

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT 5-HT_{2A} RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1324-1

Lot Number: C1324-1-030409

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Full-length Human HTR_{2A} cDNA (GenBank Accession Number NM_000621) with FLAG-tag sequence at the N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: Stable after minimum two months continuous growth

Background: 5-HT_{2A} (5-hydroxytryptamine receptor 2A) is a receptor for serotonin. It is expressed throughout the central nervous system in the neocortex and olfactory tubercle. Additionally, it is expressed in platelets, fibroblasts and neurons of the peripheral nervous system. 5-HT_{2A} receptor agonists may have important clinical value in the treatment of various disorders, such as depression, anxiety, bipolar disorder and schizophrenia. It is also a receptor for the human polyomavirus, JC virus.

Application: Functional assays

Figure 1

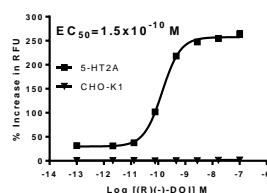


Figure 2

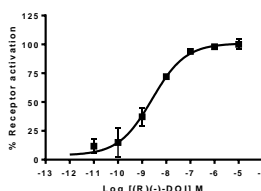


Figure 3

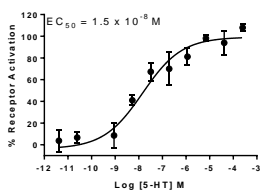


Figure 4

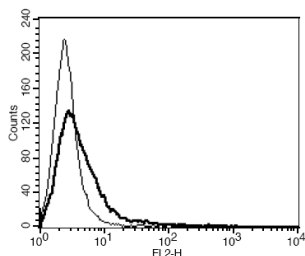


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with MULTISCREEN™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent stimulation of intracellular IP1 accumulation upon treatment with ligand, measured with IP-one Tb kit. **Figure 3.** 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 4.** 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:

Meltzer and Li (2003) Serotonin receptors: their key role in drugs to treat schizophrenia. *Prog Neuropsychopharmacol Biol Psychiatry* 27:1159-1172.

Porter *et al.* (1999) Functional characterization of agonists at recombinant human 5-HT_{2A}, 5-HT_{2B}, and 5-HT_{2C} receptors in CHO-K1 cells. *Br J Pharmacol* 128:13-20.

Stam *et al.* (1992) Genomic organization, coding sequence and functional expression of human 5-HT₂ and HT1A receptor genes. *Eur J Pharmacol* 227:158-162.

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