# SANTA CRUZ BIOTECHNOLOGY, INC.

# FAS (APO-1-1): sc-65400



#### 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.

#### 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. 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.
- 9. Maedler, K., et al. 2006. Aging correlates with decreased  $\beta$  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 10g23.31.

# SOURCE

FAS (APO-1-1) is a mouse monoclonal antibody raised against FAS of human origin.

# **RESEARCH USE**

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

#### PRODUCT

Each vial contains 100  $\mu$ g lgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as fluorescein conjugate for flow cytometry, sc-65400 FITC, 100 tests.

### **APPLICATIONS**

FAS (APO-1-1) 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) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for FAS siRNA (h): sc-29311, FAS siRNA (h2): sc-44260, FAS shRNA Plasmid (h): sc-29311-SH, FAS shRNA Plasmid (h2): sc-44260-SH, FAS shRNA (h) Lentiviral Particles: sc-29311-V and FAS shRNA (h2) Lentiviral Particles: sc-44260-V.

Molecular Weight of FAS: 48 kDa.

Positive Controls: FAS (h): 293T Lysate: sc-113770, FAS (h2): 293T Lysate: sc-170706 or 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 antimouse 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). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

#### DATA



FAS (APO-1-1): sc-65400. Western blot analysis of FAS expression in non-transfected: sc-117752 (A) and human FAS transfected: sc-113770 (B) 293T whole cell lysates

#### **STORAGE**

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