MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT D1 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: H1335

Lot Number: H1335-061810

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length human DRD1 cDNA (GenBank Accession Number NM_000794) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: Stable in culture for minimum of two months

Background: The human dopamine receptor D1 (DRD1 or D1) is a G-protein-coupled receptor. It is expressed most abundantly in the brain areas such as caudate, nucleus accumbens and olfactory tubercle. The D1 receptor regulates neuronal growth and development, mediates some behavioral responses, and modulates dopamine receptor D2-mediated events.

Application: Functional assays

Figure 1

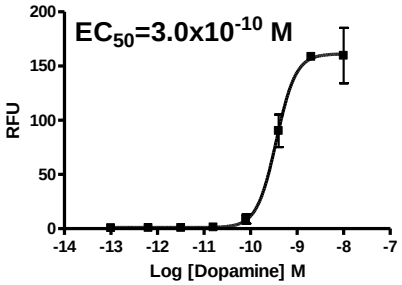


Figure 2

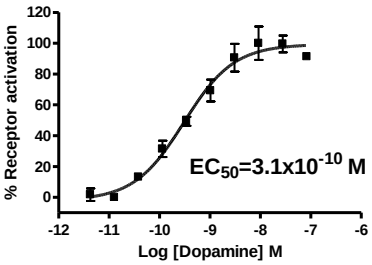
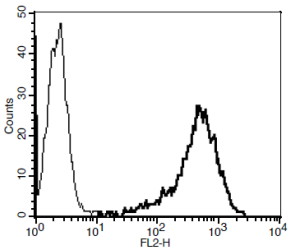


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent increase of intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 3.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

Figure 3



References:

Dearry *et al.* (1990) Molecular cloning and expression of the gene for a human D(1) dopamine receptor. *Nature* 347:72-76.

Huang *et al.* (20008) Significant association of DRD1 with nicotine dependence. *Hum Genet* 123:133-140.

Xu *et al.* (1994) Dopamine D1 receptor mutant mice are deficient in striatal expression of dynorphin and in dopamine-mediated behavioral responses. *Cell* 79:729-742.

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