

## MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT GPR99 RECEPTOR

### PRODUCT INFORMATION

**Catalog Number:** C1132-1

**Lot Number:** C1132-1-101411

**Quantity:** 1 vial ( $2 \times 10^6$ ) 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

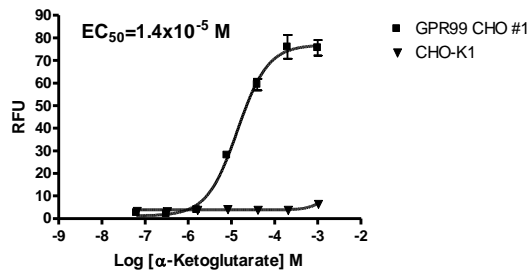
**Stability:** In progress

### Data sheet

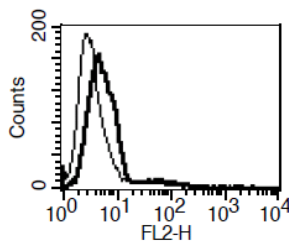
**Background:** Human GPR99 also known as GPR80 is a G protein-coupled receptor with 337 amino acids. The mRNA of GPR99 was shown to be expressed predominantly in the kidney. Phylogenetic analysis groups GPR99 into the P2Y subfamily of GPCRs. However, deorphanization studies show that it is a close relative of GPR91 and have proposed the citric acid cycle intermediate  $\alpha$ -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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