

MULTISCREENTM DIVISION-ARRESTED CELL LINE HUMAN RECOMBINANT @1a ADRENERGIC RECEPTOR

PRODUCT INFORMATION

Catalog Number: DC1431-1a

Lot Number: DC1431-1a-020924

Quantity: 1 vial (4 x 106) frozen cells

Freeze Medium: Cellbanker2

Host cell: CHO-K1

Transfection: Expression vector containing full-length human ADRA1A cDNA (GenBank accession number NM_000680.2) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM/F12, 10% FBS

Background: Norepinephrine is implicated in a wide range of physiological processes through activation of nine different G-protein-coupled receptors ($\alpha 1a$, $\alpha 1b$, $\alpha 1d$, $\alpha 2a$, $\alpha 2b$, $\alpha 2c$, $\beta 1$, $\beta 2$, $\beta 3$). The $\alpha 1a$ -adrenoceptor is highly expressed in human vasculature. As with the other $\alpha 1$ -ARs, $\alpha 1a$ is used by the sympathetic nervous system to regulate systemic arterial blood pressure and blood flow. The $\alpha 1$ -ARs also play a major role in cardiac and vascular smooth muscle cells. The knockout mouse models lacking the $\alpha 1a$ -adrenergic receptors have highlighted the potential implications of this receptor subtype in variety of functions including the regulation of renal artery contractions, smooth muscle contractions, and vasconstriction.

Application: Functional assays

Figure 1



Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with MULTISCREEN[™] Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

References:

Chalothorn et al. (2002) Differences in the cellular localization and agonist-mediated internalization properties of the α 1-adrenoreceptor subtypes. Mol Pharmacol 61(5):1008-1016.

Weinberg *et al.* (1994) Cloning, expression and characterization of human alpha adrenergic receptors alpha 1a, alpha 1b and alpha 1c. *Biochem. Biophys. Res. Commun.* 201:1296-1304.

Hague et al. (2003) a1-Adrenergic receptor subtypes: non-identical triplets with different dancing partners? Life Sciences 74:411-418.

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Data sheet