

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

Data sheet

PRODUCT INFORMATION

Catalog Number: C1325

Lot Number: C1325-042310

Quantity: 1 vial (2×10^6) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Full-length Human HTR_{2B} cDNA (GenBank Accession Number NM_000867) with FLAG-tag sequence at the N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS, 1 μ g/mL puromycin

Stability: Stable in culture for minimum of two months

Background: 5-HT_{2B} (5-hydroxytryptamine receptor 2B) is a receptor for serotonin. It is expressed in many peripheral and central nervous system tissues, including stomach fundus, liver kidney, muscle, intestine and brain. 5-HT_{2B} receptors are responsible for many cardiovascular and central nervous system functions, such as blood vessel contraction, platelet shape changes, neuronal sensitization to tactile stimuli, and mediation of the hallucinogenic effects of phenylisopropylamin hallucinogens. It has also been shown to be required for heart development.

The cDNA expressed in the cell line has identical sequence to GenBank NM_000867 except for one base pair mutation that results in a change in amino acid at position 477 (from glutamic acid to glutamine). This has been reported as a natural variant.

Application: Functional assays

Figure 1

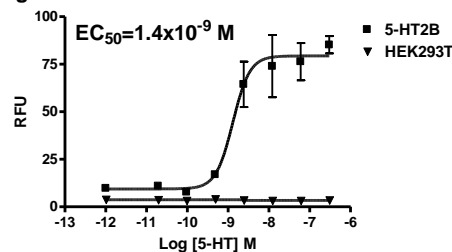


Figure 2

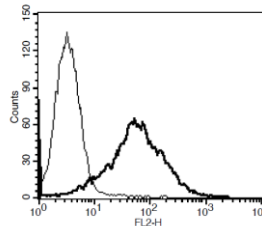


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Bonhaus *et al.* (1995) The pharmacology and distribution of human 5-hydroxytryptamine 2B (5-HT_{2B}) receptor gene products: comparison with 5-HT_{2A} and 5-HT_{2C} receptors. *Br J Pharmacol* 115:622-628.

Nebegil *et al.* (1992) Serotonin 2B receptor is required for heart development. *Proc Natl Acad Sci USA* 97:9508-9513.

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.

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