MULTISCREEN™ DIVISION-ARRESTED CELL LINE HUMAN RECOMBINANT LPA1 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: DC1048-6

Lot Number: DC1048-6-080415

Quantity: 1 vial (4 x 10^6) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: RH7777

Transfection: Expression vector containing full-length human LPA1 cDNA (GenBank Accession Number:NM_001401) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS

Stability: Stable for 1 – 2 days after thawing

Background: The lipid growth factor lysophosphatidic acid (LPA) is responsible for cell signaling in diverse pathways including survival, proliferation, motility, and differentiation. LPA acts upon target cells by activating its cognate receptors, which belong to the G protein-coupled endothelial differentiation gene (EDG) family. Four mammalian cell surface LPA receptors have been identified so far: EDG-2 (LPA1), EDG-4 (LPA2), EDG-7 (LPA3) and LPA4 (GPR23/P2Y9). EDG-2 is the most widely expressed receptor, with high-level mRNAs in the colons, small intestine, placenta, brain and heart. Heterologous expression studies have shown that EDG-2 couples to both Gi/o and Gq to mediate PLC activation, inhibition of cAMP accumulation and activation of the MAPK pathway. EDG-2 deficient mice show phenotypic changes observed in psychiatric disease as well as impaired suckling behavior attributable to defective olfaction.

Application: Functional assays

Figure 1

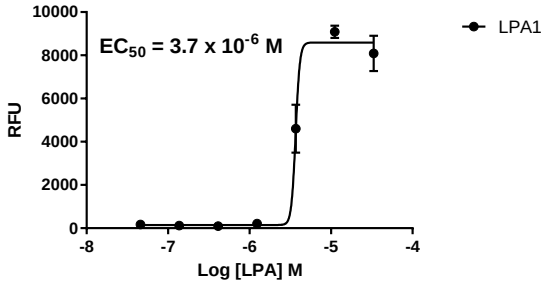

Figure 1. Dose-dependent calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

References:

Mills and Moolenaar (2003) The emerging role of lysophosphatidic acid in cancer. *Nat Rev Cancer* 3:582-591.

Yang *et al.* (2002) In vivo roles of lysophospholipid receptors revealed by gene targeting studies in mice. *Biochim Biophys Acta* 1582:197-203.

FOR RESEARCH USE ONLY.

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