

**Goat Anti-TIA1 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF2088a****Specification**

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**Goat Anti-TIA1 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P31483</a>
Other Accession	<a href="#">NP_071505</a> , <a href="#">7072</a> , <a href="#">21841 (mouse)</a> , <a href="#">312510 (rat)</a>
Reactivity	Human
Predicted	Mouse, Rat, Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	42963

**Goat Anti-TIA1 Antibody - Additional Information****Gene ID** 7072**Other Names**

Nucleolysin TIA-1 isoform p40, RNA-binding protein TIA-1, T-cell-restricted intracellular antigen-1, TIA-1, p40-TIA-1, TIA1

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-TIA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-TIA1 Antibody - Protein Information****Name** TIA1**Function**

RNA-binding protein involved in the regulation of alternative pre-RNA splicing and mRNA translation by binding to uridine-rich (U- rich) RNA sequences (PubMed:&lt;a href="http://www.uniprot.org/citations/8576255" target="\_blank"&gt;8576255&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/11106748" target="\_blank"&gt;11106748&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/12486009" target="\_blank"&gt;12486009&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/12486009" target="\_blank"&gt;12486009&lt;/a&gt;, PubMed:&lt;a href="http://www.uniprot.org/citations/12486009" target="\_blank"&gt;12486009&lt;/a&gt;)

[17488725](http://www.uniprot.org/citations/17488725)). Binds to U-rich sequences immediately downstream from a 5' splice sites in a uridine-rich small nuclear ribonucleoprotein (U snRNP)-dependent fashion, thereby modulating alternative pre-RNA splicing (PubMed:[11106748](http://www.uniprot.org/citations/11106748)), PubMed:[8576255](http://www.uniprot.org/citations/8576255)). Preferably binds to the U-rich IAS1 sequence in a U1 snRNP-dependent manner; this binding is optimal if a 5' splice site is adjacent to IAS1 (By similarity). Activates the use of heterologous 5' splice sites; the activation depends on the intron sequence downstream from the 5' splice site, with a preference for a downstream U-rich sequence (PubMed:[11106748](http://www.uniprot.org/citations/11106748)). By interacting with SNRPC/U1-C, promotes recruitment and binding of spliceosomal U1 snRNP to 5' splice sites followed by U-rich sequences, thereby facilitating atypical 5' splice site recognition by U1 snRNP (PubMed:[11106748](http://www.uniprot.org/citations/11106748), PubMed:[12486009](http://www.uniprot.org/citations/12486009), PubMed:[17488725](http://www.uniprot.org/citations/17488725)). Activates splicing of alternative exons with weak 5' splice sites followed by a U-rich stretch on its own pre-mRNA and on TIAR mRNA (By similarity). Acts as a modulator of alternative splicing for the apoptotic FAS receptor, thereby promoting apoptosis (PubMed:[11106748](http://www.uniprot.org/citations/11106748), PubMed:[1934064](http://www.uniprot.org/citations/1934064), PubMed:[17488725](http://www.uniprot.org/citations/17488725)). Binds to the 5' splice site region of FAS intron 5 to promote accumulation of transcripts that include exon 6 at the expense of transcripts in which exon 6 is skipped, thereby leading to the transcription of a membrane-bound apoptotic FAS receptor, which promotes apoptosis (PubMed:[11106748](http://www.uniprot.org/citations/11106748), PubMed:[1934064](http://www.uniprot.org/citations/1934064), PubMed:[17488725](http://www.uniprot.org/citations/17488725)). Binds to a conserved AU-rich cis element in COL2A1 intron 2 and modulates alternative splicing of COL2A1 exon 2 (PubMed:[17580305](http://www.uniprot.org/citations/17580305)). Also binds to the equivalent AT-rich element in COL2A1 genomic DNA, and may thereby be involved in the regulation of transcription (PubMed:[17580305](http://www.uniprot.org/citations/17580305)). Binds specifically to a polypyrimidine-rich controlling element (PCE) located between the weak 5' splice site and the intronic splicing silencer of CFTR mRNA to promote exon 9 inclusion, thereby antagonizing PTB1 and its role in exon skipping of CFTR exon 9 (PubMed:[14966131](http://www.uniprot.org/citations/14966131)). Involved in the repression of mRNA translation by binding to AU-rich elements (AREs) located in mRNA 3' untranslated regions (3' UTRs), including target ARE-bearing mRNAs encoding TNF and PTGS2 (By similarity). Also participates in the cellular response to environmental stress, by acting downstream of the stress-induced phosphorylation of EIF2S1/EIF2A to promote the recruitment of untranslated mRNAs to cytoplasmic stress granules (SGs), leading to stress-induced translational arrest (PubMed:[10613902](http://www.uniprot.org/citations/10613902)). Formation and recruitment to SGs is regulated by Zn(2+) (By similarity). Possesses nucleolytic activity against cytotoxic lymphocyte target cells (PubMed:[1934064](http://www.uniprot.org/citations/1934064)).

### Cellular Location

Nucleus. Cytoplasm Cytoplasm, Stress granule Note=Accumulates in cytoplasmic stress granules (SG) following cellular damage (PubMed:15371533, PubMed:10613902). Recruitment to SG is induced by Zn(2+) (By similarity). {ECO:0000250|UniProtKB:P52912, ECO:0000269|PubMed:10613902, ECO:0000269|PubMed:15371533}

### Tissue Location

Expressed in heart, small intestine, kidney, liver, lung, skeletal muscle, testes, pancreas, and ovary (at protein level)

## Goat Anti-TIA1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Goat Anti-TIA1 Antibody - Images



AF2088a (0.1 µg/ml) staining of Jurkat cell lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

## Goat Anti-TIA1 Antibody - Background

The product encoded by this gene is a member of a RNA-binding protein family and possesses nucleolytic activity against cytotoxic lymphocyte (CTL) target cells. It has been suggested that this protein may be involved in the induction of apoptosis as it preferentially recognizes poly(A) homopolymers and induces DNA fragmentation in CTL targets. The major granule-associated species is a 15-kDa protein that is thought to be derived from the carboxyl terminus of the 40-kDa product by proteolytic processing. Alternative splicing resulting in different isoforms of this gene product has been described in the literature.

## Goat Anti-TIA1 Antibody - References

Systematic analysis of immune infiltrates in high-grade serous ovarian cancer reveals CD20, FoxP3 and TIA-1 as positive prognostic factors. Milne K, et al. PLoS One, 2009 Jul 29. PMID 19641607.  
Sam68 relocalization into stress granules in response to oxidative stress through complexing with TIA-1. Henao-Mejia J, et al. Exp Cell Res, 2009 Nov 15. PMID 19615357.  
Cross-seeding fibrillation of Q/N-rich proteins offers new pathomechanism of polyglutamine diseases. Furukawa Y, et al. J Neurosci, 2009 Apr 22. PMID 19386911.  
TIA nuclear proteins regulate the alternate splicing of lysyl hydroxylase 2. Yeowell HN, et al. J Invest Dermatol, 2009 Jun. PMID 19110540.  
Codependent functions of RSK2 and the apoptosis-promoting factor TIA-1 in stress granule assembly and cell survival. Eisinger-Mathason TS, et al. Mol Cell, 2008 Sep 5. PMID 18775331.