

**MULTISCREEN™ STABLE CELL LINE  
HUMAN RECOMBINANT M2 RECEPTOR**

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** C1023-1

**Lot Number:** C1023-1-051209

**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 CHRM2 cDNA (GenBank Accession Number NM\_001006632.1) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

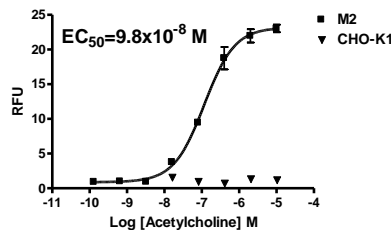
**Propagation Medium:** DMEM/F12, 10% FBS, 10 µg/mL puromycin

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

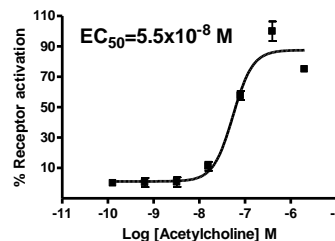
**Background:** The muscarinic M2 receptor is a 466-amino acid, 7-transmembrane protein. In heart muscle, M2 receptors represent the prevailing subtype of muscarinic receptors. They can also be found in neurons of central and peripheral nervous system. In neuronal cells, mainly on synaptic terminals, stimulation of the M2 autoreceptors is responsible for presynaptic muscarinic autoinhibition of acetylcholine release in both central and peripheral cholinergic neurons. Loss of function of these M2 receptors, as occurs in some patients with asthma and in animal models of inflammation, leads to an increase in vagally mediated hyperreactivity.

**Application:** Functional assays

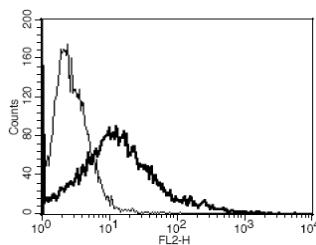
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 1.** Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP accumulation upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **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:**

Eglen (2006) Muscarinic receptor subtypes in neuronal and non-neuronal cholinergic function. *Auton Atacoid Pharmacol* 26:219-233.

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