

MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT GPR41 RECEPTOR

PRODUCT INFORMATION

Catalog Number: CG1102

Lot Number: CG1102-032906

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T Gαq5

Transfection: Expression vector containing full-length human FFAR3 cDNA (GenBank Accession Number NM_005304) with flag tag sequence at N-terminus.

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS, 1 µg/mL puromycin, 150 µg/mL hygromycin.

Stability: Stable after two months of continuous growth

Data sheet

Background: GPR41 or free fatty acid receptor 3 (FFAR3) shares 98% amino acid identity with GPR42 and closely related to GPR43. While GPR43 is expressed in immune cells, GPR41 appears to be expressed in blood vessel endothelial cells, particularly in adipose tissue, with significant expression also in immune cells and endothelial cells of other tissues. Propionate and short chain fatty acids have been identified as the cognate physiological ligands for GPR41.

Application: Functional assays

Figure 1

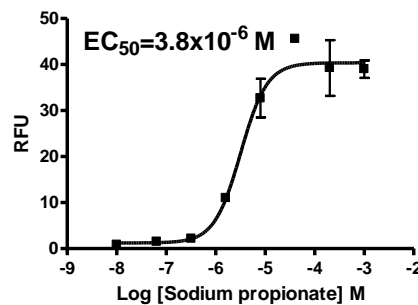


Figure 2

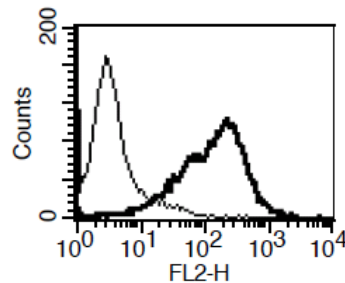


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

Figure 2. 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:

Sawzdargo *et al.* (1997) A 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.

Brown *et al.* (2003) The orphan G protein-coupled receptors GPR41 and GPR43 are activated by propionate and other short chain carboxylic acids. *J Biol Chem* 278:11312-11319.

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