SANTA CRUZ BIOTECHNOLOGY, INC.

TIAR (C-18): sc-1749

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

FAS, also referred to as CD95 or APO-1, is a type I transmembrane protein that plays a central role mediating viral immunity. TIA-1 and TIAR are 2 closely related proteins that possess three RRMs (RNA recognition motifs), designated RRM 1, 2 and 3, respectively. Although both TIA-1 and TIAR are thought to function as mediators of apoptotic cell death, their specific roles in such pathways are unknown. Unlike TIA-1, which is found in the granules of cytotoxic lymphocytes, TIAR expression is limited to the nucleus and found in a much broader range of cells including, but not limited to, cells of hematopoietic origin. TIAR is translocated to the cytoplasm shortly after FAS ligation and this event immediately proceeds the onset of DNA fragmentation. A novel serine/threonine kinase that is activated as a result of FAS ligation, designated FAST (FAS-activated serine/threonine), shows kinase specificity towards both TIA-1 and TIAR. In unstimulated Jurkat cells, FAST resides in the cytoplasm as a highly phosphorylated protein and is quickly dephosphorylated and activated in response to stimulated FAS.

CHROMOSOMAL LOCATION

Genetic locus: TIAL1 (human) mapping to 10q26.11; Tial1 (mouse) mapping to 7 F3.

SOURCE

TIAR (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TIAR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1749 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TIAR (C-18) is recommended for detection of TIAR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TIAR (C-18) is also recommended for detection of TIAR in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TIAR siRNA (h): sc-36671, TIAR siRNA (m): sc-36672, TIAR shRNA Plasmid (h): sc-36671-SH, TIAR shRNA Plasmid (m): sc-36672-SH, TIAR shRNA (h) Lentiviral Particles: sc-36671-V and TIAR shRNA (m) Lentiviral Particles: sc-36672-V.

Molecular Weight of TIAR: 42/50 kDa.

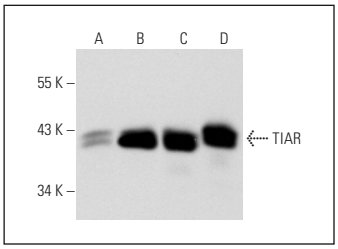
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

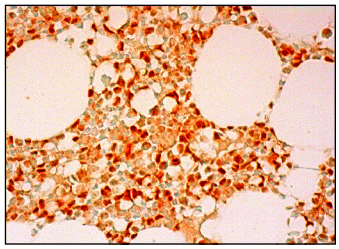
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



TIAR (C-18): sc-1749. Western blot analysis of TIAR expression in non-transfected 293T: sc-117752 (**A**), mouse TIAR transfected 293T: sc-127656 (**B**), Jurkat (**C**) and BJAB (**D**) whole cell lysates.



TIAR (C-18): sc-1749. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing nuclear and cytoplasmic staining of hematopoietic cells.

SELECT PRODUCT CITATIONS

1. Gueydan, C., et al. 1999. Identification of TIAR as a protein binding to the translational regulatory AU-rich element of tumor necrosis factor mRNA. J. Biol. Chem. 274: 2322-2326.
2. Kino, Y., et al. 2011. Intracellular localization and splicing regulation of FUS/TLS are variably affected by amyotrophic lateral sclerosis-linked mutations. Nucleic Acids Res. 39: 2781-2798.
3. Esposito, E., et al. 2011. MK801 attenuates secondary injury in a mouse experimental compression model of spinal cord trauma. BMC Neurosci. 12: 31.
4. Sola, I., et al. 2011. The polypyrimidine tract-binding protein affects coronavirus RNA accumulation levels and relocalizes viral RNAs to novel cytoplasmic domains different from replication-transcription sites. J. Virol. 85: 5136-5149.
5. Weissbach, R. and Scadden, A.D. 2012. Tudor-SN and ADAR1 are components of cytoplasmic stress granules. RNA 18: 462-471.
6. Yamaguchi, A. and Kitajo, K. 2012. The effect of PRMT1-mediated arginine methylation on the subcellular localization, stress granules, and detergent-insoluble aggregates of FUS/TLS. PLoS ONE 7: e4926.
7. Fujimura, K., et al. 2012. Selenite targets eIF4E-binding protein-1 to inhibit translation initiation and induce the assembly of non-canonical stress granules. Nucleic Acids Res. 40: 8099-8110.
8. Dinh, P.X., et al. 2013. Induction of stress granule-like structures in vesicular stomatitis virus-infected cells. J. Virol. 87: 372-383.