

**MULTISCREEN™ MEMBRANE PREPARATION
HUMAN RECOMBINANT ADENOSINE A_{2A} RECEPTOR**

Data sheet

PRODUCT INFORMATION

Catalog Number: MC1428-1

Lot Number: MC1428-1-022916

Quantity: 9.3mg/ml, 5mg

Packaging Buffer: 20 mM Gly-Gly, 1 mM MgCl₂, 25 mM Sucrose (pH 7.2)

Host cell: CHO-K1

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

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

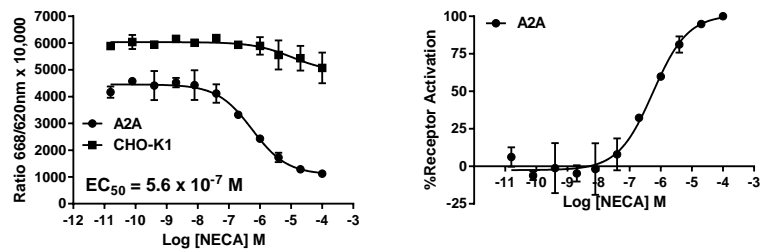


Figure 2

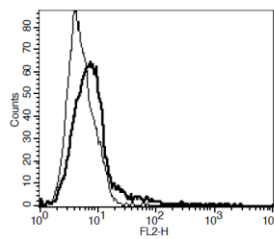


Figure 1. Dose-dependent stimulation of intracellular cAMP level upon treatment with ligand, measured with cAMP HiRange kit (Cisbio 62AM6PEC). **Figure 2.** Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. Cells were transiently transfected with Gαq5 and Gα16.

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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