SANTA CRUZ BIOTECHNOLOGY, INC.

Toso (RR-16): sc-101253

BACKGROUND

Cytotoxic T lymphocyte (CTL)-mediated cytotoxicty constitutes an important component of specific effector mechanisms in immuno-surveillance against virus-infected or -transformed cells. One mechanism for this activity involves the transducing molecule FAS (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 intercelluler interactions of FAS with its ligand or effectors, and may be critically involved in CTL-mediated cytoxicity. Toso was identified as a cell surface protein that is expressed in lymphoid cells. Toso blocks apoptosis mediated by members of the TNF family, including FAS, and has been shown to inhibit TCR induced T cell self-killing.

REFERENCES

1. Henkart, P.A. 1985. Mechanism of lymphocyte-mediated cytotoxicity. Annu. Rev. Immunol. 3: 31-58.
2. Podack, E.R., et al. 1991. A central role of perforin in cytolysis? Annu. Rev. Immunol. 9: 129-157.
3. Yagita, H., et al. 1992. Role of perforin in lymphocyte-mediated cytolysis. Adv. Immunol. 51: 215-242.
4. 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 1pr/1pr. Proc. Natl. Acad. Sci. USA 90: 10340-10344.
5. 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.
6. Kagi, D., et al. 1994. FAS and perforin pathways as major mechanisms of T cell-mediated cytoxicity. Science 265: 528-530.
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.

CHROMOSOMAL LOCATION

Genetic locus: FCMR (human) mapping to 1q32.1.

SOURCE

Toso (RR-16) is a mouse monoclonal antibody raised against recombinant Toso of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Toso (RR-16) is recommended for detection of Toso 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Toso siRNA (h): sc-106628, Toso shRNA Plasmid (h): sc-106628-SH and Toso shRNA (h) Lentiviral Particles: sc-106628-V.

Molecular Weight of Toso: 43 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

SELECT PRODUCT CITATIONS

1. Anquetil, F., et al. 2015. IgM and IgA rheumatoid factors purified from rheumatoid arthritis sera boost the Fc receptor- and complement-dependent effector functions of the disease-specific anti-citrullinated protein autoantibodies. J. Immunol. 194: 3664-3674.
2. Priebe, V., et al. 2020. Role of ETS1 in the transcriptional network of diffuse large B cell lymphoma of the activated B cell-like type. Cancers 12: 1912.
3. Zhang, Y.R., et al. 2020. Toso interacts with SYK and enhances Bcr pathway activation in chronic lymphocytic leukemia. Chin. Med. J. 133: 2090-2097.

RESEARCH USE

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

PROTOCOLS

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