

For Research Use Only

TIA1 Polyclonal antibody

Catalog Number: 12133-2-AP

Featured Product

20 Publications



Basic Information

Catalog Number:

12133-2-AP

Size:

150UL, Concentration: 233 µg/ml by Bradford method using BSA as the standard;

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG2778

GenBank Accession Number:

BC015944

GeneID (NCBI):

7072

Full Name:

TIA1 cytotoxic granule-associated RNA binding protein

Calculated MW:

214 aa, 24 kDa, 43 kDa

Observed MW:

40 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:500-1:3000

IP 0.5-4.0 ug for IP and 1:500-1:1000 for WB

IHC 1:50-1:500

IF 1:50-1:500

Applications

Tested Applications:

IF, IHC, IP, WB, ELISA

Cited Applications:

IF, IHC, WB

Species Specificity:

human, mouse, rat

Cited Species:

chicken, human, mouse, rat

Positive Controls:

WB: COLO 320 cells, mouse thymus tissue, mouse spleen tissue, Raji cells, Jurkat cells

IP: Jurkat cells,

IHC: human lymphoma tissue, mouse brain tissue

IF: L02 cells, HeLa cells

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Background Information

TIA1, also named as p40-TIA-1, is 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). It possesses nucleolytic activity against cytotoxic lymphocyte target cells. TIA1 may be involved in apoptosis. Two isoforms of this protein exist - 41kDa and 42kDa. One of these was a missense variant (P362L) in TIA1. Similar to the ALS-related disease proteins TDP-43, hnRNP A1, and FUS, TIA1 is an RNA-binding protein containing a prionlike LCD and assembles into membrane-less organelles, including SGs. Postmortem neuropathology of five TIA1 mutation carriers showed a consistent pathological signature with numerous round, hyaline, TAR DNA-binding protein 43 (TDP-43)-positive inclusions. TIA1 mutations significantly increased the propensity of TIA1 protein to undergo phase transition. In live cells, TIA1 mutations delayed stress granule (SG) disassembly and promoted the accumulation of non-dynamic SGs that harbored TDP-43. Moreover, TDP-43 in SGs became less mobile and insoluble.

Notable Publications

Author	Pubmed ID	Journal	Application
Do-Yeon Lee	33025330	Neurochem Res	WB,IHC,IF
Siqi Hu	31772125	Sci Signal	WB
Yoshifumi Sonobe	29792928	Neurobiol Dis	IF

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

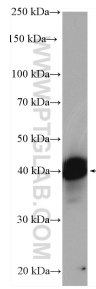
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

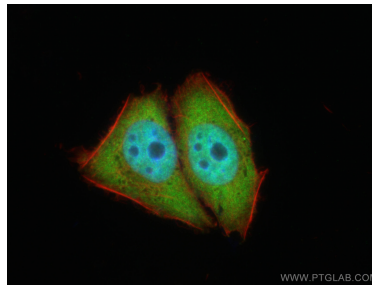
E: proteintech@ptglab.com
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

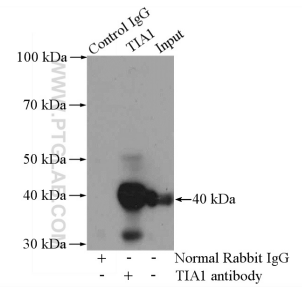
Selected Validation Data



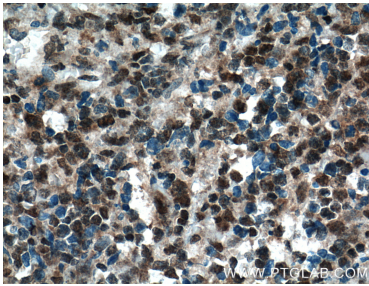
COLO 320 cells were subjected to SDS PAGE followed by western blot with 12133-2-AP (TIA1 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed L02 cells using TIA1 antibody (12133-2-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), 594-CL594-Phalloidin (red).



IP Result of anti-TIA1 (IP:12133-2-AP, 4ug; Detection:12133-2-AP 1:500) with Jurkat cells lysate 3200ug.



Immunohistochemical analysis of paraffin-embedded human lymphoma tissue slide using 12133-2-AP (TIA1 Antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).