

MULTISCREEN™ STABLE CELL LINE
MOUSE RECOMBINANT ADENOSINE A_{2A} RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: Cm1428-1

Lot Number: Cm1428-1-101916

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Full-length Mouse ADORA2A cDNA (GenBank Accession Number NM_009630.3) with FLAG-tag sequence at the N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DME/F12, 10% FBS, 10 µg/mL puromycin

Stability: In progress

Background: Adenosine regulates the function of the innate and adaptive immune systems through targeting virtually every cell type that is involved in orchestrating an immune/inflammatory response. Of the four adenosine receptors (A₁, A_{2A}, A_{2B}, A₃), A_{2A} receptor is the primary anti-inflammatory effectors of extracellular adenosine. A_{2A} receptor predominant expresses in monocytes/macrophages, dendritic cells, mast cells, neutrophils, endothelial cells, eosinophils, epithelial cells, as well as lymphocytes, NK cells, and NKT cells. Its activation inhibits early and late events occurring during an immune response. A_{2A} receptor also participates in tissue remodeling and reparation. A_{2A} receptor has been shown to impact the course of a wide spectrum of ischemic, autoimmune, infectious, and allergic diseases, and has regulatory roles in immune/inflammatory diseases of various organs, including heart, lung, gut, liver, kidney, joints, and brain. Recently, A_{2A} receptor has become a particularly attractive target to manage psychiatric disorders.

Application: Functional assays

Figure 1

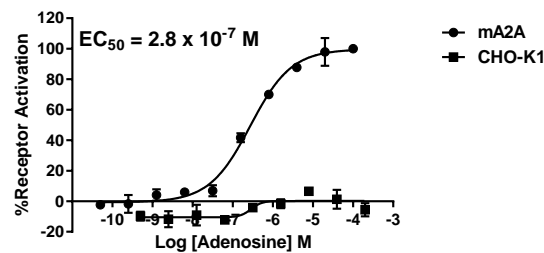


Figure 2

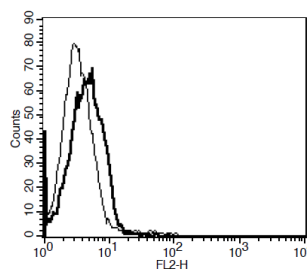


Figure 1. Dose-dependent stimulation of intracellular cAMP level upon treatment with ligand, monitored on Flexstation. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Haskó and Pacher (2008) A_{2A} receptors in inflammation and injury: lessons learned from transgenic animals. *J Leukoc Biol* 83:447-455.

Cunha *et al.* (2008) Potential therapeutic interest of adenosine A_{2A} receptors in psychiatric disorders. *Curr Pharm Des* 14:1512-1524.

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