

FAS (B-D29): sc-65316

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 inter-cellular interactions of FAS with its ligand or effectors, and that FAS may be critically involved in CTL-mediated cytotoxicity.

REFERENCES

- Henkart, P.A. 1985. Mechanism of lymphocyte-mediated cytotoxicity. *Annu. Rev. Immunol.* 3: 31-58.
- Young, J.D.E., et al. 1988. Perforin-dependent and independent pathways of cytotoxicity mediated by lymphocytes. *Immunol. Rev.* 103: 161-202.
- Podack, E.R., et al. 1991. A central role of perforin in cytolysis? *Annu. Rev. Immunol.* 9: 129-157.
- Yagita, H., et al. 1992. Role of perforin in lymphocyte-mediated cytolysis. *Adv. Immunol.* 51: 215-242.
- Drappa, J., et al. 1993. The FAS protein is expressed at high levels on CD4⁺CD8⁺ thymocytes and activated mature lymphocytes in normal mice but not in the lupus-prone strain, MRL lpr/lpr. *Proc. Natl. Acad. Sci. USA* 90: 10340-10344.
- Suda, T., et al. 1993. Molecular cloning and expression of the FAS ligand, a novel member of the tumor necrosis factor family. *Cell* 75: 1169-1178.
- 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.
- Fülöp, P., et al. 2006. Lack of UCP2 reduces FAS-mediated liver injury in ob/ob mice and reveals importance of cell-specific UCP2 expression. *Hepatology* 44: 592-601.
- Maedler, K., et al. 2006. Aging correlates with decreased β cell proliferative capacity and enhanced sensitivity to apoptosis: a potential role for FAS and pancreatic duodenal homeobox-1. *Diabetes* 55: 2455-6242.

CHROMOSOMAL LOCATION

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

SOURCE

FAS (B-D29) is a mouse monoclonal antibody raised against recombinant FAS of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 1% BSA.

APPLICATIONS

FAS (B-D29) 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

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.

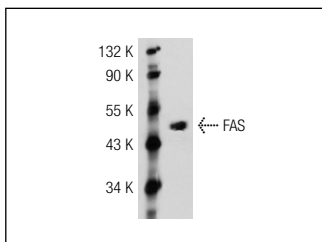
Molecular Weight of FAS: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

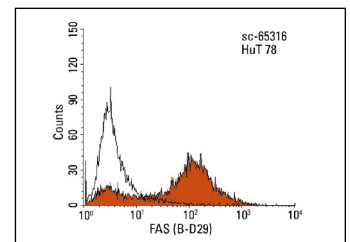
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



FAS (B-D29): sc-65316. Western blot analysis of FAS expression in Jurkat whole cell lysate.



FAS (B-D29): sc-65316. Indirect FCM analysis of HuT78 cells stained with FAS (B-D29), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG₁: sc-3877.

STORAGE

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

PROTOCOLS

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