SANTA CRUZ BIOTECHNOLOGY, INC.

TDAG51 (L-19): sc-6143

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytotoxic T lymphocyte (CTL)-mediated cytotoxicity constitutes an important component of specific effector mechanisms in immunosurveillance against virus-infected or -transformed cells. Two mechanisms appear to account for this activity, one of which is the perforin-based process. Independently, a FAS-based mechanism involves the transducing molecule FAS (APO-1) and its ligand (FAS-L). The human FAS (APO-1) protein is a cell surface glycoprotein that belongs to a family of receptors that includes CD40, nerve growth factor receptors and tumor necrosis factor receptors. The FAS antigen is expressed on a broad range of lymphoid cell lines, and is expressed at high levels in T cells subsequent to crosslinking of the T cell receptor (TCR). A previously undescribed protein, TDAG51, restores activation-induced apoptosis in cells that have lost the ability to display Fas in response to activation. Thus, TDAG51 plays a critical role in T cell apoptosis by coupling TCR stimulation to Fas expression.

CHROMOSOMAL LOCATION

Genetic locus: PHLDA1 (human) mapping to 12q21.2; Phlda1 (mouse) mapping to 10 D1.

SOURCE

TDAG51 (L-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of TDAG51 of mouse 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-6143 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TDAG51 (L-19) is recommended for detection of TDAG51 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). TDAG51 (L-19) is also recommended for detection of TDAG51 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TDAG51 siRNA (h): sc-36631, TDAG51 siRNA (m): sc-36632, TDAG51 shRNA Plasmid (h): sc-36631-SH, TDAG51 shRNA Plasmid (m): sc-36632-SH, TDAG51 shRNA (h) Lentiviral Particles: sc-36631-V and TDAG51 shRNA (m) Lentiviral Particles: sc-36632-V.

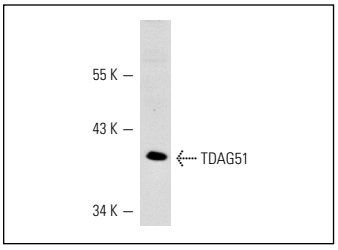
Molecular Weight of TDAG51: 44 kDa.

Positive Controls: human pancreas extract: sc-363770, Hep G2 cell lysate: sc-2227 or mouse brain extract: sc-2253.

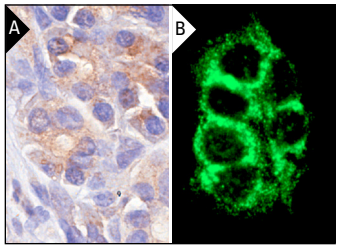
STORAGE

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

DATA



TDAG51 (L-19): sc-6143. Western blot analysis of TDAG51 expression in Hep G2 whole cell lysate.



TDAG51 (L-19): sc-6143. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human pancreas tissue (**A**) and immunofluorescence staining of methanol-fixed Hep G2 cells (**B**) showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Neef, R., et al. 2002. Identification of the human PHLDA1/TDAG51 gene. Cancer Res. 62: 5920-5929.
2. Hossain, G.S., et al. 2003. TDAG51 is induced by homocysteine, promotes detachment-mediated programmed cell death, and contributes to the cevelopment of atherosclerosis in hyperhomocysteinemia. J. Biol. Chem. 278: 30317-30327.
3. Oberg, H.H., et al. 2004. Regulation of T-cell death-associated gene 51 (TDAG51) expression in human T-cells. Cell Death Differ. 11: 674-684.
4. Zhou, J., et al. 2005. Activation of the unfolded protein response occurs at all stages of atherosclerotic lesion development in apolipoprotein E-deficient mice. Circulation 111: 1814-1821.
5. Liu, F., et al. 2011. Expression of Hsf1, Hsf2, and Phlda1 in cells undergoing cryptorchid-induced apoptosis in rat testes. Mol. Reprod. Dev. 78: 283-291.

RESEARCH USE

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

PROTOCOLS

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