

TIA1 Antibody (Center R184) Blocking Peptide

Synthetic peptide
Catalog # BP1830c

Specification

TIA1 Antibody (Center R184) Blocking Peptide - Product Information

Primary Accession [P31483](#)

TIA1 Antibody (Center R184) Blocking Peptide - 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

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1830c](/products/AP1830c) was selected from the Center region of human TIA1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

TIA1 Antibody (Center R184) Blocking Peptide - 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: [8576255](http://www.uniprot.org/citations/8576255), PubMed: [11106748](http://www.uniprot.org/citations/11106748), PubMed: [12486009](http://www.uniprot.org/citations/12486009), PubMed: [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). 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, PubMed:12486009, PubMed: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, PubMed:1934064, PubMed: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, PubMed:1934064, PubMed:17488725). Binds to a conserved AU-rich cis element in COL2A1 intron 2 and modulates alternative splicing of COL2A1 exon 2 (PubMed: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). 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). 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). Formation and recruitment to SGs is regulated by Zn(2+) (By similarity). Possesses nucleolytic activity against cytotoxic lymphocyte target cells (PubMed: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)

TIA1 Antibody (Center R184) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

TIA1 Antibody (Center R184) Blocking Peptide - Images**TIA1 Antibody (Center R184) Blocking Peptide - Background**

TIA1 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.

TIA1 Antibody (Center R184) Blocking Peptide - References

Yeowell,H.N., Walker,L.C. J. Invest. Dermatol. 129 (6), 1402-1411 (2009)Eisinger-Mathason,T.S. Mol. Cell 31 (5), 722-736 (2008)Tang,H., Huang,Y. Intervirology 51 (3), 203-209 (2008)Dember,L.M., Kim,N.D. J. Biol. Chem. 271 (5), 2783-2788 (1996)