

**MULTISCREEN™ STABLE CELL LINE  
HUMAN RECOMBINANT MC1 RECEPTOR**

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** C1340

**Lot Number:** C1340-09262012

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

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

**Host cell:** HEK293T

**Transfection:** Full-length Human MC1R cDNA (GenBank Accession Number NM\_002386.3) with FLAG-tag sequence at the N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

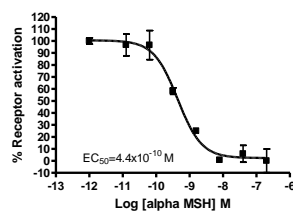
**Propagation Medium:** DMEM, 10% FBS, 1  $\mu$ g/mL puromycin

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

**Background:** The melanocortin 1 receptor (MC1R), also known as melanocyte-stimulating hormone receptor (MSHR) or melanotropin receptor, is a seven transmembrane G-protein coupled receptors expressed on the surface of melanocytes. MC1R binds to a class of pituitary peptide hormones known as the melanocortins. Binding of melanocortins to five subtypes of melanocortin receptors exert a large array of central and peripheral effects. MC1R is one of the key proteins expressed in skin and hair and involved in regulating skin and hair color. Activation of MC1R by agonist stimulates the synthesis of eumelanin by a process melanogenesis, primarily activating adenylate cyclase. MC1R has a potential role in anti-inflammatory and melanoma treatment. Further studies of the MC<sub>1</sub> receptor are essential in gaining a better understanding of the mechanism and in vivo regulation of pigmentation and anti-inflammatory functions.

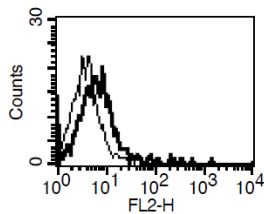
**Application:** Functional assays

**Figure 1**



**Figure 1.** Dose-dependent increase of intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

**Figure 3**



**References:**

Beaumont KA, et al (2010) Melanocortin MC1 receptor in human genetics and model systems. *European Journal of Pharmacology* 660:103-110

Neumann AG, et al. (2001) MC(1) receptors are constitutively expressed on leucocyte subpopulations with antigen presenting and cytotoxic functions. *Clin Exp Immunol* 126(3):441-6.

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