

**TIA-1 Antibody**

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

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 42, 44	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #P31483	<b>Entrez-Gene Id:</b> 7072
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**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:50

**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**

TIA-1 Antibody recognizes endogenous levels of total TIA-1 protein. A band of unknown origin is detected at 100 kDa.

**Source / Purification**

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

**Background**

T-cell intracellular antibody 1 (TIA-1) is a member of the RNA-recognition motif (RRM) family of RNA-binding proteins that was originally found to induce DNA fragmentation in digitonin-permeabilized thymocytes (1). TIA-1 protein has about 80% identity to the related TIAR protein, both of which possess three amino-terminal RRM domains and a glutamine-rich carboxyl terminus (1,2). Alternative splicing is responsible for generating at least two isoforms of TIA-1 and TIAR (3,4). Several research studies indicate that TIA-1 and TIAR play a role in apoptosis, cellular stress, and inflammation. Importantly, TIA-1 and TIAR translocate from the nucleus to stress granules in response to a variety of environmental stresses (5-8). Stress granules function as sites of translational repression in response to potentially damaging conditions. mRNA transcripts targeted by TIA-1 and TIAR include TNF-α, COX-2, cytochrome c, GADD45α, and HIF-1α (8-13).

**Background References**

1. Tian, Q. et al. (1991) *Cell* 67, 629-39.
2. Kawakami, A. et al. (1992) *Proc Natl Acad Sci U S A* 89, 8681-5.
3. Izquierdo, J.M. and Valcárcel, J. (2007) *J Biol Chem* 282, 19410-7.
4. Beck, A.R. et al. (1996) *Nucleic Acids Res* 24, 3829-35.
5. Kedersha, N.L. et al. (1999) *J Cell Biol* 147, 1431-42.
6. Gilks, N. et al. (2004) *Mol Biol Cell* 15, 5383-98.
7. Eisinger-Mathason, T.S. et al. (2008) *Mol Cell* 31, 722-36.
8. Gottschald, O.R. et al. (2010) *J Mol Cell Biol* 2, 345-56.
9. Gueydan, C. et al. (1999) *J Biol Chem* 274, 2322-6.
10. Piecyk, M. et al. (2000) *EMBO J* 19, 4154-63.
11. Kawai, T. et al. (2006) *Mol Cell Biol* 26, 3295-307.
12. Dixon, D.A. et al. (2003) *J Exp Med* 198, 475-81.
13. Lal, A. et al. (2006) *Mol Cell* 22, 117-28.

**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

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