

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

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** Cr1224

**Lot Number:** Cr1224-081910

**Quantity:** 1 vial ( $2 \times 10^6$ ) 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

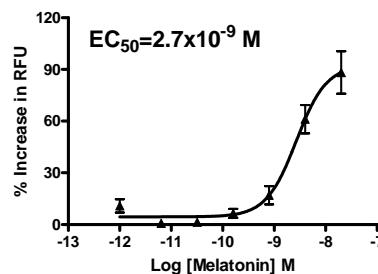
**Propagation Medium:** DMEM, 10% FBS, 1  $\mu$ g/mL puromycin

**Stability:** Stable in culture for minimum of two months

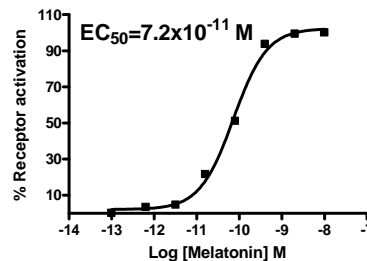
**Background:** MT2 receptor, also known as MTNR1B (Melatonin receptor type 1B), is a high affinity receptor for melatonin. It is known to mediate the reproductive and circadian actions of melatonin and is considered as a novel therapeutic target for the development of subtype-selective analogs for the 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

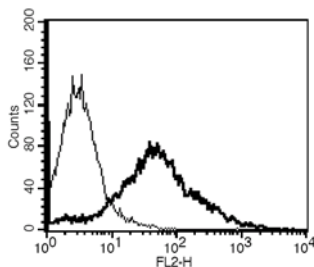
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 1.** Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with cAMP HiRange kit (Cisbio 62AM6PEC). **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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