

# TIA1 Rabbit pAb

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Catalog # AP58597

## Product Information

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<b>Application</b>	IHC-P, IHC-F, IF
<b>Primary Accession</b>	<a href="#">P31483</a>
<b>Reactivity</b>	Human, Rat
<b>Predicted</b>	Mouse, Dog, Pig, Horse, Rabbit
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	42963
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human TIA1
<b>Epitope Specificity</b>	101-200/386
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
<b>SUBCELLULAR LOCATION</b>	Cytoplasmic granule. Nucleus. Note=Accumulates in cytoplasmic stress granules (SG) following cellular damage.
<b>SIMILARITY</b>	Contains 3 RRM (RNA recognition motif) domains.
<b>Important Note</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>Background Descriptions</b>	Involved in alternative pre-RNA splicing and regulation of mRNA translation by binding to AU-rich elements (AREs) located in mRNA 3' untranslated regions (3' UTRs). Possesses nucleolytic activity against cytotoxic lymphocyte target cells. May be involved in apoptosis.

## Additional Information

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<b>Gene ID</b>	7072
<b>Other Names</b>	Cytotoxic granule associated RNA binding protein TIA1 {ECO:0000312 HGNC:HGNC:11802}, Nucleolysin TIA-1 isoform p40, RNA-binding protein TIA-1, T-cell-restricted intracellular antigen-1, TIA-1, p40-TIA-1, TIA1
<b>Dilution</b>	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
<b>Storage</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

## Protein Information

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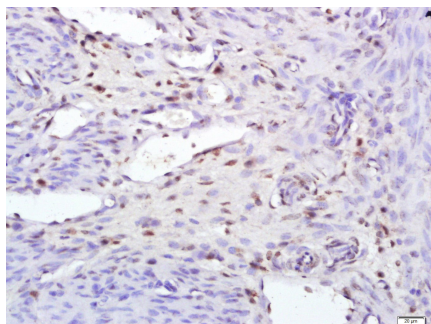
<b>Name</b>	TIA1
<b>Function</b>	<p>RNA-binding protein involved in the regulation of alternative pre-RNA splicing and mRNA translation by binding to uridine-rich (U- rich) RNA sequences (PubMed:<a href="#">11106748</a>, PubMed:<a href="#">12486009</a>, PubMed:<a href="#">17488725</a>, PubMed:<a href="#">8576255</a>). 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:<a href="#">11106748</a>, PubMed:<a href="#">8576255</a>). 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:<a href="#">11106748</a>). 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:<a href="#">11106748</a>, PubMed:<a href="#">12486009</a>, PubMed:<a href="#">17488725</a>). 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:<a href="#">11106748</a>, PubMed:<a href="#">17488725</a>, PubMed:<a href="#">1934064</a>). 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:<a href="#">11106748</a>, PubMed:<a href="#">17488725</a>, PubMed:<a href="#">1934064</a>). Binds to a conserved AU-rich cis element in COL2A1 intron 2 and modulates alternative splicing of COL2A1 exon 2 (PubMed:<a href="#">17580305</a>). Also binds to the equivalent AT-rich element in COL2A1 genomic DNA, and may thereby be involved in the regulation of transcription (PubMed:<a href="#">17580305</a>). 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:<a href="#">14966131</a>). 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:<a href="#">10613902</a>). Formation and recruitment to SGs is regulated by Zn(2+) (By similarity). Possesses nucleolytic activity against cytotoxic lymphocyte target cells (PubMed:<a href="#">1934064</a>).</p>
<b>Cellular Location</b>	<p>Nucleus. Cytoplasm Cytoplasm, Stress granule Note=Accumulates in cytoplasmic stress granules (SG) following cellular damage (PubMed:<a href="#">10613902</a>, PubMed:<a href="#">15371533</a>). Recruitment to SG is induced by Zn(2+) (By similarity). {ECO:0000250 UniProtKB:P52912, ECO:0000269 PubMed:<a href="#">10613902</a>, ECO:0000269 PubMed:<a href="#">15371533</a>}</p>
<b>Tissue Location</b>	<p>Expressed in heart, small intestine, kidney, liver, lung, skeletal muscle, testes, pancreas, and ovary (at protein level)</p>

## Background

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## Images

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Tissue/cell: rat uterus; 4% Paraformaldehyde-fixed and paraffin-embedded;  
Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;  
Incubation: Anti-TIA1 Polyclonal Antibody, Unconjugated(AP58597) 1:500, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.