

**MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT NPY1 RECEPTOR**

Data sheet

PRODUCT INFORMATION

Catalog Number: CG1273-1

Lot Number: CG1273-1-031408

Quantity: 1 vial (2×10^6) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1 Gαq5

Transfection: Expression vector containing full-length human NPY1R cDNA (GenBank Accession Number NM_000909) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM-F12, 10% FBS, 10 µg/mL puromycin, 150 µg/mL hygromycin

Stability: Stable after two months continuous growth

Background: NPY1R (Neuropeptide Y receptor type 1) is a receptor for neuropeptide Y that is the most abundant peptide present in the mammalian central and peripheral nervous system. Neuropeptide Y exhibits a variety of potent central and peripheral effects including those on feeding, memory, blood pressure, cardiac contractility and intestinal secretions. Neuropeptide Y effects are mediated by several different receptor subtypes, Y-1, Y-1-like, Y-2, Y-3, Y-4 and Y-5. NPY1R is correlated with food feeding and subnanomolar antagonists of NPY1R have been discovered as potential anti-obesity agents. NPY1R is also involved in cardiovascular actions of exogenous neuropeptide Y and plays a role in maintaining basal blood pressure and heart rate in ischaemic heart failure.

Application: Functional assays

Figure 1

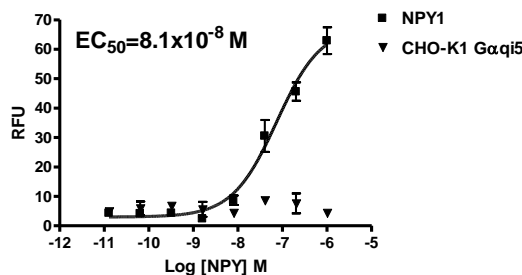


Figure 2

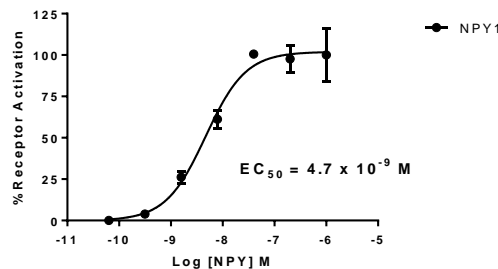


Figure 3

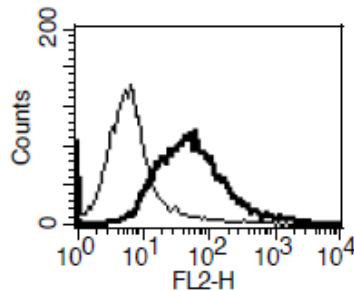


Figure 1. Dose-dependent calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 3.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Balasubramaniam (1997) Neuropeptide Y family of hormones: receptor subtypes and antagonists. *Peptides* 18:445-457.

Hammond (2001) Neuropeptide Y receptor antagonists. *IDrugs* 4:920-927.

Zhao *et al.* (1999) Renal and cardiovascular role of the neuropeptide Y Y1 receptor in ischaemic heart failure rats. *J Pharm Pharmacol* 51:1257-1265.

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