

FAS-L (GM5F4): sc-56101

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

1. Henkart, P.A. 1985. Mechanism of lymphocyte-mediated cytotoxicity. *Annu. Rev. Immunol.* 3: 31-58.
2. Young, J.D.E., et al. 1988. Perforin-dependent and independent pathways of cytotoxicity mediated by lymphocytes. *Immunol. Rev.* 103: 161-202.
3. Podack, E.R., et al. 1991. A central role of perforin in cytolysis? *Annu. Rev. Immunol.* 9: 129-157.
4. Yagita, H., et al. 1992. Role of perforin in lymphocyte-mediated cytolysis. *Adv. Immunol.* 51: 215-242.
5. 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.
6. 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.
7. 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.
8. Kägi, D., et al. 1994. FAS and perforin pathways as major mechanisms of T cell-mediated cytotoxicity. *Science* 265: 528-530.

CHROMOSOMAL LOCATION

Genetic locus: TNFSF6 (human) mapping to 1q23; Tnfsf6 (mouse) mapping to 1 H2.1.

SOURCE

FAS-L (GM5F4) is a mouse monoclonal antibody raised against FAS-L extracellular domain of human origin.

PRODUCT

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

Available as phycoerythrin (sc-56101 PE) or fluorescein (sc-56101 FITC) conjugates for flow cytometry, 100 tests.

APPLICATIONS

FAS-L (GM5F4) is recommended for detection of FAS ligand (FAS-L) transiently expressed on the cell surface of transfected BOSC cells of human origin by flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for FAS-L siRNA (h): sc-29313.

Molecular Weight of soluble FAS-L: 26 kDa.

Molecular Weight of membrane-bound FAS-L: 40 kDa.

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 or our catalog for detailed protocols and support products.