MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT GPR99 RECEPTOR

PRODUCT INFORMATION

Catalog Number: C1132-1

Lot Number: C1132-1-101411

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human CB1 cDNA (GenBank Accession Number: NM_080818.2) with FLAG tag sequence at N-terminus.

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: In progress

Data sheet

Background: Human GPR99 also known as GPR80 is a G protein-coupled receptor with 337 amino acids. The mRNA of GPR99 was shown to be expressed predominantly in the kidney. Phylogenetic analysis groups GPR99 into the P2Y subfamily of GPCRs. However, deorphanization studies show that it is a close a relative of GPR91 and have proposed the citric acid cycle intermediate α-Ketoglutarate as a ligand for GPR99 receptor. The receptor couples to Gq upon ligand binding, promoting intracellular calcium increase and inositol phosphate accumulation.

Application: Functional assays

Figure 1

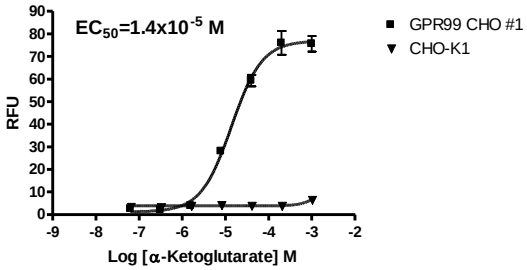

Figure 2

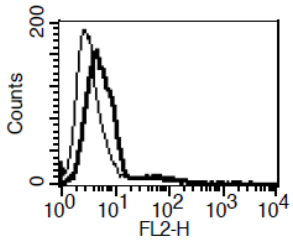

Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

He, W., Miao, F. J., Lin, D. C., Schwandner, R. T., Wang, Z., Gao, J., Chen, J. L., Tian, H. and Ling, L. (2004) Citric acid cycle intermediates as ligands for orphan G-protein-coupled receptors. *Nature*, 429: 188-193.

A.D, Qi, T.K, Harden and R.A. Nicholas. (2004) GPR80/99, proposed to be the P2Y15 receptor activated by adenosine and AMP, is not a P2Y receptor. *Purinergic Signaling,* 1:67-74.

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www.multispaninc.com
sales@multispaninc.com
support@multispaninc.com

Phone: +1 (510) 887-0817
Fax: +1 (510) 887-0863
26219 Eden Landing Road
Hayward, CA 94545-3718
U.S.A.

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