

**MULTISCREEN™ STABLE CELL LINE  
HUMAN RECOMBINANT NPSR1 (Ile<sup>107</sup>) RECEPTOR**

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** C1355-2

**Lot Number:** C1355-2-073005

**Quantity:** 1 vial (2 x 10<sup>6</sup>) frozen cells

**Freeze Medium:** Sigma Freezing Medium (C-6164)

**Host cell:** HEK293T

**Transfection:** Full-length human NPSR variant Asn107Ile cDNA (SNP591694 A>T; refSNP ID rs324981)

**Recommended Storage:** Liquid nitrogen upon receiving

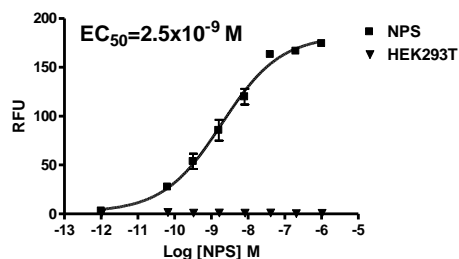
**Propagation Medium:** DMEM, 10% FBS, 100 µg/mL hygromycin, 100 µg/mL G418

**Stability:** Stable after minimum of two months continuous growth

**Background:** Neuropeptide S (NPS) receptor 1 is also known as GPR154 or G protein-coupled receptor for asthma susceptibility (GPRA). NPS receptor is widely expressed in the brain, with highest levels found in hypothalamus, amygdala, endopiriform nucleus, cortex, subiculum and nuclei of the thalamic midline. Central administration of NPS promotes behavioral arousal and suppresses all stages of sleep in rodents. Furthermore, NPS was found to produce anxiolytic-like effects in a battery of four different tests that measure behavioral responses of rodents to novelty or stress.

A number of polymorphisms in the human NPS receptor gene have been identified and a specific set of these polymorphisms was linked to an increased susceptibility for asthma and potentially other forms of allergy that are characterized by high IgE serum levels in Finnish and Canadian asthma patients. One of the single nucleotide polymorphisms Asn107Ile in the human receptor results in a gain-of-function characterized by an increase in agonist potency without changing binding affinity.

**Application:** Functional assays



**Figure legend:** Dose-dependent calcium flux upon treatment with ligand, monitored with FlexStation.

**References:**

Xu *et al.* (2004) Neuropeptide S: a neuropeptide promoting arousal and anxiolytic-like effects. *Neuron* 43:487-497.

Laitinen *et al.* (2004) Characterization of a common susceptibility locus for asthma-related traits. *Science* 304:300-304.

Reinscheid *et al.* (2005) Pharmacological characterization of human and murine neuropeptide s receptor variants. *J Pharmacol Exp Ther* 315:1338-1345.

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