MULTISCREEN™ DIVISION ARRESTED CELL LINE HUMAN RECOMBINANT GPR40 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: DC1101

Lot Number: 111210

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length human GPR40 cDNA (GenBank Accession Number NM_005303) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: Stable for 1-2 days after thawing

Background: G-protein coupled receptor 40 (GPR40 or FFA1) is specifically expressed in brain and pancreas. In pancreas, abundant GPR40 is localized to insulin-producing beta cells. Long-chain FFAs amplify glucose-stimulated insulin secretion from pancreatic beta cells by activating GPR40, indicating that GPR40 agonists and/or antagonists have potential for the development of new anti-diabetic drugs. GPR40 overexpression in breast cancer cells amplified oleate-induced proliferation, whereas silencing the GPR40 gene decreased it. These results suggest that GPR40 is implicated in the control of breast cancer cell growth by fatty acids and that GPR40 may provide a link between fat and cancer.

Application: Ca++ assays

Figure 1.

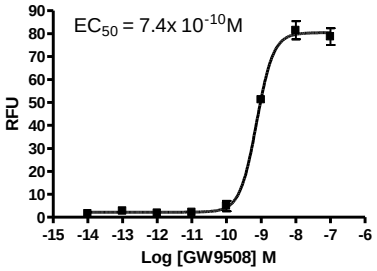

Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

References:

Briscoe CP *et al*. (2003) The orphan G protein-coupled receptor GPR40 is activated by medium and long chain fatty acids. *J Biol Chem* 278:11303-11311.

Steneberg P *et al*. (2005) The FFA receptor GPR40 links hyperinsulinemia, hepatic steatosis, and impaired glucose homeostasis in mouse. *Cell Metab* 1:245-258.

Hardy S *et al*. (2005) Oleate promotes the proliferation of breast cancer cells via the G protein-coupled receptor GPR40. *J Biol Chem* 280:13285-13291.

FOR RESEARCH USE ONLY.

©2016 by Multispan, Inc. 26219 Eden Landing Rd, Hayward, CA 94545 Tel: 510-887-0817 Email: info@multispaninc.com