

**MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT H2 RECEPTOR**

Data sheet

PRODUCT INFORMATION

Catalog Number: C1028

Lot Number: C1028-032712

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length human HRH2 cDNA (GenBank accession number NM_022304.2) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: Testing in progress

Background: Histamine is one of the most studied biomolecules in medicine and is most notably known for its effects on smooth muscle contraction, vascular permeability and regulation of stomach acid. H₂ receptors are positively coupled to adenylate cyclase via G_s. It increases the intracellular Ca²⁺ concentrations and release Ca²⁺ from intracellular stores by coupling to G_q. H₂ receptors have been found to be located in a variety of tissues, including the brain, gastric cells, and cardiac tissue. Histamine H₂ receptors have a potent effect on gastric acid secretion, and the inhibition of this secretory process by H₂ receptor antagonists has provided evidence for an important physiological role of histamine in the regulation of gastric secretion. It also regulates gastrointestinal motility and intestinal secretion and is thought to be involved in regulating cell growth and differentiation. It has also been demonstrated to control the relaxation of smooth muscles.

Application: Functional assays

Figure 1

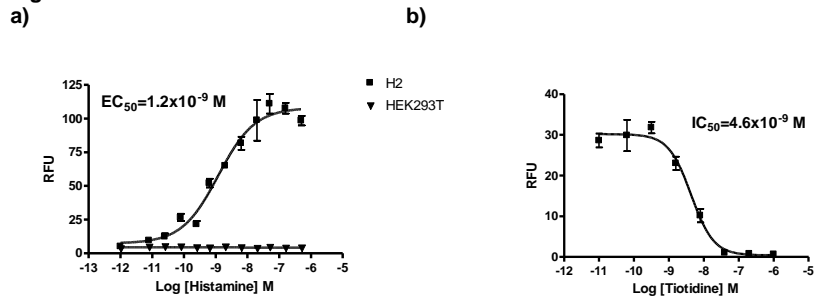


Figure 2

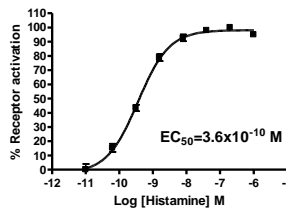


Figure 3

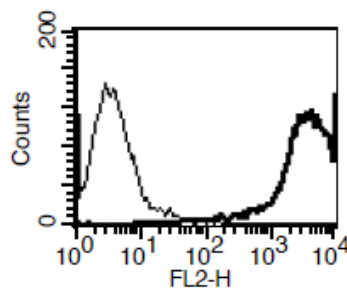


Figure 1. a) Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **b)** Dose-dependent inhibition of calcium flux upon treatment with antagonist, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **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.

References:

- Hill, S.J. *et al.* (1997) Classification of Histamine Receptors. *Pharmacological Reviews* vol 49 no. 3 253-278
- Martínez-Mir, M. I *et al.* (1992) Effect of histamine and histamine analogues on human isolated myometrial strips. *Br J Pharmacol*, 107: 528-531.

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