

**Anti-CD22-SAP**
TARGETED SAP CONJUGATE

a tool for eliminating cells that possess the group-A epitope of the human B-cell antigen, CD22 in human; targeted via a mouse monoclonal antibody to Human CD22, eliminated via saporin

Catalog Number: IT-37
Quantity: 25 micrograms, 100 micrograms, 250 micrograms, 1 milligram
Format: PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4), no preservative. Sterile-filtered.
Host: Mouse

Background: Targeted SAP conjugates are powerful and specific lesioning agents used in the technique known as Molecular Surgery. The ribosome-inactivating protein, saporin (from the seeds of the plant, *Saponaria officinalis*) is bound to a targeting agent (anything that is recognized on the cell surface and internalized). The targeted conjugate is administered to cells (*in vitro* or *in vivo*). The targeting agent seeks out and binds to its target on the cell surface. The conjugate is internalized, saporin breaks away from the targeting agent, and inactivates the ribosomes which causes protein inhibition and, ultimately, cell death. Cells that do not have the cell surface marker are not affected.

CD22 is characterized as a doublet of 130/140 kDa and is expressed on the surface of normal human B-cells and some neoplastic B-cell lines and tumors. CD22 has also been further divided into four different epitope groups, A, B, C, and D, which represent groups of determinants situated on different portions of the CD22 molecule. Anti-CD22-SAP recognizes and specifically eliminates cells that possess the group-A epitope of the human B-cell antigen, CD22. Anti-CD22 immunotoxins have been used to study precursor-B cell acute lymphoblastic leukemia.

Specificity & Preparation: This targeted toxin recognizes and specifically eliminates cells that possess the group-A epitope of the human B-cell antigen, CD22 and cells that do not express CD22 will be unaffected. This targeted toxin reacts exclusively with cells of normal human B-cell lineage. Anti-CD22-SAP is a chemical conjugate of a mouse monoclonal antibody to Human CD22 and the ribosome-inactivating protein, saporin. This product is routinely tested by cytotoxicity assay.

Usage: Anti-CD22-SAP specifically eliminates cells that express the group-A epitope of the human B-cell antigen, CD22. It is useful in retrograde transport (see Wiley *et al*, 1989). **There may be lot-to-lot variation in material; working dilutions must be determined by end user. If this is a new lot, you must assess the proper working dilution before beginning a full experimental protocol.**

Storage: Gently spin down material 5-10 seconds in a microfuge before use. Store the material in undiluted aliquots at -20°C for 1-2 months. For longer term storage store the material at -80°C. Material should be aliquoted to a convenient volume and quantity to avoid repeated freezing and thawing that can damage the protein content. Under these conditions, the material has a very stable shelf-life. Thawing should be done at room temperature or on ice. The thawed solution should remain in ice until use.

Do not use a reducing agent (such as dithiothreitol, beta-mercaptoethanol or ascorbic acid) with this material. It will inactivate the toxin.

This material is an extremely potent cytotoxin. Handling should be done by experienced personnel. Gloves and safety glasses are required when handling this product. Care in disposal is mandatory; autoclaving or exposure to 0.2 M sodium hydroxide will inactivate the material. All labware that comes into contact with this material should be likewise treated.



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Selected References:

1. Gilibert-Oriol R, Thakur M, Hausmann K, Niesler N, Bhargava C, Görick C, Fuchs H, Weng A (2016) Saponins from *Saponaria officinalis* L. Augment the Efficacy of a Rituximab-Immunotoxin. *Planta Med* 82:1525-1531. doi: 10.1055/s-0042-110495
2. Wiley RG, Stirpe F, Thorpe P, Oelmann TN (1989) Neuronotoxic effects of monoclonal anti-Thy 1 antibody (OX7) coupled to the ribosome inactivating protein, saporin, as studied by suicide transport experiments in the rat. *Brain Res* 505:44-54.

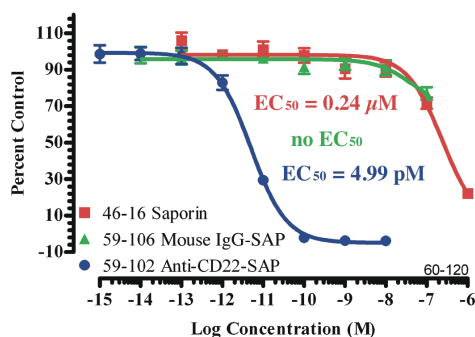
Control(s): Mouse IgG-SAP

Safety:

Good laboratory technique must be employed for safe handling of this product. This requires observation of the following practices:

1. Wear appropriate laboratory attire, including lab coat, gloves and safety glasses.
2. Do not pipet by mouth, inhale, ingest or allow product to come into contact with open wounds. Wash thoroughly any part of the body which comes into contact with the product.
3. Avoid accidental autoinjection by exercising extreme care when handling in conjunction with any injection device.
4. This product is intended for research use by qualified personnel only. It is not intended for use in humans or as a diagnostic agent. Advanced Targeting Systems is not liable for any damages resulting from the misuse or handling of this product.

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Daudi cells, a Burkitt lymphoma cell line, were plated at 3000 cells per well and were 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. EC50's of each compound are color-coded. Data analysis is by PRISM (GraphPad).