

**MULTISCREEN™ DIVISION ARRESTED CELL LINE
HUMAN RECOMBINANT M5 RECEPTOR**

PRODUCT INFORMATION

Catalog Number: DC1026-1

Lot Number: DC1026-1-030916

Quantity: 1 vial (4×10^6) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human CHRM5 cDNA (GenBank accession Number NM_012125) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM/F12, 10% FBS

Stability: Stable for 1-2 days after thawing

Data sheet

Background: The muscarinic M5 receptor is a 532-amino acid 7-transmembrane protein. Acetylcholine, a potent dilator of most vascular beds, virtually lost the ability to dilate cerebral arteries and arterioles in M5 $-/-$ mice, suggesting that endothelial M5 receptors mediate this activity in wild-type mice. M5 receptors located on dopaminergic nerve terminals play a role in facilitating muscarinic agonist-induced dopamine release in the striatum. Both somatic and affective components of naloxone-induced morphine withdrawal symptoms were significantly attenuated in M5 $-/-$ mice. M5 receptor activity modulates both morphine reward and withdrawal processes, suggesting that M5 receptors may represent a novel target for the treatment of opiate addiction.

Application: Functional assays

Figure 1

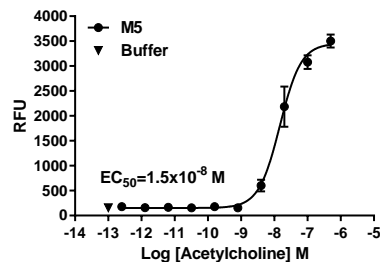


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

References:

Basile *et al.* (2002) Deletion of the M5 muscarinic acetylcholine receptor attenuates morphine reinforcement and withdrawal but not morphine analgesia. *Proc Natl Acad Sci USA* 99:11452-11457.

Yamada *et al.* (2003) Novel insights into M5 muscarinic acetylcholine receptor function by the use of gene targeting technology. *Life Sci* 74:345-353.

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