

**MULTISCREEN™ STABLE CELL LINE
RAT RECOMBINANT MT2 RECEPTOR**

Data sheet

PRODUCT INFORMATION

Catalog Number: Cr1224

Lot Number: Cr1224-081910

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Full-length Mouse Mtnr1b cDNA (GenBank Accession Number NM_001100641.1) with FLAG-tag sequence at the N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS, 1 μ g/mL puromycin

Stability: Stable in culture for minimum of two months

Background: MT2 receptor, also known as MTNR1B (Melatonin receptor type 1B), is a high affinity receptor for melatonin. It is known to mediate the reproductive and circadian actions of melatonin and is considered as a novel therapeutic target for the development of subtype-selective analogs for the treatment of circadian sleep and mood-related disorders. MT2 receptor is also likely to mediate the interfering with the apoptotic pathway activated by heat shock in HL-60 cells.

Application: Functional assays

Figure 1

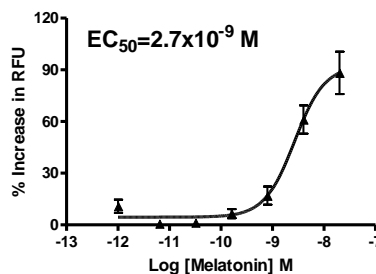


Figure 2

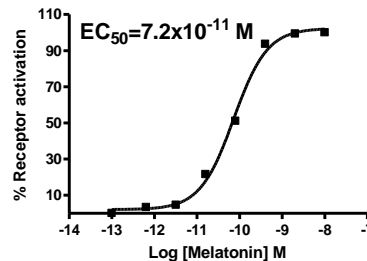


Figure 3

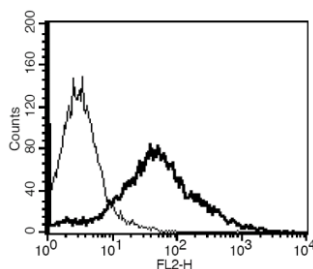


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ 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:

Reppert *et al.* (1995) Molecular characterization of a second melatonin receptor expressed in human retina and brain: the Mel1b melatonin receptor. *Proc Natl Acad Sci USA* 92:8734-8738.

Cabrera *et al.* (2003) Melatonin prevents apoptosis and enhances HSP27 mRNA expression induced by heat shock in HL-60 cells: possible involvement of the MT2 receptor. *J Pineal Res* 35:231-238.

Dubocovich *et al.* (1998) Selective MT2 melatonin receptor antagonists block melatonin-mediated phase advances of circadian rhythms. *FASEB J* 12:1211-1220.

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