

PRODUCT INFORMATION

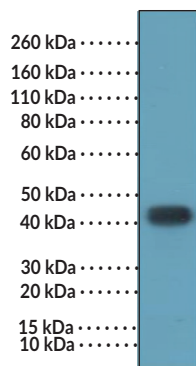
TIA-1 Rabbit Monoclonal Antibody (Clone RM490)

Item No. 42844

Overview and Properties

Contents:	This vial contains 100 µl of protein A affinity-purified recombinant monoclonal antibody
Synonyms:	Cytotoxic Granule-associated RNA-Binding Protein TIA-1, Nucleolysin TIA-1 Isoform p40, T-cell-restricted Intracellular Antigen-1
Immunogen:	A peptide corresponding to the C-terminus of human TIA-1
Cross Reactivity:	(+) TIA-1
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM490
Host:	Rabbit
Isotype:	IgG
Applications:	Western blot (WB); the recommended starting dilution is 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



WB of Jurkat cell lysate using TIA-1 Rabbit Monoclonal Antibody (Clone RM490) at a dilution of 1:1,000.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

T-cell-restricted intracellular antigen-1 (TIA-1) is an RNA-binding protein that plays a role in pre-mRNA splicing, RNA metabolism, and stress granule formation.¹ It is composed of three RNA recognition motifs (RRMs) and a C-terminal glutamine-rich auxiliary region, where RRM3 mediates nuclear export and RRM2 and part of the C-terminal region mediate nuclear import.^{2,3} TIA-1 exists as two isoforms, is ubiquitously expressed, and localizes to the cytoplasm and nucleus. It is involved in the regulation of diverse biological processes, including transcription, translation, stress response, apoptosis, and autophagy, among others.¹ Mutations in TIA-1 are associated with Welander distal myopathy, amyotrophic lateral sclerosis (ALS), and ALS with frontotemporal dementia (FTD).^{4,5} Cayman's TIA-1 Rabbit Monoclonal Antibody (Clone RM490) can be used for Western blot (WB).

References

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2. Izquierdo, J.M. and Valcárcel, J. Two isoforms of the T-cell intracellular antigen 1 (TIA-1) splicing factor display distinct splicing regulation activities. Control of TIA-1 isoform ratio by TIA-1-related protein. *Comparative Study* **282**(27), 19410-19417 (2007).
3. Zhang, T., Delestienne, N., Huez, G., *et al.* Identification of the sequence determinants mediating the nucleo-cytoplasmic shuttling of TIAR and TIA-1 RNA-binding proteins. *J. Cell Sci.* **118**(Pt 23), 5453-5463 (2005).
4. Hackman, P., Sarparanta, J., Lehtinen, S., *et al.* Welander distal myopathy is caused by a mutation in the RNA-binding protein TIA1. *Ann. Neurol.* **73**(4), 500-509 (2013).
5. Mackenzie, I.R., Nicholson, A.M., Sarkar, M., *et al.* TIA1 mutations in amyotrophic lateral sclerosis and frontotemporal dementia promote phase separation and alter stress granule dynamics. *Neuron.* **94**(4), 808-816 (2017).

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