

**MULTISCREEN™**  
**HUMAN ENDOGENOUS  $\mu$  OPIOID RECEPTOR**

**PRODUCT INFORMATION**

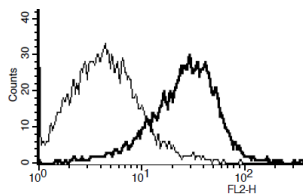
**Catalog Number:** C1350-E

**Lot Number:** C1350-E-081414

**Cell:** SK-N-SH cells naturally expressing  $\mu$  opioid receptor

**Propagation Medium:** MEM, 10% FBS, 1X NEAA

**Figure 3**

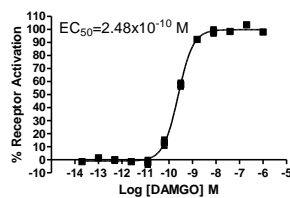


**Data Sheet**

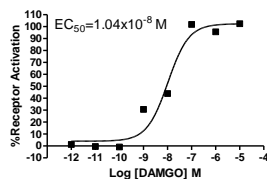
**Background:**  $\mu$  opioid receptor (MOR) is a G protein-coupled receptor for  $\beta$ -endorphin. The receptor activation inhibits neurotransmitter release by reducing calcium currents and increasing potassium conductance. MOR mediates positive reinforcement following direct (morphine) or indirect (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 2**



**Figure 1.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand. **Figure 2.** Dose-dependent stimulation of pERK level upon treatment with ligand. **Figure 3.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-MOR antibody. Thin line: Cells stained with secondary antibody only; Thick line: Cells stained with primary and secondary antibody.

**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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