

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT NOP (OPRL1) RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: CA1354-1

Lot Number CA1354-1-100818

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

Freeze Medium: Cellbanker 2

Host cell: CHO-K1

Transfection: Expression vector containing full-length human OPRL1 cDNA (GenBank Accession Number NM_000913.3) with FLAG tag sequence at N-terminus and ARRB2 cDNA (GenBank Accession Number NM_004313.3)

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM/F12, 10% FBS, 10 μ g/mL puromycin, 800 μ g/mL G418

Stability: Stable after minimum two months continuous growth

Background: NOP, ORL1 or OPRL1 (opioid receptor-like 1 receptor) is also known as nociceptin receptor, orphanin FQ receptor and KOR-3 (kappa 3-related opioid receptor). It is a receptor for the neuropeptide nociceptin/orphanin FQ and has a potential role in modulating a number of brain functions, including instinctive behaviors and emotions. In vivo experiments have demonstrated that nociceptin modulates a variety of biological functions including nociception, food intake, memory processes, cardiovascular and renal functions, spontaneous locomotor activity, gastrointestinal motility, anxiety and neurotransmitter release at peripheral and central sites.

Application: Functional assays

Figure 1

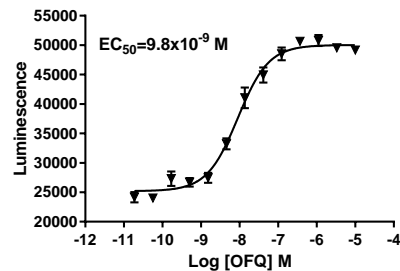


Figure 2

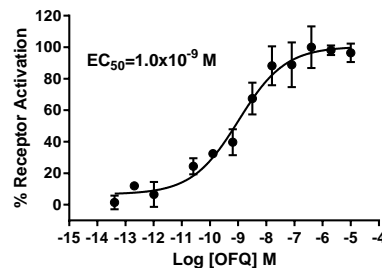


Figure 3

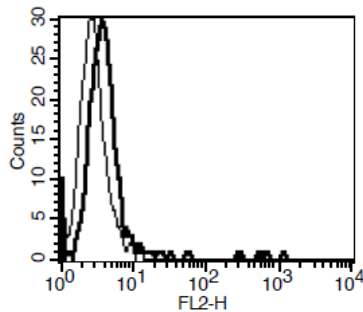


Figure 1. Dose-dependent stimulation from arrestin recruitment upon treatment with ligand, monitored on Flexstation III. **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP accumulation upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay 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:

Calo *et al.* (2000) Pharmacology of nociceptin and its receptor: a novel therapeutic target. *Br J Pharmacol* 129:1261-1283.

Ciccocioppo *et al.* (2003) The nociceptin/orphanin FQ/NOP receptor system as a target for treatment of alcohol abuse: a review of recent work in alcoholpreferring rats. *Physiol Behav* 79:121-128.

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