

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

Data sheet

PRODUCT INFORMATION

Catalog Number: C1432-1

Lot Number: C1432-1-012909

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 ADRA1B cDNA (GenBank accession number NM_000679) 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 1B-adrenoceptor expresses in brain, heart, kidney, and artery of various mammalian species and mediate diverse effects on cardiac functions, muscle contractions and cell growth. The knockout mouse models lacking the α 1b-adrenergic receptor has highlighted the potential implication of this receptor subtype in variety of functions including the regulation of blood pressure, glucose homeostasis, reproduction, and the rewarding response to drugs of abuse. In vitro and in vivo studies also indicate that the α 1b gene can function as an oncogene inducing neoplastic transformation.

Application: Functional assays

Figure 1

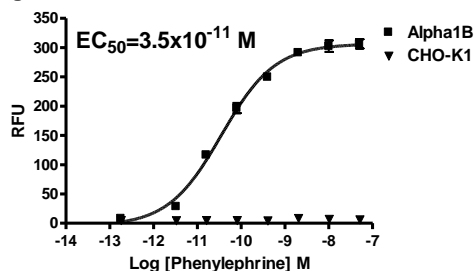


Figure 2

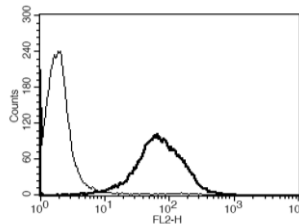


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

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:

Ramarao *et al.* (1992) Genomic organization and expression of the human alpha 1B-adrenergic receptor. *J Biol Chem* 267:21936-21945.

Allen *et al.* (1992) G protein-coupled receptor genes as protooncogenes: constitutively activating mutation of the alpha 1B-adrenergic receptor enhances mitogenesis and tumorigenicity. *Proc Natl Acad Sci USA* 88:11354-11358.

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.

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