abcam

Product datasheet

Anti-TIA1 antibody [EPR9304] ab140595

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-TIA1 antibody [EPR9304]
Description	Rabbit monoclonal [EPR9304] to TIA1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, IP, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, HuT-78, Jurkat, Molt4, NIH/3T3 and K562 cell lysates. IHC-P: Human spleen tissue. ICC/IF: HuT-78 cells. ICC/IF KO: Hap1 cells (Hap1-TIA1 KO used as negative cell line). IP: HuT-78 cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 0.05% BSA, 59% PBS
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR9304
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab140595 in the following tested applications.

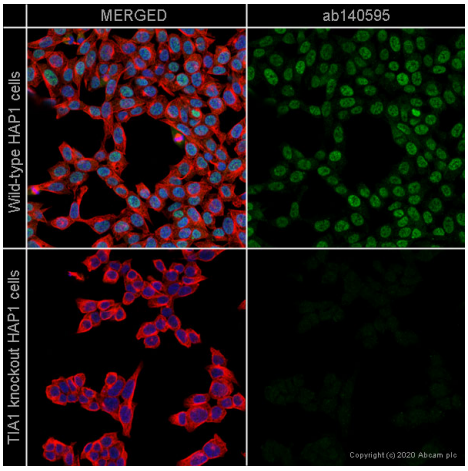
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 43 kDa.
IHC-P		1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. **For unpurified use at 1/100 - 1/250.**
IP		1/10 - 1/100.
ICC/IF	★★☆☆☆ **(1)**	1/100 - 1/250.

Target

Function	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.
Sequence similarities	Contains 3 RRM (RNA recognition motif) domains.
Cellular localization	Cytoplasmic granule. Nucleus. Accumulates in cytoplasmic stress granules (SG) following cellular damage.

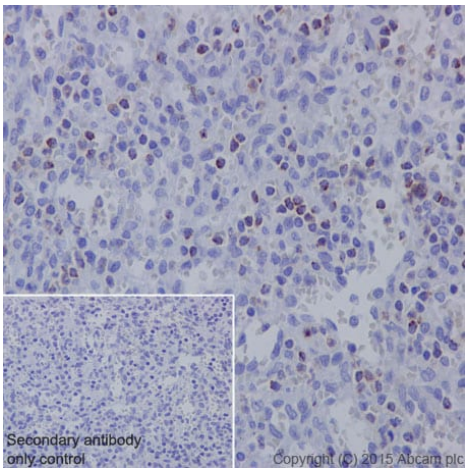
Images



Immunocytochemistry/ Immunofluorescence - Anti-TIA1 antibody [EPR9304] (ab140595)

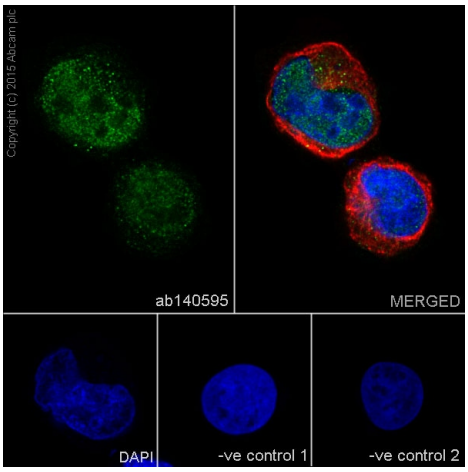
ab140595 staining TIA1 in wild-type Hap1 cells (top panel) and TIA1 knockout Hap1 cells (bottom panel). The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab140595 at 1/250 dilution and **ab7291** (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (**ab150081**) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (**ab150120**) at 2 µg/ml (shown in red). Nuclear DNA was labelled in blue with DAPI.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIA1 antibody [EPR9304] (ab140595)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human spleen tissue labelling TIA1 with purified ab140595 at 1/1000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

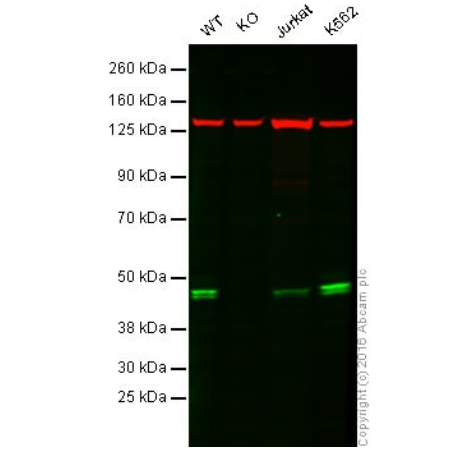


Immunocytochemistry/ Immunofluorescence - Anti-TIA1 antibody [EPR9304] (ab140595)

Immunocytochemistry/Immunofluorescence analysis of HuT-78 cells labelling TIA1 with purified ab140595 at 1/100. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. **ab7291**, a mouse anti-tubulin (1/1000) and **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) were also used.

Control 1: primary antibody (1/100) and secondary antibody, **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000).

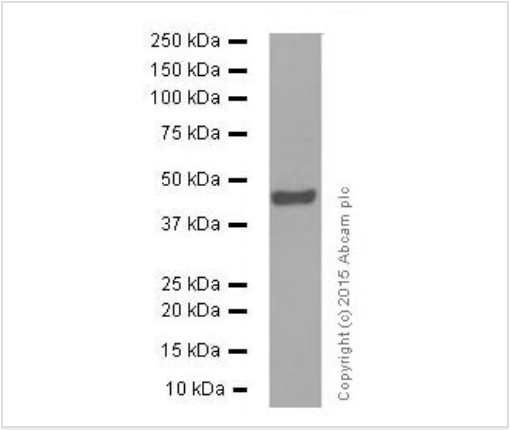
Control 2: **ab7291** (1/1000) and secondary antibody, **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000).



Western blot - Anti-TIA1 antibody [EPR9304] (ab140595)

Lane 1: Wild-type HAP1 cell lysate (40 µg)
Lane 2: TIA1 knockout HAP1 cell lysate (40 µg)
Lane 3: Jurkat cell lysate (40 µg)
Lane 4: K562 cell lysate (40 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab140595 observed at 43 kDa. Red - loading control, **ab18058**, observed at 124 kDa.

ab140595 was shown to specifically react with TIA1 when TIA1 knockout samples were used. Wild-type and TIA1 knockout samples were subjected to SDS-PAGE. Ab140595 and **ab18058** (loading control to Vinculin) were diluted at 1/1000 and 1/10000 dilution respectively and incubated overnight at 4C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed **ab216776** secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-TIA1 antibody [EPR9304] (ab140595)

Anti-TIA1 antibody [EPR9304] (ab140595) at 1/5000 dilution (purified) + NIH/3T3 whole cell lysate at 20 µg

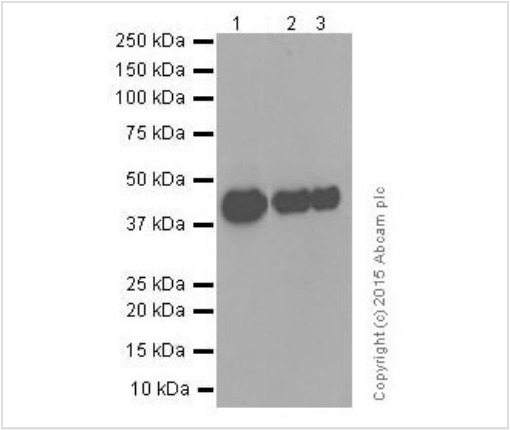
Secondary

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Predicted band size: 43 kDa

Observed band size: 42-43 kDa

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-TIA1 antibody [EPR9304] (ab140595)

All lanes : Anti-TIA1 antibody [EPR9304] (ab140595) at 1/5000 dilution (purified)

Lane 1 : Jurkat whole cell lysate

Lane 2 : K562 whole cell lysate

Lane 3 : HUT-78 whole cell lysate

Lysates/proteins at 20 µg per lane.

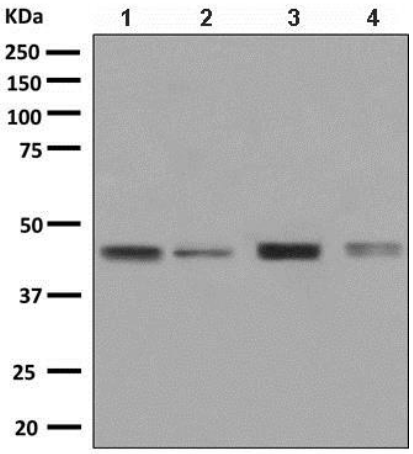
Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Predicted band size: 43 kDa

Observed band size: 42-43 kDa

Blocking and dilution buffer: 5% NFDM/TBST.



Western blot - Anti-TIA1 antibody [EPR9304] (ab140595)

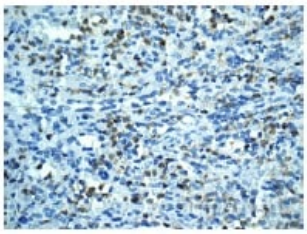
All lanes : Anti-TIA1 antibody [EPR9304] (ab140595) (unpurified)

Lane 1 : HuT-78 cell lysate
Lane 2 : Jurkat cell lysate
Lane 3 : Molt-4 cell lysate
Lane 4 : K562 cell lysate

Lysates/proteins at 10 µg per lane.

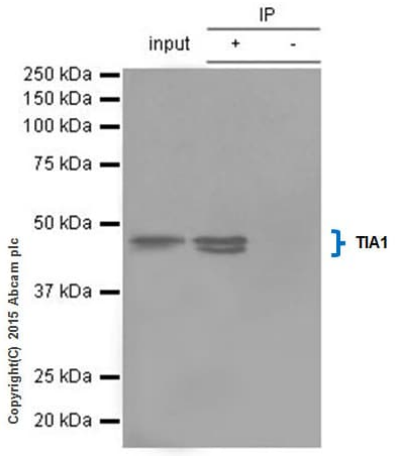
Secondary
All lanes : HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

Predicted band size: 43 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TIA1 antibody [EPR9304] (ab140595)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human spleen tissue labelling TIA1 with unpurified ab140595 at a dilution of 1/100.



Immunoprecipitation - Anti-TIA1 antibody [EPR9304] (ab140595)

ab140595 (purified) at 1/40 immunoprecipitating TIA1 in HuT-78 whole cell lysate.

Lane 1 (input): HuT-78 whole cell lysate (10µg)

Lane 2 (+): ab140595 + HuT-78 whole cell lysate.

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab140595 in HuT-78 whole cell lysate.

For western blotting, a HRP-conjugated anti-rabbit IgG, specific to the non-reduced form of IgG was used as the secondary antibody (1/1500).

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

Anti-TIA1 antibody [EPR9304] (ab140595)

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