

The Technology: Molecular Surgery™

Advanced Targeting Systems' technology – Molecular Surgery – is a modification of one of the most widely used techniques in the neurosciences: lesioning of a region by surgical means and observation of the effect.

Saporin has no way of entering a cell on its own, except by bulk-phase endocytosis. To be effective, Saporin is bound to a Targeting Agent. A Targeting Agent binds to the cell surface and is internalized. Examples include: antibody, ligand, cytokine, growth factor, aptamer, etc. When the conjugate is internalized it escapes the endosomal compartment and inactivates the ribosomes. This shuts down protein synthesis and results in cell death.

Scan this QR code to view a tutorial of the Saporin technology





Advanced Targeting Systems Carlsbad, California "The Saporin People" www.ATSbio.com



Need a special service? We have you covered!

Custom Conjugates

Custom conjugations are provided using your Targeting Agent attached to Saporin or the payload of your choice.

Biotinylation Service

Proteins come in all shapes and sizes and don't always contain a ready-to-conjugate binding site. Our experts can help provide you with the most effective conjugate while retaining the functionality of each of the components.

Fluorescent Labeling

A quick method of screening antibodies, peptides, ligands, and various other proteins consists of tagging them with a fluorescent dye and visualizing the fluorescence levels. The ability to quickly gather initial binding data of a Targeting Agent gives direction for further development and preliminary assessment of affinity and specificity.

Compound Screening Service

Need an extra hand with cell-based assays? Contact us for a quote for screening your compound via cytotoxicity assay, flow cytometry, or ELISA.





Targeted Toxins Secondary ZAP Conjugates Control Conjugates Saporin Antibodies Custom Conjugations



Advanced Targeting Systems (ATS) is a California-based biotechnology company dedicated to providing quality targeting reagents for scientific research and pharmaceutical development.



Saporin

Saporin is obtained from the seeds of the Soapwort plant (*Saponaria officinalis*), a plant that grows wildly in Britain and other parts of Europe. Saporin has no known specificity. Saporin is escorted into a cell by a targeting agent that is recognized on the cell surface and internalized. Upon internalization, the ribosomes are inactivated, resulting in cell

death. When conjugated to a targeting agent it becomes a molecular scalpel. Unconjugated Saporin can also serve as a control.



Targeted Toxins

Targeted SAP conjugates are powerful and specific lesioning agents where the targeting agent is attached to **Saporin**. The targeted conjugate is administered to cells (*in vitro* or *in vivo*). Upon binding to its receptor, the conjugate is internalized causing cell death. Cells that do not have the cell surface marker are not affected.

ATS offers Saporin conjugates for over 40 targets including: CTB-SAP, Anti-DBH-SAP, IB4-SAP, mu p75-SAP, ME20.4-SAP, 192-IgG-SAP, SSP-SAP, Bombesin-SAP and CCK-SAP.



Product References / FAQ

Vist our website to browse over 2700 references from scientists around the world. Read summaries that include dose and application information that will be helpful in planning your experiment.

Search our FAQ section to help troubleshoot or contact us directly for assistance.



Secondary ZAP Conjugates

Secondary ZAP conjugates are non-targeted saporin conjugates that "piggyback" on to your primary targeting agent. Upon binding to its receptor, the conjugate is internalized causing cell death. Cells that do not have the cell surface marker are not affected.

Biotinylated Targeting Agent Kits contain a conjugate of streptavidin and **Saporin** that will convert biotinylated materials into targeted toxins. Products are available for peptides, antibodies, and any other biotinylated materials.

Antibody Internalization Kits contain a secodary antibody conjugated to Saporin. It uses your primary antibody to target and eliminate cells. Available species include: alpaca/llama IgG, chicken IgY, goat IgG, guinea pig, IgG, human IgG*, human IgM, mouse IgG*, mouse IgM, rabbit IgG*, and rat IgG*.



*Kits are available with bivalent and monovalent antibodies.

Control Conjugates

Controls are a vital part of the scientific procedure; without them it is difficult to isolate the specific effects from the non-specific or artifactual. Control conjugates are available for **Targeted Toxins** and **ZAP Conjugates** that are the same molecular weight, consist of similar, comparable materials and are synthesized with the same protocols. The

difference is the cell-specific targeting agents are replaced with "blanks," antibodies or peptides that have no specificity, and no ability to target cells.

pHast Conjugates

pHast Conjugates are one of the fastest tools for quantitative testing of your primary antibody's specificity, binding, and internalization, providing results in 1 day.





Antibodies and more

Search our product catalog online to find what you need for your project.



Beta Products

The Beta-Testing program makes new conjugates available sooner. Beta Products have not been characterized or reported in scientific literature. Researchers receive

special Beta-pricing. The first to publish using the conjugate will receive a \$500 ATS product credit.



