MULTISCREEN™ DIVISION-ARRESTED CELL LINE HUMAN RECOMBINANT GPR109A RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: DC1370-1

Lot Number: C1370-1-032916

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human GPR109A cDNA (GenBank accession number NM_177551.3) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM/F12, 10% FBS

Stability: Stable for 1-2 days after thawing

Background: GPR109A (HM74A, PUMA-G or niacin receptor 1) is a high-affinity receptor for nicotinic acid (niacin), and is highly expressed in adipocytes, lung, macrophages, dendritic cells, microglia and neutrophils. GPR109A in adipocytes is likely to be involved in niacin-mediated inhibition of lipolysis, reduction of serum free fatty acids and triglycerides as well as elevation of high density lipoproteins. GPR109A also serves important functions in the immune system. GPR109A on Langerhans cells in the skin also mediates niacin-induced cutaneous flushing, one of the major side effects of niacin, via the massive production of prostaglandins PGD2 and PGE2 in a ligand-dependent fashion.

Application: Functional assays

Figure 1

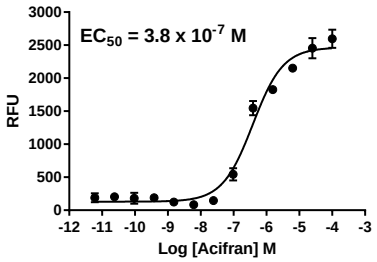

Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

References:

Karpe and Frayn (2004) The nicotinic acid receptor-a new mechanism for an old drug. *Lancet* 363:1892-1894.

Tunaru *et al.* (2003) PUMA-G and HM74 are receptors for nicotinic acid and mediate its anti-lipolytic effect. *Nature Med* 9:352-355.

Wise *et al.* (2003) Molecular identification of high and low affinity receptors for nicotinic acid. *J Biol Chem* 278:9869-9874.

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