SANTA CRUZ BIOTECHNOLOGY, INC.

FAS (B-10): sc-8009

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 (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 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 310-335 at the C-terminus of FAS of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FAS (B-10) is available conjugated to agarose (sc-8009 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8009 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8009 PE), fluorescein (sc-8009 FITC), Alexa Fluor® 488 (sc-8009 AF488), Alexa Fluor® 546 (sc-8009 AF546), Alexa Fluor® 594 (sc-8009 AF594) or Alexa Fluor® 647 (sc-8009 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8009 AF680) or Alexa Fluor® 790 (sc-8009 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-8009 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

FAS (B-10) is recommended for detection of FAS of 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), flow cytometry (1 µg per 1 x 10^6 cells) 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.

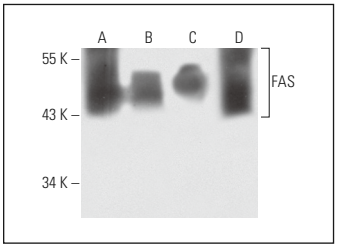
Molecular Weight of FAS: 48 kDa.

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

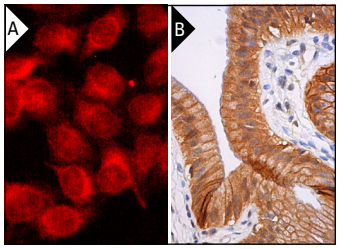
STORAGE

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

DATA



FAS (B-10): sc-8009. Western blot analysis of FAS expression in A-431 (**A**), MDA-MB-468 (**B**), Jurkat (**C**) and Caki-1 (**D**) whole cell lysates.



FAS (B-10): sc-8009. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**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. Song, J., et al. 2000. Roles of FAS and FAS ligand during mammary gland remodeling. J. Clin. Invest. 106: 1209-1220.
2. Tanikawa, C., et al. 2009. XEDAR as a putative colorectal tumor suppressor that mediates p53-regulated anoikis pathway. Oncogene 28: 3081-3092.
3. Sawai, H. and Domae, N. 2010. Transfer of FAS (CD95) protein from the cell surface to the surface of polystyrene beads coated with anti-FAS antibody clone CH-11. Eur. J. Histochem. 54: e8.
4. Chen, T., et al. 2011. Experimental therapy of ovarian cancer with synthetic makaluvamine analog: in vitro and in vivo anticancer activity and molecular mechanisms of action. PLoS ONE 6: e20729.
5. Lee, K.W., et al. 2012. Sulfuretin from heartwood of *Rhus verniciflua* triggers apoptosis through activation of Fas, Caspase-8, and the mitochondrial death pathway in HL-60 human leukemia cells. J. Cell. Biochem. 113: 2835-2844.
6. Yan, K.H., et al. 2013. Aspirin antagonizes the cytotoxic effect of methotrexate in lung cancer cells. Oncol. Rep. 30: 1497-1505.
7. de Bielke, M.G., et al. 2015. FAS haploinsufficiency caused by extracellular missense mutations underlying autoimmune lymphoproliferative syndrome. J. Clin. Immunol. 35: 769-776.
8. Coe, G.L., et al. 2016. Ceramide mediates FasL-induced caspase 8 activation in colon carcinoma cells to enhance FasL-induced cytotoxicity by tumor-specific cytotoxic T lymphocytes. Sci. Rep. 6: 30816.

RESEARCH USE

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