Targeting Tools: Featured Products

Anti-Tac and Anti-Tac-SAP

Advanced Targeting Systems announces the release of two reagents for immunological studies:

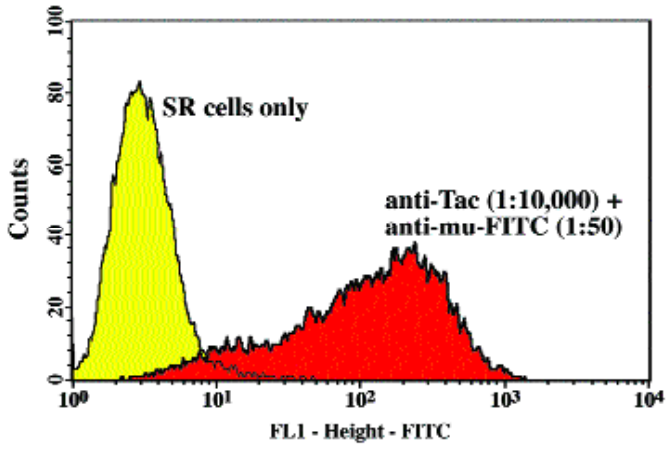
- Anti-Tac (Cat# AB-18) - a monoclonal antibody to human CD25, the interleukin-2 receptor, and
- Anti-Tac-SAP (Cat# IT-23) - the immunotoxin made by conjugation of anti-Tac to saporin.

These reagents add to the growing list of ATS products for use in studies of the hematopoietic systems. Other products include the anti-human and mouse macrophage immunotoxin (Mac-1-SAP, Cat# IT-06) and the anti-rat and mouse T lymphocyte immunotoxin OX7-SAP (Cat# IT-02).

The interleukin 2 receptor (IL-2r) is expressed on activated T lymphocytes and is important for the proliferation of T lymphocytes in response to antigen. The IL-2r is not detected on resting cells.[1] Anti-Tac is able to prevent activation of T lymphocytes by antigen; apparently by binding to a newly available receptor and blocking IL-2 binding.[2] It is reactive with activated and functionally mature human T cells.[3] Figure 1 shows FACS analysis of the antibody bound to SR cells. This cell line is derived from the peripheral blood of a patient with mycosis fungoides. The cells express CD25 and respond to IL-2.

Immunotoxins made with an antibody to the IL-2r have been suggested for clinical use in the treatment of T cell leukemias and lymphomas.[4] We at ATS believe that, as a research tool, this reagent is an important part of the toolbox. Anti-Tac immunotoxins have been shown to remove activated T lymphocytes in culture,[5] and can be used to understand the role of this population in its various processes in the immune system. Figure 2 shows this immunotoxin against SR cells that express CD25. The immunotoxin is more than 100-fold more effective than saporin alone. Later this year we will introduce an anti-rat CD25 immunotoxin that will be useful for *in vivo* studies in animal models.

Figure 1



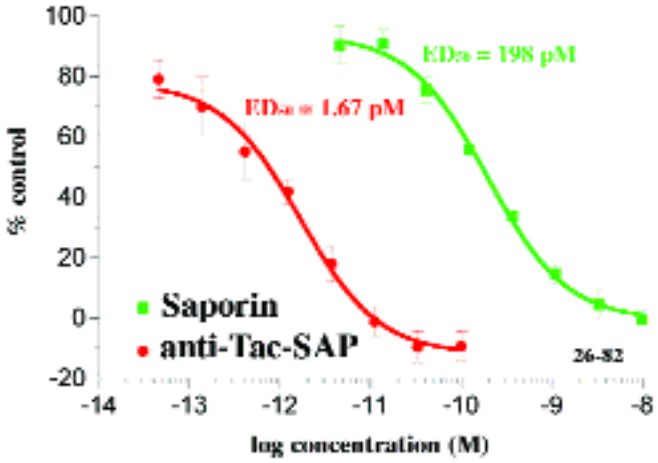


Figure 2. Cytotoxicity of anti-Tac-SAPand of non-conjugated saporin (Saporin) to SR cells in culture. Cells were plated at 5000 cells per well and allowed to acclimate. Samples were added at the indicated concentrations and cells were incubated for 72 hours. MTS (Promega) was added and, after color development, wells were read with a Molecular Dynamics SpectraMax 340. ED_{50}'s of each compound are color-coded. Data analysis is by PRISM (GraphPad).

References

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