Revision 1

Store at -20C

#4664

ABIN-1 Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	80-85	Rabbit	#Q15025	10318

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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

ABIN-1 Antibody detects endogenous levels of total ABIN-1 protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human ABIN-1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The ABIN family (ABIN-1, -2, and -3) is a group of adaptor proteins that associate and cooperate with A20/TNFAIP3 (1), a ubiquitin editing protein that inhibits the key inflammatory transcription factor NF-κB (2-4). Mechanistically, A20 acts by regulating the ubiquitination of the kinase RIP, which leads to inhibition of the IKK complex (5).
ABIN-1 (Naf1/TNIP1) was identified based on its binding to A20 (6), as well as the HIV protein Nef-1 (7). Overexpression of ABIN-1 inhibits NF-κB activation by a number of stimuli including TNF, IL-1, and LPS. It is widely expressed and can be induced by NF-κB, providing a negative feedback loop of NF-κB signaling. In addition to binding to A20, ABIN-1 can function on other key components of NF-κB signaling including IKKγ/NEMO (8) and NF-κB family members p100 and p105 (9), and can also inhibit ERK signaling (10). Knockout mice of ABIN-1 are embryonic lethal, with fetal liver apoptosis, anemia and hypoplasia (11). ABIN-1 deficient cells are hypersensitive to TNF-mediated apoptosis.

Background References

1. Verstrepen, L. et al. (2009) *Biochem Pharmacol* 78, 105-14.
2. Beyaert, R. et al. (2000) *Biochem Pharmacol* 60, 1143-51.
3. Lee, E.G. et al. (2000) *Science* 289, 2350-4.
4. Dixit, V.M. et al. (1990) *J Biol Chem* 265, 2973-8.
5. Wertz, I.E. et al. (2004) *Nature* 430, 694-9.
6. Heyninck, K. et al. (1999) *J Cell Biol* 145, 1471-82.
7. Fukushi, M. et al. (1999) *FEBS Lett* 442, 83-8.
8. Mauro, C. et al. (2006) *J Biol Chem* 281, 18482-8.
9. Cohen, S. et al. (2009) *Biochem Biophys Res Commun* 389, 205-10.
10. Zhang, S. et al. (2002) *Biochem Biophys Res Commun* 297, 17-23.
11. Oshima, S. et al. (2009) *Nature* 457, 906-9.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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