

**MULTISCREEN™ STABLE CELL LINE  
HUMAN RECOMBINANT M1 RECEPTOR**

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** C1022-1

**Lot Number:** C1022-1-040109

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

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

**Host cell:** CHO-K1

**Transfection:** Expression vector containing full-length human CHRM1 cDNA (GenBank Accession Number NM\_000738) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

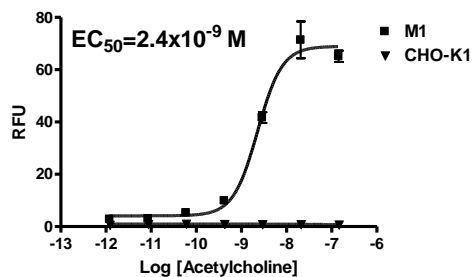
**Propagation Medium:** DMEM/F12, 10% FBS, 10  $\mu$ g/mL puromycin

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

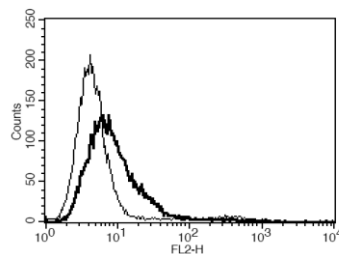
**Background:** The muscarinic M1 receptor is a membrane protein with seven transmembrane segments and binds with acetylcholine on the extracellular surface. The acetylcholine-bound receptor interacts with and activates G protein Gq/G11. The receptor is found in the hippocampal and cortical regions of the brain as well as in the parasympathetic ganglia. It is involved in many processes, including the initiation of seizures, learning and memory, and regulation of the force and rate of heart contractions. Because of its involvement in these processes, the M1 receptor is a compelling drug target for Alzheimer's disease and other neurological and psychiatric disorders.

**Application:** Functional assays

**Figure 1**



**Figure 2**



**Figure 1.** Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **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.

**References:**

Francis *et al.* (1999) The cholinergic hypothesis of Alzheimer's disease: a review of progress. *J Neurol Neurosurg Psychiatry* 66:137-147

Kubo *et al.* (1986) Cloning, sequencing and expression of complementary DNA encoding the muscarinic acetylcholine receptor. *Nature* 323:411-416.

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www.multispaninc.com  
sales@multispaninc.com  
support@multispaninc.com

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Phone: +1 (510) 887-0817  
Fax: +1 (510) 887-0863  
26219 Eden Landing Road  
Hayward, CA 94545-3718  
U.S.A.