ADVANCED TARGETING SYSTEMS

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Antibody to Saporin
GOAT POLYCLONAL

Catalog Number: AB-15
Quantity: 100 microliters
Format: Ammonium sulfate-purified antiserum, Liquid antisera, no preservative
Host: Goat
Isotype: IgG
Immunogen: Saporin

Background:
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 is a plant enzyme with N-glycosidase activity that depurinates a specific nucleotide in the ribosomal RNA 28S, thus irreversibly blocking protein synthesis. It belongs to the well-characterized family of ribosome-inactivating proteins (RIPs). There are two types of RIPs: type I, which are much less cytotoxic due to the lack of the B chain and type II, which are distinguished from type I RIPs by the presence of the B chain and their ability to enter cells on their own. However, type I RIPs can still be internalized by fluid-phase endocytosis. In the case of saporin, it was reported that saporin first binds to the alpha2-macroglobulin receptor on human cells and is then internalized to the cytosol. Upon internalization, the ribosomes are inactivated, resulting in cell death.

Specificity and Preparation:
This antibody recognizes saporin. Saporin was used as the immunogen. The antibody is routinely tested by Western blot.

Usage and Storage:
Applications include immunoblotting (ATS in-house; 1:1,000), ELISA (ATS in-house; 1:100), and immunohistochemistry (frozen, fixed sections; 1:1,000 or 1:350).[1,2] Store the antibody at 4°C for one month or -20°C in undiluted aliquots for one year. Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

References:
1. Vulchanova L, Olson TH, Stone LS, Riedl MS, Elde R, Honda CN (2001) Cytotoxic targeting of isolectin IB4-binding sensory neurons. *Neurosci* 108(1):143-155.
2. Mantyh PW, Rogers SD, Honore P, Allen BJ, Ghilardi JR, Li J, Daughters RS, Lappi DA, Wiley RG, Simone DA (1997) Inhibition of hyperalgesia by ablation of lamina I spinal neurons expressing the substance P receptor. *Science* 278:275-279.