

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

Data sheet

PRODUCT INFORMATION

Catalog Number: Cm1029

Lot Number: Cm1029-080712

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length mouse Hr₃ 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 H₃ was initially recognized as an autoreceptor controlling histamine synthesis and release in the brain. The inhibition mediated by H₃ autoreceptors constitutes a major regulatory mechanism of histaminergic neurons *in vivo*. Functional and localization studies have shown that H₃ receptors are also present on perikarya, dendrites and projections of many other neurones in brain and peripheral tissues. The histamine receptor H₃ has been found to prevent oxidative stress and alleviate schizophrenic symptoms, particularly the negative symptoms and cognitive deficits.

Application: Functional assays

Figure 1

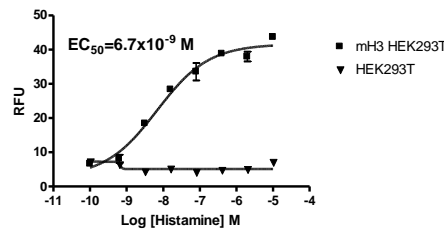


Figure 2

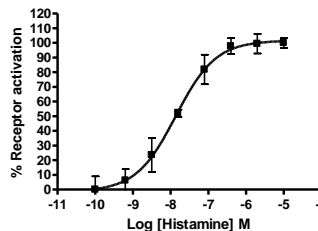


Figure 3

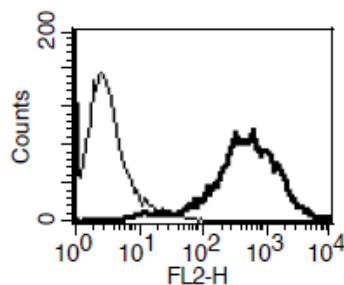


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). Cells were transiently transfected with Gαq15. **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment 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 H₃ receptor-ligands in experimental models of schizophrenia. *Arzneimittelforschung* 62(05):222-229.

Rouleau, A. et al. (2004) Cloning and expression of the mouse histamine H₃ receptor: evidence for multiple isoforms. *J Neurochem* 90: 1331-1338.

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