MULTISPAN
Assay Experts in GPCRs and Beyond

MULTISCREEN^{TM} STABLE CELL LINE
HUMAN RECOMBINANT GLUCAGON RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: CA1266-1

Lot Number: CA1266-1-043019

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 GCGR cDNA (GenBank Accession Number NM_000160) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM/F12, 10% FBS, 10 μg/mL puromycin, 800 μg/mL G418

Stability: In progress

Background: The human glucagon receptor GCGR mediates the action of the pancreatic peptide hormone glucagon. Glucagon regulates blood glucose via control of hepatic glycogenolysis and gluconeogenesis and via regulation of insulin release from the β cell. Type 2 diabetes is characterized by inappropriate regulation of hepatic glucose production, which is due to an imbalance in the bihormonal relationship between plasma levels of glucagon and insulin. The glucose-lowering effects of glucagon peptide antagonists and anti-glucagon antibodies have demonstrated the potential of glucagon receptor antagonism as a treatment for type 2 diabetes. Glucagon also elicits various effects in extrahepatic tissues, including adipose tissue, kidney, heart, pancreatic β cells, gastrointestinal tract, thyroid and central nervous system.

Application: Functional assays

Figure 1

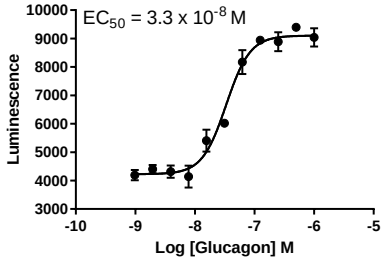

Figure 2

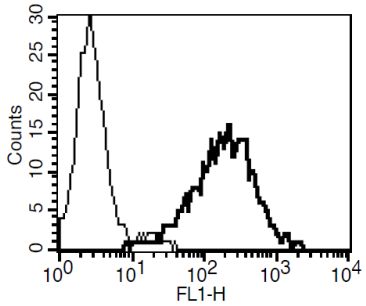

Figure 1. Dose-dependent stimulation from arrestin recruitment upon treatment with ligand, monitored on Flexstation III. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; gray line: receptor-expressing cells.

References:

Lok *et al*. (1994) The human glucagon receptor encoding gene: structure, cDNA sequence and chromosomal localization. *Gene* 140:203-209.

Sloop *et al*. (2005) Glucagon as a target for the treatment of Type 2 diabetes. *Expert Opin Ther Targets* 9:593-600.

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