

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

**Data Sheet**

**PRODUCT INFORMATION**

**Catalog Number:** Cr1104

**Lot Number:** Cr1104-071312

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

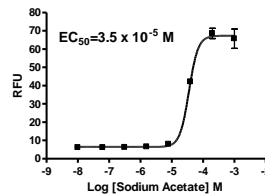
**Recommended Storage:** Liquid nitrogen upon receiving

**Propagation Medium:** DMEM, 10% FBS, 1  $\mu$ g/mL puromycin

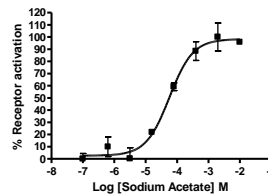
**Stability:** In progress

**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.

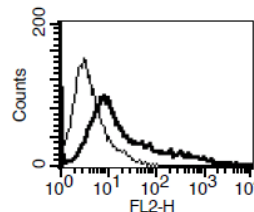
**Figure 1**



**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.

**FOR RESEARCH USE ONLY.**

Multispan Inc. All rights reserved. No part of this document may be reproduced in any form without prior permission in writing.