SANTA CRUZ BIOTECHNOLOGY, INC.

FAS (N-18): sc-714

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytotoxic T lymphocyte (CTL)-mediated cytotoxicity constitutes an important component of specific effector mechanisms in immuno-surveillance 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 (also designated APO-1) and its ligand (FAS-L). The human FAS 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, certain of which undergo apoptosis in response to treatment with antibody to FAS. These findings strongly imply that targeted cell death is potentially mediated by the intercellular interactions of FAS with its ligand or effectors, and that FAS may be critically involved in CTL-mediated cytotoxicity.

CHROMOSOMAL LOCATION

Genetic locus: FAS (human) mapping to 10q23.31.

SOURCE

FAS (N-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of FAS 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-714 P (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FAS (N-18) is recommended for detection of FAS of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), 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 FAS siRNA (h): sc-29311, FAS shRNA Plasmid (h): sc-29311-SH and FAS shRNA (h) Lentiviral Particles: sc-29311-V.

Molecular Weight of FAS: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or MDA-MB-468 cell lysate: sc-2282.

RESEARCH USE

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

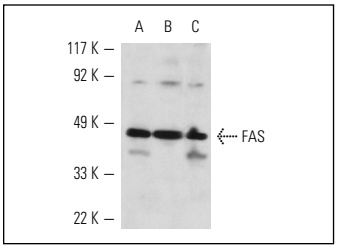
PROTOCOLS

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

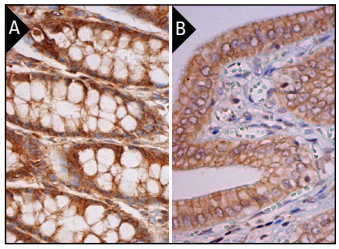
STORAGE

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

DATA



FAS (N-18): sc-714. Western blot analysis of FAS expression in A-431 (**A**), FAS treated Jurkat (**B**) and MDA-MB-231(**C**) whole cell lysates.



FAS (N-18): sc-714. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic and membrane staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Papoff, G., et al. 1996. An N-terminal domain shared by FAS/APO-1 (CD95) soluble variants prevents cell death *in vitro*. J. Immunol. 156: 4622-4630.
2. Liu, W.H. and Chang, L.S. 2010. Suppression of ADAM17-mediated Lyn/Akt pathways induces apoptosis of human leukemia U937 cells: Bungarus multicinctus protease inhibitor-like protein-1 uncovers the cytotoxic mechanism. J. Biol. Chem. 285: 30506-30615.
3. Liu, W.H. and Chang, L.S. 2010. Piceatannol induces Fas and Fas_L up-regulation in human leukemia U937 cells via Ca^{2+}/p38α MAPK-mediated activation of c-Jun and ATF-2 pathways. Int. J. Biochem. Cell Biol. 42: 1498-1506.
4. Papoff, G., et al. 2010. FADD-calmodulin interaction: a novel player in cell cycle regulation. Biochim. Biophys. Acta 1803: 898-911.
5. Liu, W.H. and Chang, L.S. 2011. Fas/Fas_L-dependent and -independent activation of caspase-8 in doxorubicin-treated human breast cancer MCF-7 cells: ADAM10 down-regulation activates Fas/Fas_L signaling pathway. Int. J. Biochem. Cell Biol. 43: 1708-1719.
6. Garg, A.D., et al. 2012. A novel pathway combining calreticulin exposure and ATP secretion in immunogenic cancer cell death. EMBO J. 31: 1062-1079.
7. Cerezo, D., et al. 2012. Acquisition of MDR phenotype by leukemic cells is associated with increased caspase-3 activity and a collateral sensitivity to cold stress. J. Cell. Biochem. 113: 1416-1425.