

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

Data sheet

PRODUCT INFORMATION

Catalog Number: C1428

Lot Number: C1428-061716

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

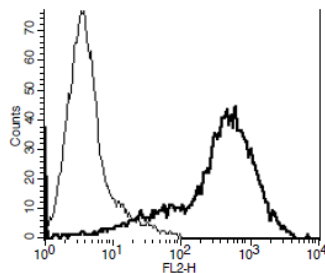
Transfection: Full-length Human ADORA2A cDNA (GenBank Accession Number NM_000675.4) with FLAG-tag sequence at the N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: Stability in progress

Figure 3



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 repairment. 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

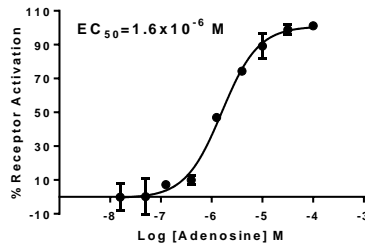


Figure 2

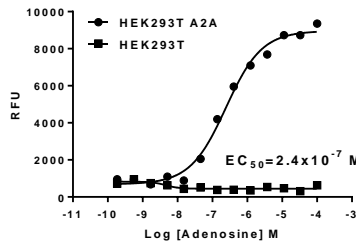


Figure 1. Dose-dependent stimulation of intracellular cAMP level upon treatment with ligand. **Figure 2.** Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FLIPR. **Figure 3.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

- 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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