

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT LPA4 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1087-1b

Lot Number: C1087-1b-101617

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

Freeze Medium: Cellbanker 2
(Amsbio 11891)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human LPA4 cDNA (GenBank accession number NM_005296) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM/F12, 10% FBS, 10 μ g/mL puromycin

Stability: In progress

Background: Human LPA4 (also known as P2Y9 and GPR23) receptors are G protein-coupled receptors. The cDNA encodes a 370-amino-acid polypeptide. The LPA4 receptors are predominately expressed in ovary, and also present in kidney, skeletal muscle and other brain and peripheral tissues. In rat neuroblastoma cells overexpressing the receptors, LPA promotes neurite retraction and cell rounding indicating LPA4 may mediate morphological changes in neuronal cells. Studies in LPA4 knockout mice revealed a role of LPA4 in the negative control of cell migration.

Application: Functional assays

Figure 1

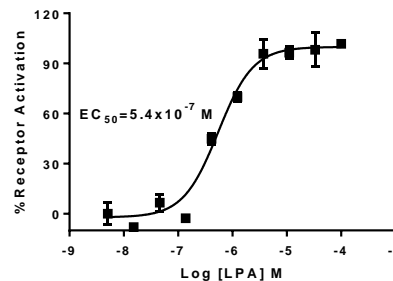


Figure 2

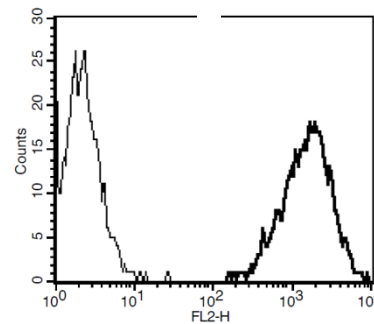


Figure 1. Dose-dependent increase of intracellular cAMP accumulation upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Yanagida *et al* (2007) LPA4/p2y9/GPR23 mediates rho-dependent morphological changes in a rat neuronal cell line. *J Biol Chem* 282:5814-5824.

Lee *et al* (2008) Role of LPA4/p2y9/GPR23 in negative regulation of cell motility. *Mol Biol Cell* 19:5435-5445.

Noguchi *et al.* (2003) Identification of p2y9/GPR23 as a novel G protein-coupled receptor for lysophosphatidic acid, structurally distant from the EDG family. *J Biol Chem* 278:25600-25606.

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