

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT M3 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1024-1

Lot Number: C1024-1-060509

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 CHRM3 cDNA (GenBank accession Number NM_000740.2) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM/F12, 10% FBS, 10 μ g/mL puromycin

Stability: Stable in culture for minimum of two months

Background: The muscarinic M3 receptor is a 590-amino acid, 7-transmembrane protein. RT-PCR and radioligand binding assays detected M3 expression in the bladder, gastric and intestinal smooth muscle, brain (CNS) and the vestibular system. Muscarinic M3 receptors mediate contraction of airway and bladder smooth muscles. The receptors in the urothelium/suburothelium can also modulate the release of certain factors, which in turn may affect bladder function at the efferent or afferent axis. Blockade of M3 receptors can alleviate the symptoms of OAB. M3 receptors are also expressed myocardial tissues and are of potential roles in parasympathetic control of heart function under normal physiological conditions and in heart failure, myocardial ischemia and arrhythmias.

Application: Functional assays

Figure 1

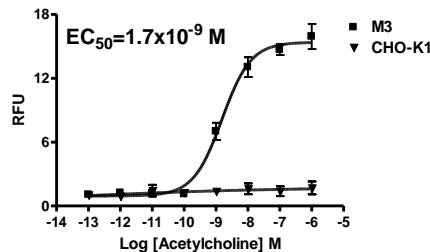


Figure 2

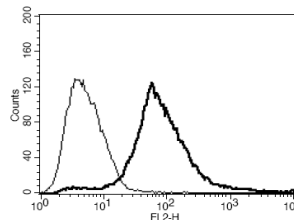


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

Figure 2. 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:

Ehlert *et al.* (1999) Contractile role of M2 and M3 muscarinic receptors in gastrointestinal smooth muscle. *Life Sci* 64:387-394.

Hedge and Eglen (1999) Muscarinic receptor subtypes modulating smooth muscle contractility in the urinary bladder. *Life Sci* 64:419-428.

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