

**MULTISCREEN™ STABLE CELL LINE  
MOUSE RECOMBINANT H3 RECEPTOR**

**Data sheet**

**PRODUCT INFORMATION**

**Catalog Number:** Cm1029

**Lot Number:** Cm1029-080712

**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 mouse Hr<sub>3</sub> cDNA (GenBank accession number NM\_133849) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

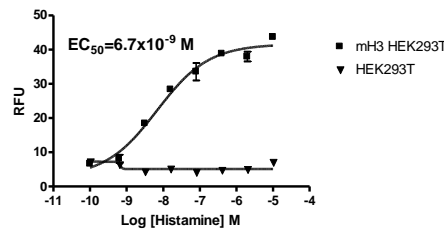
**Propagation Medium:** DMEM, 10% FBS, 1 µg/mL puromycin

**Stability:** In progress

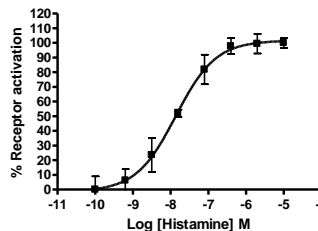
**Background:** Histamine is one of the most studied biomolecules in medicine and is most notably known for its effects on smooth muscle contraction, vascular permeability and regulation of stomach acid. The histamine receptor H<sub>3</sub> was initially recognized as an autoreceptor controlling histamine synthesis and release in the brain. The inhibition mediated by H<sub>3</sub> autoreceptors constitutes a major regulatory mechanism of histaminergic neurons *in vivo*. Functional and localization studies have shown that H<sub>3</sub> receptors are also present on perikarya, dendrites and projections of many other neurones in brain and peripheral tissues. The histamine receptor H<sub>3</sub> has been found to prevent oxidative stress and alleviate schizophrenic symptoms, particularly the negative symptoms and cognitive deficits.

**Application:** Functional assays

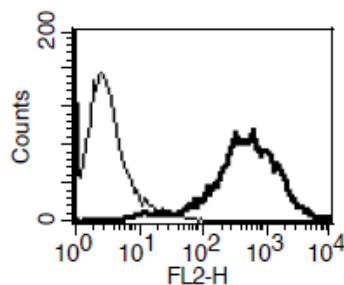
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 1.** Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). Cells were transiently transfected with Gαq15. **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:**

Mahmood et al. (2012) Reversal of oxidative stress by histamine H<sub>3</sub> receptor-ligands in experimental models of schizophrenia. *Arzneimittelforschung* 62(05):222-229.

Rouleau, A. et al. (2004) Cloning and expression of the mouse histamine H<sub>3</sub> receptor: evidence for multiple isoforms. *J Neurochem* 90: 1331-1338.

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