

## MULTISCREEN™ STABLE CELL LINE RAT RECOMBINANT CASR RECEPTOR

### Data sheet

#### PRODUCT INFORMATION

**Catalog Number:** Hr1233

**Lot Number:** Hr1233-030512

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

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

**Host cell:** HEK293T

**Transfection:** Expression vector containing full-length rat Casr cDNA (GenBank accession number NM\_016996.1) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

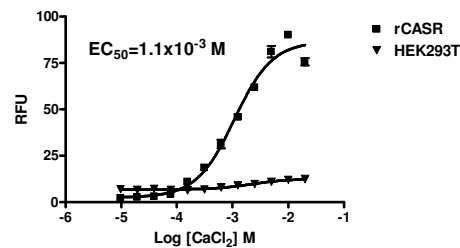
**Propagation Medium:** DMEM, 10% FBS, 1  $\mu$ g/mL puromycin

**Stability:** In progress

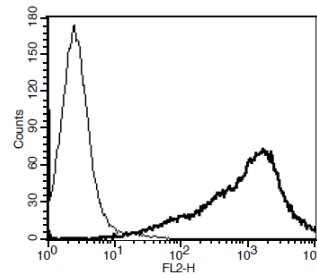
**Background:** CASR is a calcium-sensing receptor and plays an important role in regulating PTH secretion. It is expressed in many different tissues, such as parathyroid cells, pituitary cells, kidney, fibroblasts, keratinocytes and human colon epithelial cells. CASR is a potential therapeutic target 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, monitored with FlexStation. **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:

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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www.multispaninc.com  
sales@multispaninc.com  
support@multispaninc.com

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Phone: +1 (510) 887-0817  
Fax: +1 (510) 887-0863  
26219 Eden Landing Road  
Hayward, CA 94545-3718  
U.S.A.