



FAS (FL): sc-4276 WB

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, 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 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 cytotoxicity? *Annu. Rev. Immunol.* 9: 129-157.
4. Yagita, H., et al. 1992. Role of perforin in lymphocyte-mediated cytotoxicity. *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. Kägi, D., et al. 1994. FAS and perforin pathways as major mechanisms of T cell-mediated cytotoxicity. *Science* 265: 528-530.
8. 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.

CHROMOSOMAL LOCATION

Genetic locus: FAS (human) mapping to 10q24.1; Fas (mouse) mapping to 19 C1.

SOURCE

FAS (FL) is expressed in *E. coli* as a 64 kDa tagged fusion protein corresponding to amino acids 1-335 representing full length FAS of human origin.

PRODUCT

FAS (FL) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

FAS (FL) is suitable as a Western blotting control for sc-714, sc-714-G, sc-715, sc-715-G, sc-1023, sc-7886, sc-8009, sc-21730 and sc-74540.

Molecular Weight of FAS: 48 kDa.

SELECT PRODUCT CITATIONS

1. Schmitz, I., et al. 2002. Specificity of anti-human CD95 (APO-1/Fas) antibodies. *Biochem. Biophys. Res. Commun.* 297: 459-462.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

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.