481-94.
3. Ikeda, F. et al. (2011) *Nature* 471, 637-41.
4. Tokunaga, F. et al. (2011) *Nature* 471, 633-6.
5. Iwai, K. (2011) *Cell Cycle* 10, 3095-104.
6. Gerlach, B. et al. (2011) *Nature* 471, 591-6.
7. Tokunaga, F. et al. (2009) *Nat Cell Biol* 11, 123-32.
8. Seymour, R.E. et al. (2007) *Genes Immun* 8, 416-21.

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

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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