MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT GPBA MUTANT 3 RECEPTOR

Data sheet

PRODUCT INFORMATION

Mutant Clone Number: Clone #35

Lot Number: 120911

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human GPBAR1 cDNA with V88L mutation (GenBank Accession Number NM_170699) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: In progress

Background: GPBA is a G-protein coupled receptor, also known as TGR5 or GPR131. Stimulation of the receptor with bile acids or other ligands induces the production of intracellular cAMP, activation of a MAP kinase signaling pathway and internalization of the receptor. Quantitative analyses for TGR5 mRNA have shown that it is abundantly expressed in monocytes/macrophages. The receptor is an attractive therapeutic target for the prevention and treatment of obesity and is highly associated with Type II diabetes and metabolic syndrome. GPBA has been implicated in inflammatory diseases, regulation of homeostasis by bile acids, as well as cardiovascular, neurological, and hepatic diseases.

Application: Functional assays

Figure 1

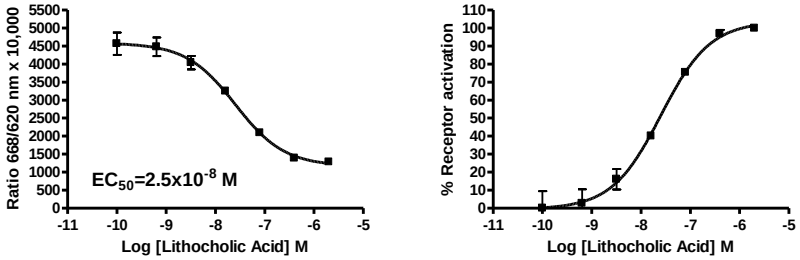

Figure 2

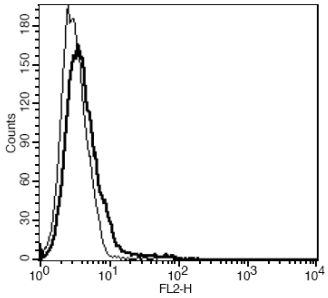

Figure 1. Dose-dependent increase of intracellular cAMP upon treatment with ligand, measured with cAMP HiRange kit (Cisbio 62AM6PEC). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Maruyama *et al*. (2002) Identification of membrane-type receptor for bile acids (M-BAR). *Biochem Biophys Res Commun* 298:714-719.

Katsuma *et al*. (2005) Bile acids promote glucagon-like peptide-1secretion through TGR5 in a murine enteroendocrine cell line STC-1. *Biochem Biophys Res Commun* 329:386-390.

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