Revision 1

Store at -20C

#8182

TAX1BP1 Antibody

Cell Signaling TECHNOLOGY®

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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:
W, IP	H	Endogenous	92	Rabbit	#Q86VP1	8887

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

TAX1BP1 Antibody recognizes endogenous levels of total TAX1BP1 protein. This antibody is predicted to cross-react with TXBP151-L and TXBP151-S isoforms.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human TAX1BP1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Tax1-binding protein (TAX1BP) 1 is an essential regulator of innate immunity and was originally identified in a yeast two-hybrid screen as a human T-lymphotropic virus Type 1 (HTLV-1) Tax1-binding protein and named TXBP151 (1-3). Independently, TAX1BP1 was discovered in yeast two-hybrid screens that sought to identify novel binding partners of A20 (4) and TRAF6, where it was named T6BP (5). Two human TAX1BP1 transcripts encoding modular proteins of 747 and 789 amino acids have been identified (4). The N-terminal region of TAX1BP1 possesses a SKIP carboxyl homology (SKITCH) domain and a 14-3-3 binding motif. The central region of TAX1BP1 harbors coiled-coil structures and helix-loop-helix regions that are thought to promote the formation of TAX1BP1 homodimers (5). The TAX1BP1 C-terminal region posesses zinc finger domains that function as novel ubiquitin-binding domains and allow for complex formation with K63-ubiquitinated RIP1 and TRAF6 (6) as well as the E3 ubiquitin ligase ITCH (7). One of the major physiologic roles of TAX1BP1 is to serve as an essential component of a negative feedback loop aimed at restraining canonical NF-κB-mediated proinflammatory signaling cascades initiated by TNF and IL-1. It is likely that TAX1BP1 functions as a ubiquitin-binding adaptor protein that inducibly recruits A20 to a complex consisting, in part, of K63-ubiquitinated TRAF6, RIP1, and their cognate E2 conjugating enzyme, thus allowing for A20-mediated ubiquitin-editing and termination of NF-κB signaling (6,8,9). A recent report identified IKKα as a novel regulator of TAX1BP1 function and demonstrated that IKKα-dependent phosphorylation of TAX1BP1 at Ser593 and Ser624 in response to TNF and IL-1 is critical for its ability to orchestrate formation of the A20 ubiquitin-editing complex involved in termination of NF-κB signaling (10).

Background References

1. Chin, K.T. et al. (2007) *Cancer Res* 67, 1072-81.
2. Wu, K. et al. (2004) *J Biol Chem* 279, 495-508.
3. Gachon, F. et al. (1998) *J Virol* 72, 8332-7.
4. De Valck, D. et al. (1999) *Oncogene* 18, 4182-90.
5. Ling, L. and Goeddel, D.V. (2000) *Proc Natl Acad Sci USA* 97, 9567-72.
6. Iha, H. et al. (2008) *EMBO J* 27, 629-41.
7. Shembade, N. et al. (2009) *EMBO J* 28, 513-22.
8. Shembade, N. et al. (2010) *Science* 327, 1135-9.
9. Shembade, N. et al. (2007) *EMBO J* 26, 3910-22.
10. Shembade, N. et al. (2011) *Nat Immunol* 12, 834-43.

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

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Limited Uses