

**MULTISCREEN™ STABLE CELL LINE
RAT RECOMBINANT NOP (OPRL1) RECEPTOR**

PRODUCT INFORMATION

Catalog Number: Cr1354

Lot Number: Cr1354-101308

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO dhfr⁻

Transfection: Full-length rat Oprl1 cDNA (GenBank Accession Number NM_031569.2)

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: Alpha-MEM, 10% FBS, 400 µg/mL G418

Stability: Stable after minimum of 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 assay

Figure 1

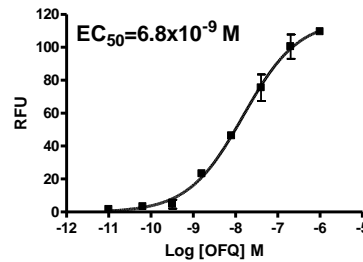


Figure 2

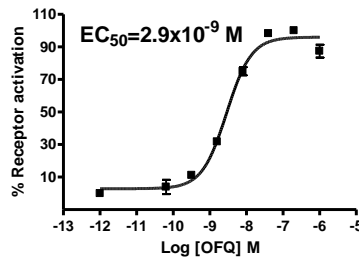


Figure 3

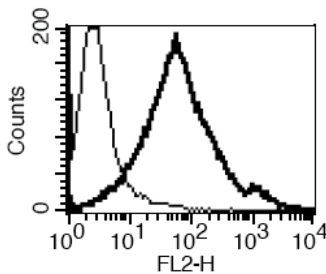


Figure 1. Dose-dependent stimulation of intercellular calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 3.** Receptor expression on cell surface as detected with anti-ORL1 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 alcohol-preferring rats. *Physiol Behav* 79:121-128.

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