

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT M1 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1022-1a

Lot Number: C1022-1a-072309

Quantity: 1 vial (2×10^6) 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 µg/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

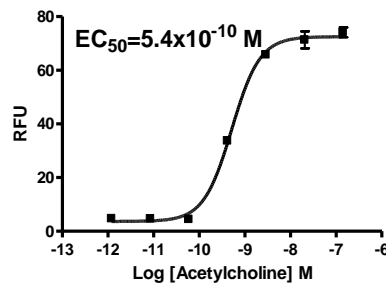


Figure 2

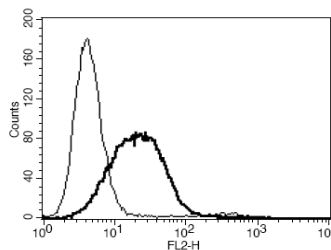


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

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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