

**MULTISCREEN™ STABLE CELL LINE
RAT RECOMBINANT GPR43 RECEPTOR**

Data Sheet

PRODUCT INFORMATION

Catalog Number: Cr1104

Lot Number: Cr1104-071312

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length rat FFAR2 cDNA (GenBank Accession Number NM_001005877.1) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: In progress

Background: GPR43, or free fatty acid receptor 2 (FFAR2), encodes a deduced 330-amino acid protein with 7 transmembrane domains. GPR43 is expressed by enteroendocrine cells expressing peptide YY and mucosal mast cells in the rat intestine. The receptor binding of short-chain fatty acids potentially provides an intestine molecular link between diet, gastrointestinal bacterial metabolism, and immune and inflammatory responses.

Figure 1

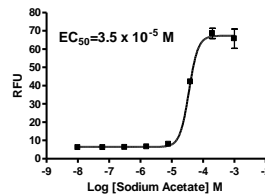


Figure 2

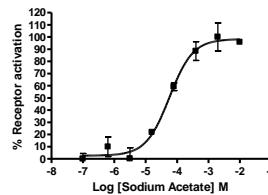


Figure 3

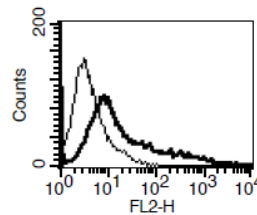


Figure 1. Dose-dependent calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0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

Karaki et al. (2006) Short-chain fatty acid receptor, GPR43, is expressed by enteroendocrine cells and mucosal mast cells in rat intestine. *Cell Tissue Res* 324(3):353-60.

Sawzdargo et al. (1997) Cluster of four novel human G protein-coupled receptor genes occurring in close proximity to CD22 gene on chromosome 19q13.1. *Biochem Biophys Res Commun* 239:543-547.

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