

MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT α 1a ADRENERGIC RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1431-1a

Lot Number: C1432-1a-042814

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

Freeze Medium: Sigma Freezing Medium (C-6164)

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, 10 μ g/mL puromycin

Stability: Stable in culture for minimum of two months

Background: Norepinephrine is implicated in a wide range of physiological processes through activation of nine different G-protein-coupled receptors (α 1a, α 1b, α 1d, α 2a, α 2b, α 2c, β 1, β 2, β 3). The α 1a-adrenoceptor is highly expressed in human vasculature. As with the other α 1-ARs, α 1a is used by the sympathetic nervous system to regulate systemic arterial blood pressure and blood flow. The α 1-ARs also play a major role in cardiac and vascular smooth muscle cells. The knockout mouse models lacking the α 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 vasoconstriction.

Application: Functional assays

Figure 1

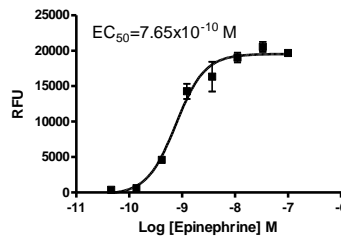


Figure 2

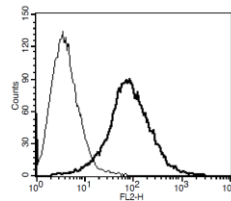


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

- 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) α 1-Adrenergic receptor subtypes: non-identical triplets with different dancing partners? *Life Sciences* 74:411-418.

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