

MULTISCREEN™ STABLE CELL LINE RAT RECOMBINANT NPY2 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: Cr1274-1

Lot Number: Cr1274-1-110613

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Expression vector containing full-length rat NPY2R cDNA (GenBank Accession Number NM_023968.1) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM-F12, 10% FBS, 10 μ g/mL puromycin

Stability: In progress

Background: NPY2R (Y2) belongs to the family of G protein-coupled receptors. It is expressed at high levels in central nerve system, heart, ileum and colon. NPY2R shows high affinity for neuropeptide Y (NPY), peptide YY (PYY), and a fragment of NPY including amino acids 13 to 36. The rank order of affinity of this receptor for pancreatic polypeptides is PYY > NPY > PYY (3-36) > NPY (2-36) > [Ile-31, Gln-34] PP > [Leu-31, Pro-34] NPY > PP, [Pro-34] PYY and NPY free acid. NPY exhibits a variety of potent central and peripheral effects including those on feeding, memory, blood pressure, and intestinal secretions. NPY2R has been shown to contribute to obesity.

Application: Functional assays

Figure 1

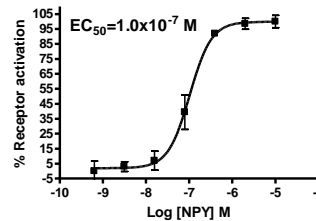


Figure 2

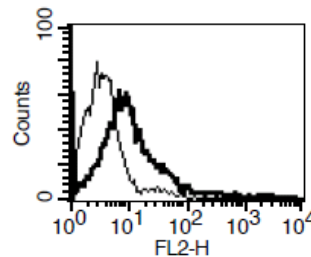


Figure 1. Dose-dependent cAMP accumulation upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01).

Figure 2. 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:

Gerald *et al.* (1995) Expression cloning and pharmacological characterization of a human hippocampal neuropeptide Y/peptide YY Y2 receptor subtype. *J Biol Chem* 270:26758-26761.

Lutz *et al.* (1997) Neuropeptide Y receptor genes on human chromosome 4q31-q32 map to conserved linkage groups on mouse chromosomes 3 and 8. *Genomics* 41:498-500.

Rose *et al.* (1995) Cloning and functional expression of a cDNA encoding a human type 2 neuropeptide Y receptor. *J Biol Chem* 270:22661-22664.

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