

**Anti-FLAG (M5)-ZAP
TAG-TARGETED TOXIN**

a tool for eliminating FLAG (M5)-expressing cells or to “piggyback” onto your FLAG (M5) tagged recombinant protein; targeted via mouse monoclonal antibody to N-terminal Met-FLAG fusion protein, eliminated via saporin

Catalog Number: IT-59
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.
Host: Mouse
Isotype: IgG1
Clone: M5

Background:

Tag-targeted toxins 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 that "piggybacks" onto YOUR cells expressing proteins tagged with FLAG. Once 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.

A fusion tag called FLAG consists of eight amino acids (Asp-Tyr-Lys-Asp-Asp-Asp-Asp-Lys). FLAG is specifically designed for immunoaffinity chromatography. It allows elution under non-denaturing conditions. Several antibodies against this peptide have been developed. One antibody denoted as M5 detects N-terminal Met-FLAG fusion proteins.

Specificity and Preparation:

This tag-targeted toxin recognizes YOUR FLAG-tagged recombinant proteins or FLAG-tagged proteins over-expressed in cells. Anti-FLAG-ZAP is a chemical conjugate of a mouse monoclonal antibody to the N-terminal Met-FLAG fusion protein and the ribosome-inactivating protein, saporin. M5 binding is not calcium dependent and is NOT recommended for detection of FLAG fusion proteins expressed in *E. coli*.

Usage and Storage:

Anti-FLAG (M5)-ZAP specifically eliminates YOUR FLAG-tagged recombinant proteins or FLAG-tagged proteins over-expressed in cells. **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.

Note: When used in a cytotoxicity assay, un-bound primary antibody will compete with primary antibody bound to Anti-FLAG (M5)-ZAP and may reduce cytotoxicity through competitive inhibition of the primary antibody-secondary conjugate complex.



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

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Available 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.

To view protocol(s) for this and other products please visit: www.ATSBio.com/support/protocols