

KD-Validated Anti-TIA1 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1738**Specification****KD-Validated Anti-TIA1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	P31483
Clonality	Monoclonal
Isotype	Rabbit IgG
Gene Name	TIA1
Aliases	TIA1; TIA1 Cytotoxic Granule Associated RNA Binding Protein; TIA-1; T-Cell-Restricted Intracellular Antigen-1; Cytotoxic Granule Associated RNA Binding Protein TIA1; Nucleolysin TIA-1 Isoform P40; TIA1 Cytotoxic Granule-Associated RNA-Binding Protein; P40-TIA-1 (Containing P15-TIA-1); RNA-Binding Protein TIA-1; P40-TIA-1; ALS26; WDM

KD-Validated Anti-TIA1 Rabbit Monoclonal Antibody - Additional Information

Gene ID 7072

Other Names

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

KD-Validated Anti-TIA1 Rabbit Monoclonal 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:11106748, PubMed:12486009, PubMed:17488725, PubMed:8576255). 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, PubMed: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).

href="http://www.uniprot.org/citations/11106748" target="_blank">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:17488725, PubMed:1934064). 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:17488725, PubMed:1934064). 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:10613902, PubMed:15371533). 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)

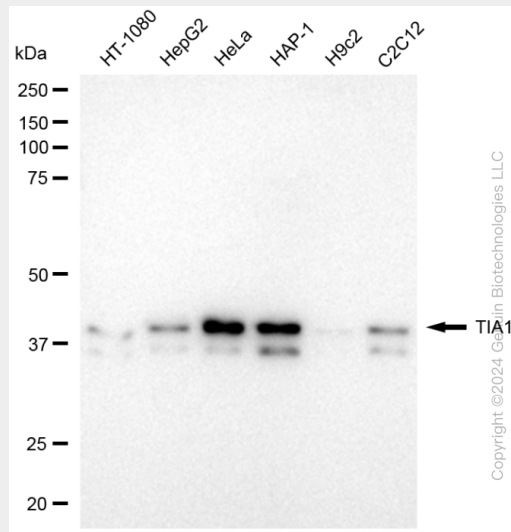
KD-Validated Anti-TIA1 Rabbit Monoclonal Antibody - Protocols

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

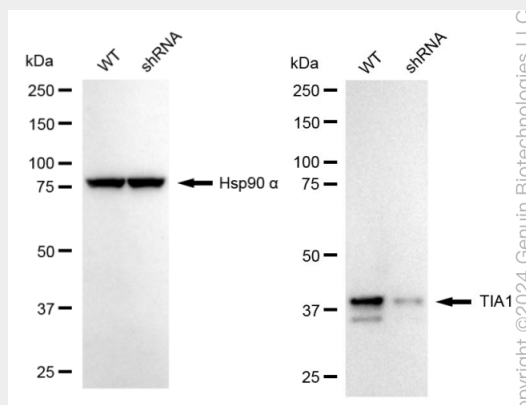
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

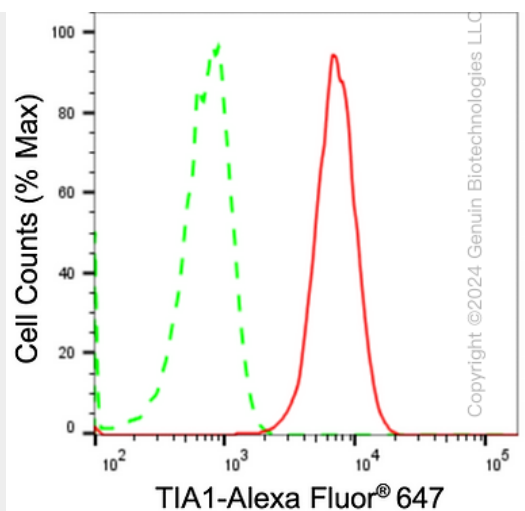
KD-Validated Anti-TIA1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-TIA1 antibody (Cat#AGI1738). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-TIA1 antibody (Cat#AGI1738, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-TIA1 antibody (Cat#AGI1738). TIA1 expression in wild-type (WT) and TIA1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-TIA1 antibody (Cat#AGI1738, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of TIA1 expression in HAP-1 cells using anti-TIA1 antibody (Cat#AGI1738, 1:2,000). Green, isotype control; red, TIA1.