



ADVANCED
TARGETING
SYSTEMS

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Oxytocin-SAP
TARGETED SAP CONJUGATE
native oxytocin peptide-saporin
targets cells expressing oxytocin receptor

Catalog Number: IT-46

Quantity: 25 micrograms, 100 micrograms, 250 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.

Oxytocin is a nine amino acid peptide with a structure similar to vasopressin, and is a hormone released by the posterior pituitary. Peripheral activity of oxytocin is linked primarily to lactation and labor-related uterine contractions. Within the brain, oxytocin receptor-positive neurons have been studied with regard to their sensitivity to leptin and involvement in satiety. Oxytocin-SAP recognizes and specifically eliminates cells expressing the oxytocin receptor.

Specificity and Preparation:

This targeted toxin (molecular weight 31 kDa) targets oxytocin-receptor positive cells. Oxytocin-SAP is a chemical conjugate of native oxytocin peptide and the ribosome-inactivating protein, saporin.

Usage and Storage:

Oxytocin-SAP specifically eliminates cells that recognize and internalize oxytocin. **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.**

Gently spin down material before use; 5-10 seconds in a microfuge should be adequate. 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 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.



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Available Control(s): Blank-SAP, Saporin

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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