

TIA-1 (C-10): sc-166246

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 precedes 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: TIA1 (human) mapping to 2p13.3; Tia1 (mouse) mapping to 6 D1.

SOURCE

TIA-1 (C-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 37-65 near the N-terminus of TIA-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166246 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TIA-1 (C-10) is recommended for detection of TIA-1 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 TIA-1 siRNA (h): sc-29504, TIA-1 siRNA (m): sc-36668, TIA-1 shRNA Plasmid (h): sc-29504-SH, TIA-1 shRNA Plasmid (m): sc-36668-SH, TIA-1 shRNA (h) Lentiviral Particles: sc-29504-V and TIA-1 shRNA (m) Lentiviral Particles: sc-36668-V.

Molecular Weight of TIA-1: 40 kDa.

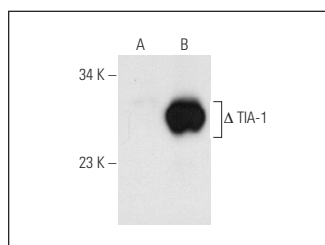
Molecular Weight of TIA-1 granule-associated isoform: 15 kDa.

Positive Controls: TIA-1 (h): 293 Lysate: sc-111880, BJAB whole cell lysate: sc-2207 or Jurkat whole cell lysate: sc-2204.

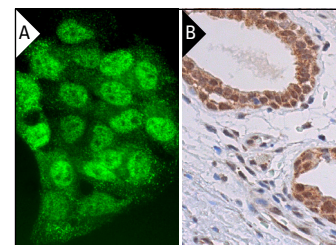
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TIA-1 (C-10): sc-166246. Western blot analysis of TIA-1 expression in non-transfected: sc-110760 (A) and truncated human TIA-1 transfected: sc-111880 (B) 293 whole cell lysates.



TIA-1 (C-10): sc-166246. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Simpson-Holley, M., et al. 2011. Formation of antiviral cytoplasmic granules during orthopoxvirus infection. *J. Virol.* 85: 1581-1593.
2. Hamdollah Zadeh, M.A., et al. 2015. Alternative splicing of TIA-1 in human colon cancer regulates VEGF isoform expression, angiogenesis, tumour growth and bevacizumab resistance. *Mol. Oncol.* 9: 167-178.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **TIA-1 (G-3): sc-166247** for TIA-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.