

**MULTISCREEN™ STABLE CELL LINE**  
**HUMAN RECOMBINANT GPR109B RECEPTOR**

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** C1059-1

**Lot Number:** C1059-1-040709

**Quantity:** 1 vial ( $2 \times 10^6$ ) frozen cells

**Freeze Medium:** Sigma Freezing Medium (C-6164)

**Host cell:** CHO-K1

**Transfection:** Expression vector containing full-length human GPR109B cDNA (GenBank Accession Number NM\_006018.1) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

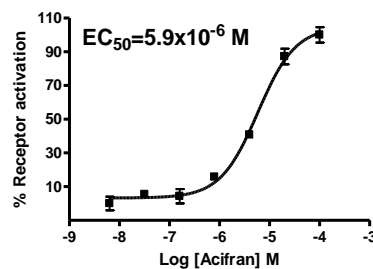
**Propagation Medium:** DMEM/F12, 10% FBS, 10  $\mu$ g/mL puromycin

**Stability:** Stable after minimum two months of continuous growth

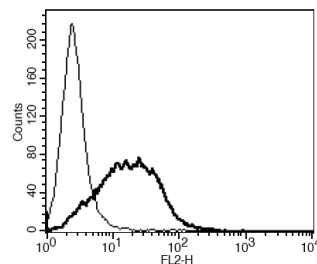
**Background:** GPR109B (or HM74) is a 387-amino acid, 7-transmembrane protein responsible for the directed migration of specific cell types. GPR109B has highest expression in spleen, lymphocytes and adipose tissue, and lower expression in the heart, placenta, prostate and bone marrow. Nicotinic acid has been used as a lipid-lowering agent possibly by acting through GPR109A and GPR109B in adipose tissues. This supports the suggestion that signaling through this nicotinic acid receptors may be a mechanism for the treatment of hyperlipidemia and insulin-resistant states.

**Application:** Functional assays

**Figure 1**



**Figure 2**



**Figure 1.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level 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:**

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.

Nomura *et al.* (1993) Molecular cloning of cDNAs encoding a LD78 receptor and putative leukocyte chemotactic peptide receptors. *Int Immun* 5:1239-1249.

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