Advanced Targeting Systems

6352 CORTE DEL ABETO, STE B
CARLSBAD, CA 92011 USA
01.858.642.1988 • WWW.ATSBIO.COM

VIP-SAP

TARGETED SAP CONJUGATE

VIP-streptavidin-saporin

Catalog Number: BETA-027
Quantity: 25 micrograms
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.

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.
Vasoactive intestinal peptide (VIP) is a 28 amino acid neuropeptide important in heart contractility, vasodilation, the lowering of arterial blood pressure, and in relaxing various smooth muscle tissues. It is expressed in a number of areas, including the gut, pancreas, and hypothalamus. VIP is also involved in synchronization of the circadian timekeeping machinery. There are two known VIP receptors. VPAC1 is expressed in the central nervous system, liver, lung, intestine, and T-lymphocytes. VPAC2 is found in the central nervous system, pancreas, skeletal muscle, heart, kidney, adipose tissue, testis, and stomach. VIP-SAP could be used to study circadian rhythm, heart failure, and various aspects of the digestive system.

Specificity & Preparation: This targeted toxin recognizes cells that express vasoactive intestinal peptide (VIP) receptors (VPAC1, VPAC2). VIP-SAP is a bonded toxin between VIP and the secondary conjugate Streptavidin-ZAP containing the ribosome-inactivating protein, saporin.

Usage: VIP-SAP eliminates cells expressing VIP receptors (VPAC1, VPAC2). All other cells are left untouched. **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. 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 on 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.

Advanced Targeting Systems

6352 CORTE DEL ABETO, STE B
CARLSBAD, CA 92011 USA
01.858.642.1988 • WWW.ATSBIO.COM

VIP-SAP
TARGETED SAP CONJUGATE

Control(s): Blank-Streptavidin-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.