MULTISPAN
One-Stop Shop for GPCR Research

MULTISCREEN^{TM} STABLE CELL LINE HUMAN RECOMBINANT NPSR1 (IIe^{107}) RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1355-2

Lot Number: C1355-2-073005

Quantity: 1 vial (2 x 10^6) 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

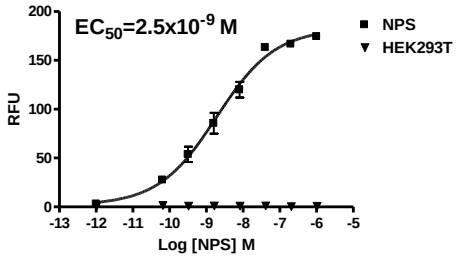

Figure legend: Dose-dependent calcium flux upon treatment with ligand, monitored with FlexStation.

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.

FOR RESEARCH USE ONLY.

www.multispaninc.com
sales@multispaninc.com
support@multispaninc.com

Phone: +1 (510) 887-0817
Fax: +1 (510) 887-0863
26219 Eden Landing Road
Hayward, CA 94545-3718
U.S.A.

Ver. October 2005