

**MULTISCREEN™ DIVISION ARRESTED CELL LINE  
RAT RECOMBINANT MOR RECEPTOR**

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** DCr1350-1a

**Lot Number:** DCr1350-1a-071414

**Quantity:** 1 vial ( $4 \times 10^6$ ) frozen cells

**Freeze Medium:** Sigma Freezing Medium (C-6164)

**Host cell:** CHO dhfr<sup>-</sup>

**Transfection:** Full-length rat Oprm1 opioid receptor cDNA (GenBank Accession Number L13069)

**Recommended Storage:** Liquid nitrogen upon receiving

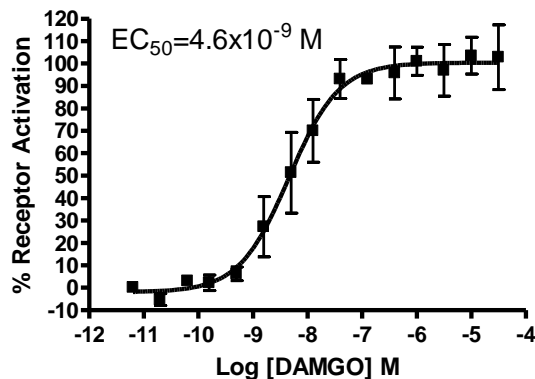
**Propagation Medium:** Alpha-MEM, 10% FBS

**Stability:** Stable for 1-2 days after thawing

**Background:** Mu opioid receptor (MOR) is a receptor for beta-endorphin, inhibits neurotransmitter release by reducing calcium ion currents and increasing potassium ion conductance. MOR signaling and regulation are strongly agonist-dependent. MOR mediates positive reinforcement following direct (morphine) or indirect (alcohol, cannabinoids, nicotine) activation. MOR plays a genetic role in the control of gut inflammation. MOR-deficient mice are highly susceptible to colon inflammation, with a 50% mortality rate occurring 3 days after administration of TNBS that induces inflammation. MOR agonists regulate cytokine production and T cell proliferation and might be new therapeutic molecules in inflammatory bowel disease.

**Application:** Functional assays

**Figure 1**



**Figure 1.** 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).

**References:**

Chen et al. (1993) Molecular cloning and functional expression of a mu-opioid receptor from rat brain. *Mol Pharmacol* 44:8-12.

Contet et al. (2004) Mu opioid receptor: a gateway to drug addiction. *Curr Opin Neurobiol* 14:370-378.

Philippe et al. (2003) Anti-inflammatory properties of the mu opioid receptor support its use in the treatment of colon inflammation. *J Clin Invest* 111:1329-1338.

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