

## Product Information

### Anti-Neuropeptide Y Receptor Type 5 (NPY5R)

Developed in Rabbit, Affinity Isolated Antibody

Product Number **N 0412**

#### Product Description

Anti-Neuropeptide Y Receptor Type 5 (NPY5R) is developed in rabbit using a synthetic peptide conjugated to KLH as immunogen. The peptide corresponds to the third cytoplasmic loop of human NPY5R. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Neuropeptide Y Receptor Type 5 (NPY5R) specifically recognizes NPY5R in human brain neurons by immunohistochemistry with formalin-fixed, paraffin-embedded tissues, and by immunocytochemistry. The immunizing peptide has 100% homology with the rat and mouse genes. Other species reactivity has not been confirmed.

Neuropeptide Y receptors (NPYR) are activated by the endogenous peptides, Neuropeptide Y, and its two other family members, peptide YY and pancreatic polypeptide (PP).<sup>1</sup> To date, at least 6 classes of G protein-coupled NPY receptors have been cloned: Y(1), Y(2), Y(3), Y(4), Y(5), and y(6), a receptor that appears to be nonfunctional in humans.<sup>2</sup> They are involved in a variety of biological responses, including control of food intake, regulating the activity of neuroendocrine axes, regulation of cardiorespiratory parameters, anxiety regulation, and learning and memory processing.<sup>1-6</sup>

NPY5R is expressed predominantly in the brain, and is found most highly in the hypothalamus (arcuate, paraventricular nuclei), midline thalamic nuclei, amygdala, and hippocampus. ESTs have been isolated from brain, kidney, and testis libraries.

#### Reagent

The antibody is provided as a solution of 1 mg/ml in phosphate buffered saline, pH 7.7, containing 0.01% sodium azide as a preservative.

#### Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

The recommended working concentration is 3-16 µg/ml for immunohistochemistry in human brain neurons, and for immunocytochemistry..

**Note:** In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

#### References

1. Herzog, H., Neuropeptide Y and energy homeostasis: insights from Y receptor knockout models, *Eur. J. Pharmacol.*, **480**, 21-29 (2003).
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3. Pedrazzini, T., et al., Neuropeptide Y: the universal soldier, *Cell Mol. Life Sci.*, **60**, 350-377 (2003).
4. Malmstrom, R.E., Pharmacology of neuropeptide Y receptor antagonists. Focus on cardiovascular functions, *Eur. J. Pharmacol.*, **447** 11-30 (2002).

5. Kask, A., et al., The neurocircuitry and receptor subtypes mediating anxiolytic-like effects of neuropeptide Y, *Neurosci. Biobehav. Rev.*, **26**, 259-283 (2002).
6. Redrobe, J.P., et al., Characterization of neuropeptide Y, Y(2) receptor knockout mice in two animal models of learning and memory processing, *J. Mol. Neurosci.*, **22**, 159-66 (2004).

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