

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

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** C1028

**Lot Number:** C1028-032712

**Quantity:** 1 vial (2 x 10<sup>6</sup>) 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

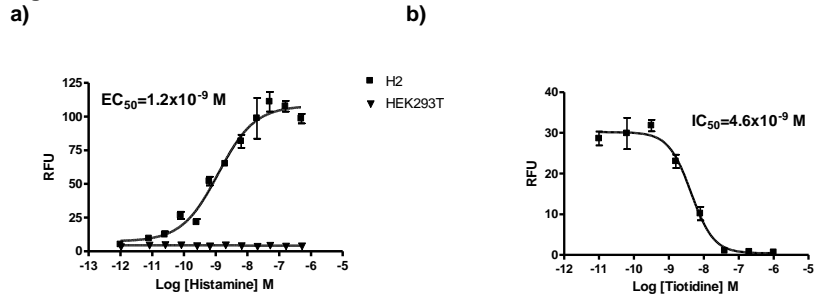
**Propagation Medium:** DMEM, 10% FBS, 1 µg/mL puromycin

**Stability:** Testing in progress

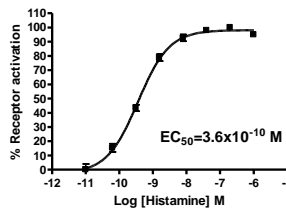
**Background:** Histamine is one of the most studied biomolecules in medicine and is most notably known for its effects on smooth muscle contraction, vascular permeability and regulation of stomach acid. H<sub>2</sub> receptors are positively coupled to adenylate cyclase via G<sub>s</sub>. It increases the intracellular Ca<sup>2+</sup> concentrations and release Ca<sup>2+</sup> from intracellular stores by coupling to G<sub>q</sub>. H<sub>2</sub> receptors have been found to be located in a variety of tissues, including the brain, gastric cells, and cardiac tissue. Histamine H<sub>2</sub> receptors have a potent effect on gastric acid secretion, and the inhibition of this secretory process by H<sub>2</sub> 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

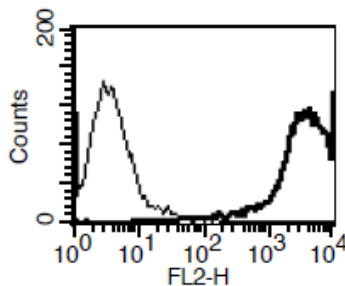
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 1. a)** Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **b)** Dose-dependent inhibition of calcium flux upon treatment with antagonist, monitored with FlexStation. **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with cAMP HiRange kit (Cisbio 62AM6PEC). **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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