MULTISPAN
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MULTISCREEN^{TM} STABLE CELL LINE HUMAN RECOMBINANT H3 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1029

Lot Number: C1029-101512

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length Human H3 cDNA (GenBank accession number NM_007232) 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 neurons 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

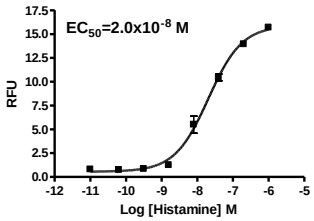

Figure 2

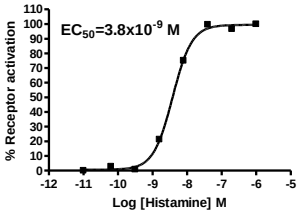

Figure 3

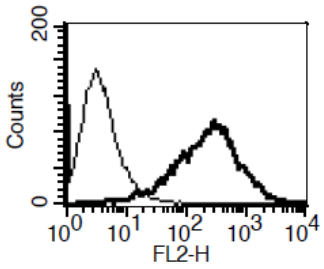

Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. Cells were transiently transfected with Gαqi5. **Figure 2**. Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with cAMP HiRange kit (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:

Mahmood et al. (2012) Reversal of oxidative stress by histamine H_3 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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