MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT CASR RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1233

Lot Number: C1233-030910

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length human CASR cDNA (GenBank accession number NM_000388) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: Stable in culture for minimum of two months

Background: CASR is a calcium-sensing receptor and plays an important role in regulating PTH secretion. It is expressed in many different tissues, such as parathyroid cells, pituitary cells, kidney, fibroblasts, keratinocytes and human colon epithelial cells. CASR is a potential therapeutic target for the treatment of many diseases, including hyperparathyroidism and osteoporosis. Mutations in the CASR gene can result in gain or loss of receptor function. Familial Hypocalciuric Hypercalcemia (FHH) and Neonatal Severe Primary Hyperparathyroidism (NSHPT) have been associated with loss of CASR function, while Autosomal Dominant Hypocalcemia (ADH) and Bartter syndrome type V have been associated with gain of CASR function.

Application: Functional assays

Figure 1

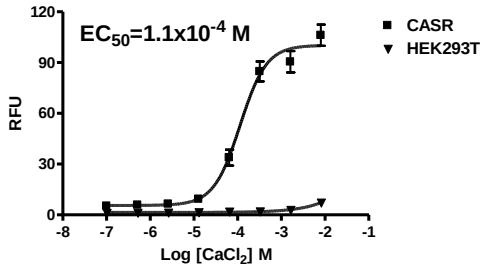


Figure 2

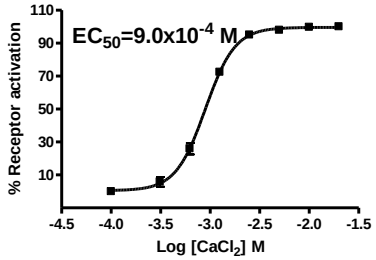
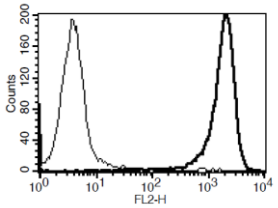


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent accumulation of intracellular IP1 upon treatment with ligand, measured with IP-one Tb kit. **Figure 3.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

Figure 3



References:

D'Souza-Li (2006) The calcium-sensing receptor and related diseases. *Arq Bras Endocrinol Metabol* 50:628-639.

Romoli *et al.* (1999) Expression of calcium-sensing receptor and characterization of intracellular signaling in human pituitary adenomas. *J Clin Endocrinol Metab* 84:2848-2853.

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