SANTA CRUZ BIOTECHNOLOGY, INC.

FAS-L (MFL3): sc-19986

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. 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.
3. 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.
4. Lopatinskaya, L., et al. 2006. Mediators of apoptosis FAS and FAS-L predict disability progression in multiple sclerosis over a period of 10 years. Mult. Scler. 12: 704-709.
5. Xie, X.Z., et al. 2006. Expression of Gastrin, Somatostatin, PCNA and FAS-L in the mucosa of gastric antrum of children with chronic gastritis and duodenal ulcer. Zhonghua Er Ke Za Zhi 44: 774-777.
6. Kopinski, P., et al. 2006. Apoptosis of alveolar lymphocytes in sarcoidosis and in control group is more frequent in smokers than in nonsmoking persons. Przeql. Lek. 63: 841-847.
7. Chen, A., et al. 2007. Depleting intratumoral $CD4^+CD25^+$ regulatory T cells via FAS-L protein transfer enhances the therapeutic efficacy of adoptive T cell transfer. Cancer Res. 67: 1291-1298.
8. Manicassamy, S. and Sun, Z. 2007. The critical role of protein kinase Cθ in FAS/ FAS ligand-mediated apoptosis. J. Immunol. 178: 312-319.

CHROMOSOMAL LOCATION

Genetic locus: Fasl (mouse) mapping to 1 H2.1.

SOURCE

FAS-L (MFL3) is an Armenian hamster monoclonal antibody raised against C57BL/6 mouse FAS-L cDNA-transfected newborn Syrian hamster kidney (BHK) cells.

RESEARCH USE

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

PRODUCT

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

Available azide-free for blocking of thymocyte interactions with CD81, sc-19986 L, 200 µg/0.1 ml.

Available as flourescein (sc-19886 FITC) or phycoerythrin (sc-19886 PE) conjugates for flow cytometry, 100 tests

APPLICATIONS

FAS-L (MFL3) is recommended for detection of FAS-L of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for FAS-L siRNA (m): sc-35358, FAS-L shRNA Plasmid (m): sc-35358-SH and FAS-L shRNA (m) Lentiviral Particles: sc-35358-V.

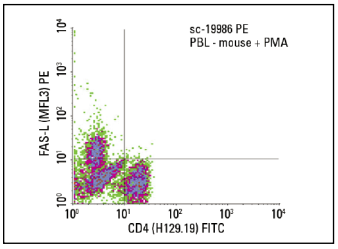
Molecular Weight of soluble FAS-L: 26 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-Armenian hamster IgG-FITC: sc-2446 (dilution range: 1:100-1:400) or goat anti-Armenian hamster IgG-TR: sc-2997 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



FAS-L (MFL3) PE: sc-19986 PE. FCM analysis of PMA-stimulated mouse peripheral blood leukocytes stained with FAS-L (MFL3) PE and CD4 (H129.19) FITC: sc-19642 FITC. Quadrant markers were set based on the isotype controls, normal armenian hamster IgG: sc-2875 and normal rat IgG_{2a}: sc-2831.

SELECT PRODUCT CITATIONS

1. Fecker, L.F., et al. 2005. Selective induction of apoptosis in melanoma cells by tyrosinase promoter-controlled CD95 ligand overexpression. J. Invest. Dermatol. 124: 221-228.

STORAGE

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