Revision 4

Store at -20C

#4625

A20/TNFAIP3 Antibody

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	82	Rabbit	#P21580	7128

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

A20/TNFAIP3 Antibody detects endogenous levels of total A20/TNFAIP3 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly267 of human A20/TNFAIP3. Antibodies were purified by protein A and peptide affinity chromatography.

Background

A20, also referred to as TNF-α-induced protein 3 (TNFAIP3), is cytokine-inducible protein that functions to inhibit apoptosis and activate NF-κB (1,2). It was first identified as a TNF-α inducible primary response gene in human umbilical vein endothelial cells, and encodes a 790-amino acid protein containing seven Cys2/Cys2-zinc finger motifs (3). Constitutive expression of A20 is observed in lymphoid tissues (4), but it is transiently expressed in a variety of cell types in response to inflammatory signals such as TNF-α (3,5), IL-1 (3,5), phorbol esters (6), and LPS (7). Expression of A20 can confer resistance to apoptosis and NF-κB activation triggered by these signals, probably through interference with TRAF (TNF receptor associated factor) family members (8,9), and interaction with the NF-κB inhibiting protein ABIN (10). Studies also show that A20 contains site-specific ubiquitin modifying activity that can contribute to its biological functions (11,12). The amino-terminus of A20 contains de-ubiquitinating (DUB) activity for Lys63 branches, such as those found in TRAF6 and RIP, while the carboxyl-terminus contains ubiquitin ligase (E3) activity for Lys48 branches of the same substrates and leads to their degradation (12).

Background References

1. Beyaert, R. et al. (2000) *Biochem Pharmacol* 60, 1143-51.
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3. Dixit, V.M. et al. (1990) *J Biol Chem* 265, 2973-8.
4. Tewari, M. et al. (1995) *J Immunol* 154, 1699-706.
5. Jäättelä, M. et al. (1996) *J Immunol* 156, 1166-73.
6. Laherty, C.D. et al. (1993) *J Biol Chem* 268, 5032-9.
7. Hu, X. et al. (1998) *Blood* 92, 2759-65.
8. Song, H.Y. et al. (1996) *Proc Natl Acad Sci USA* 93, 6721-5.
9. Heyninck, K. and Beyaert, R. (1999) *FEBS Lett* 442, 147-50.
10. Heyninck, K. et al. (1999) *J Cell Biol* 145, 1471-82.
11. Evans, P.C. et al. (2004) *Biochem J* 378, 727-34.
12. Lin, S.C. et al. (2008) *J Mol Biol* 376, 526-40.

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

Cross-Reactivity Key

H: Human

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