# MULTISCREEN™ STABLE CELL LINE
# HUMAN RECOMBINANT GPR61 RECEPTOR

## Data sheet

**PRODUCT INFORMATION**

**Catalog Number**: C1117a

**Lot Number**: C1117a-012725

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

**Freeze Medium**: Cellbanker 2

**Host cell**: HEK293T

**Transfection**: Full-length human GPR61 cDNA (GenBank Accession Number NM_031936.3) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

**Propagation Medium:** DMEM, 10% FBS, 1 μg/mL puromycin

**Stability:** Stable for a minimum of 2 months in continuous culture

**Background:** G-protein-coupled receptor 61 (GPR61) is a receptor for a tertiary sulfonamide. It is expressed in the hypothalamus and brainstem. While not fully understood, studies suggest that GPR61 could be linked to conditions such as type 2 diabetes. Because of this, GPR61 is a possible target for appetite modulation. In concert with several other GPCRs, GPR61 is also responsible for plasmalogen mediation, which is necessary for neuronal cell survival. Additionally, GPR61 co-colonizes with Gonadotropin-releasing hormone receptors on gonadotrophs, which play a vital role in reproductive function.

**Application:** Functional assays

**Figure 1**

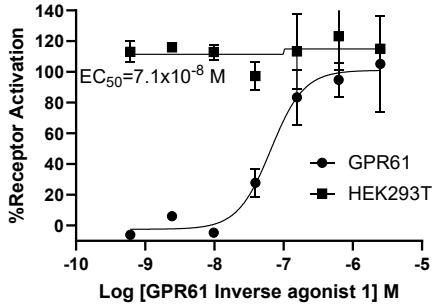


**Figure 2**

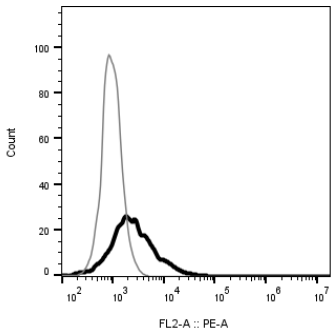


**Figure 1.** Dose-dependent increase of intracellular cAMP accumulation upon treatment with ligand, measured with MULTISCREEN™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin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

**References:**


Lees, *et al.* (2023) An inverse agonist of orphan receptor GPR61 acts by a G protein competitive allosteric mechanism. Nat. Commun 14:5938.

Hossian, *et al.* (2016) Neuronal Orphan G-Protein Coupled Receptor Proteins Mediate Plasmalogens-Induced Activation of ERK and Akt Signaling. PLOS ONE DOI:10.1371/journal.pone.0150846.

Kadokawa, *et al.* (2022) Chemosynthetic ethanolamine plasmalogen stimulates gonadotropin secretion from bovine gonadotrophs by acting as a potential GPR61 agonist. Anim. Reprod. Sci. 241:106992.

Kozielewicz, *et al.* (2019) Overexpression of Orphan Receptor GPR61 Increases cAMP Levels upon Forskolin Stimulation in HEK293 Cells: in vitro and in silico Validation of 5-(Nonyloxy) Tryptamine as a Low-Affinity Inverse Agonist. Pharmacology 104:377–382.


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