

MULTISCREEN™ STABLE CELL LINE RAT RECOMBINANT GPR17 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: Cr1526-3

Lot Number: Cr1526-3-061419

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Cellbanker 2

Host cell: 1321N1

Transfection: Expression vector containing full-length mouse GPR17 cDNA (GenBank Accession Number NM_001071777.1) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: In progress

Background: G-protein coupled receptor 17 (GPR17) is closely related to the purinergic and cysteinyl-leukotriene receptor families. It is present on both neurons and a subset of oligodendrocyte precursor cells. Recent studies have shown that GPR17 plays an important role in both sensing and repairing brain damage. Thus, GPR17 represents a potential new target for the treatment of traumatic brain injuries as well as neurodegenerative diseases like Alzheimer's and multiple sclerosis.

Application: Functional assays

Figure 1

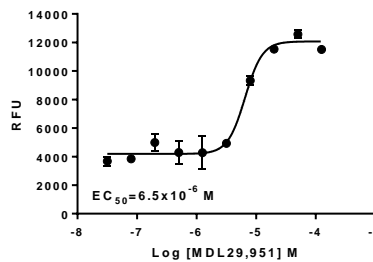


Figure 2

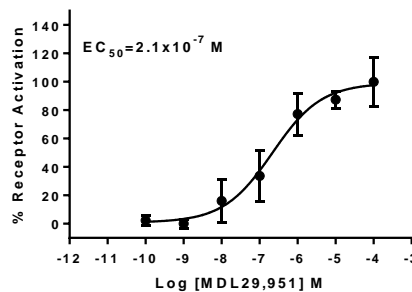


Figure 3

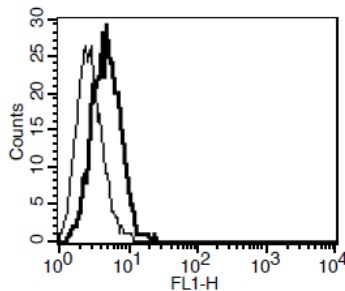


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ 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.

References:

Franke, Heike et al. "Changes of the GPR17 Receptor, a New Target for Neurorepair, in Neurons and Glial Cells in Patients with Traumatic Brain Injury." *Purinergic Signalling* 9.3 (2013): 451–462. *PMC*. Web. 18 Feb. 2015.

Hennen, S et al. "Decoding Signaling and Function of the Orphan G Protein-Coupled Receptor GPR17 with a Small-Molecule Agonist." *Sci Signal* 2013 Oct 22;6(298)

Lecca, Davide et al. "The Recently Identified P2Y-Like Receptor GPR17 Is a Sensor of Brain Damage and a New Target for Brain Repair." Ed. Kenji Hashimoto. *PLoS ONE* 3.10 (2008): e3579. *PMC*. Web. 18 Feb. 2015.

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