Targeting Tools: Featured Products

Somatostatin receptor targeting

Advanced Targeting Systems is pleased to announce the availability of polyclonal antibodies to somatostatin receptor (SSTr) sub-types 1 and 4.

Antibody to SSTr1

SSTr1 is a 391 amino acid G-protein-coupled receptor that contains three glycosylation sites and that is expressed in several areas of the rat CNS.[1] It is strongly expressed in the amygdala and cortex, and less so in the hypothalamus, hippocampus, olfactory tubule, olfactory bulb and thalamus and spinal cord.[2] In the periphery, it is also expressed in stomach, colon and liver. We have created an antibody to an extracellular domain of SSTr1 and it is available both as antiserum and as the affinity purified antibody. Figure 1 shows western blotting of membrane extracts of MIA PaCa-2; both versions of the antibody reveal a single band of 53 kDa, consistent with a glycosylated GPCR. The affinity-purified also functions in FACS analysis with MIA PaCa-2 cells (Figure 2).

References

1. Selmer I, Schindler M, *et al.* (2000). Advances in understanding neuronal somatostatin receptors. *Regul Pept* 90(1-3):1-18.
2. Bruno JF, Xu Y, *et al.* (1993) Tissue distribution of somatostatin receptor subtype messenger ribonucleic acid in the rat. *Endocrinology* 133(6):2561-2567.

Antibody to SSTr4

Coming Soon!

SSTr4 has a higher affinity for somatostatin 28. It is a 388-amino acid glycosylated GPCR. It has a single glycosylation site, and so the molecular weight is lower (44 kDa) than that of SSTr1. This new antibody is also being prepared from a peptide from an extracellular part of the receptor. SSTr4 is widely distributed in the rat brain and its mRNA has been recorded in the heart, stomach, lung, kidney and other organs.

Advanced Targeting Systems is developing both polyclonal and monoclonal antibodies to extracellular domains of the SSTrs, primarily for use as targeting agents. These first antibodies will be very useful in research on the characterization of the role of these receptors in systems biology.

SSTR Antibodies

AB-N19	SSTr1, antiserum	100 µl, $150
AB-N20	SSTr1, affinity purified	50 µg, $200
AB-N21	SSTr4, affinity purified	50 µg, $200

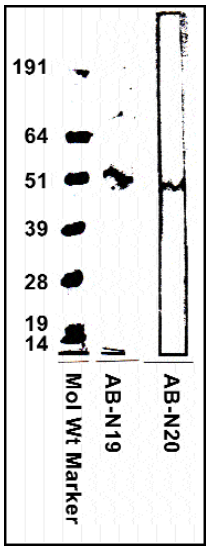

Figure 1

Lane 1: Molecular weight standards (Novex See-Blue)

Lanes 2 and 3: 111 µg of MIA PaCa-2 (human pancreatic cells) cell membrane extract probed with Anti-SSTr1 (AB-N19, Lane 2) and Anti-SSTr1 affinity purified (AB-N20, Lane 3) at a 1:100 dilution.

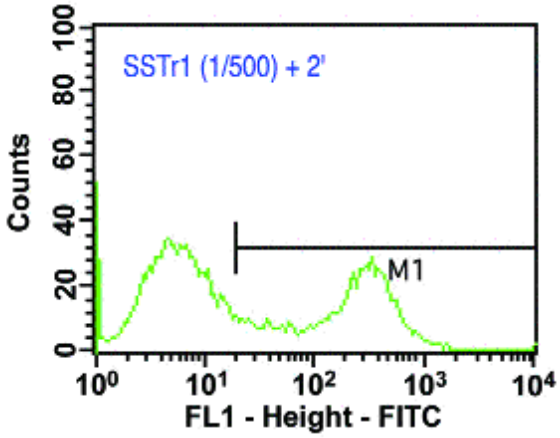

Figure 2. *MIA PaCa-2 cells, human pancreatic cells transfected with the SSTr1, were used for FACS analysis with the SSTr1 antibody. Cells were treated with affinity purified Anti-SSTr1 (AB-N20) at a 1:500 dilution and subsequently with goat-anti-rabbit-FITC.*

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