

# TIAR (G-6): sc-398372

## 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 two closely related proteins that possess three RRM (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.

## REFERENCES

1. Hanabuchi, S., et al. 1994. FAS and its ligand in a general mechanism of T-cell-mediated cytotoxicity. *Proc. Natl. Acad. Sci. USA* 91: 4930-4934.
2. Tian, Q., et al. 1995. FAS-activated serine/threonine kinase (FAST) phosphorylates TIA-1 during FAS-mediated apoptosis. *J. Exp. Med.* 182: 865-874.

## CHROMOSOMAL LOCATION

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

## SOURCE

TIAR (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 348-377 near the C-terminus of TIAR of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TIAR (G-6) is available conjugated to agarose (sc-398372 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398372 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398372 PE), fluorescein (sc-398372 FITC), Alexa Fluor® 488 (sc-398372 AF488), Alexa Fluor® 546 (sc-398372 AF546), Alexa Fluor® 594 (sc-398372 AF594) or Alexa Fluor® 647 (sc-398372 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398372 AF680) or Alexa Fluor® 790 (sc-398372 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398372 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

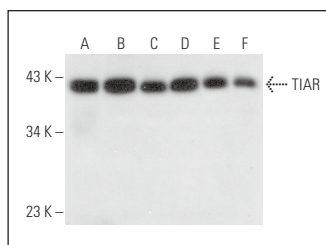
TIAR (G-6) is recommended for detection of TIAR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

Suitable for use as control antibody for TIAR siRNA (h): sc-36671, TIAR siRNA (m): sc-36672, TIAR siRNA (r): sc-270081, TIAR shRNA Plasmid (h): sc-36671-SH, TIAR shRNA Plasmid (m): sc-36672-SH, TIAR shRNA Plasmid (r): sc-270081-SH, TIAR shRNA (h) Lentiviral Particles: sc-36671-V, TIAR shRNA (m) Lentiviral Particles: sc-36672-V and TIAR shRNA (r) Lentiviral Particles: sc-270081-V.

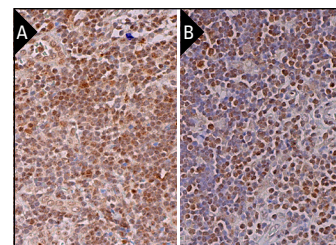
Molecular Weight of TIAR: 42/50 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

## DATA



TIAR (G-6): sc-398372. Western blot analysis of TIAR expression in Jurkat (A), BJAB (B), HeLa (C), K-562 (D) and HuT 78 (E) whole cell lysates and human thymus tissue extract (F).



TIAR (G-6): sc-398372. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fetal thymus tissue showing nuclear staining of cortical cells and medullary cells (B).

## SELECT PRODUCT CITATIONS

1. Autour, A., et al. 2018. Fluorogenic RNA Mango aptamers for imaging small non-coding RNAs in mammalian cells. *Nat. Commun.* 9: 656.
2. Lutz, M.M., et al. 2019. *Mammalian orthoreovirus* infection is enhanced in cells pre-treated with sodium arsenite. *Viruses* 11: 563.
3. Schneider, J.W., et al. 2020. Dysregulated ribonucleoprotein granules promote cardiomyopathy in RBM20 gene-edited pigs. *Nat. Med.* 26: 1788-1800.
4. Szczerba, M., et al. 2023. Canonical cellular stress granules are required for arsenite-induced necroptosis mediated by Z-DNA-binding protein 1. *Sci. Signal.* 16: eabq0837.

## RESEARCH USE

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

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