

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT $\alpha 2B$ RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1435-1

Lot Number: C1435-1-040109

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human ADRA2B cDNA (GenBank Accession Number NM_000682.5) 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: Adrenergic $\alpha 2b$ receptor belongs to the group of nine adrenoceptors that mediate the biological actions of the endogenous catecholamines adrenaline and noradrenaline. While $\alpha 2a$ receptor exerts a tonic sympathoinhibitory function, the $\alpha 2b$ is responsible for the central hypertensive sympathoexcitatory response. Development of agents capable of selectively activating the $\alpha 2a$ or blocking the $\alpha 2b$ may further improve our capability to treat hypertension, ischemic heart disease and heart failure. The $\alpha 2b$ receptor also contributes to the peripheral regulation of vascular tone.

Application: Functional assays

Figure 1

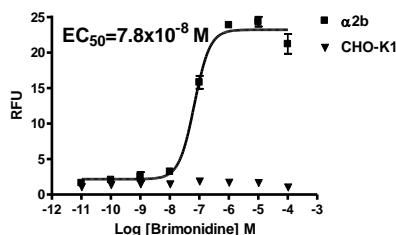


Figure 2

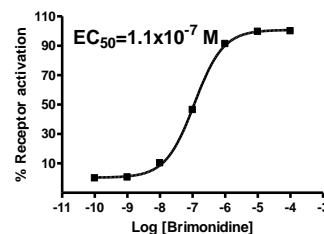


Figure 3

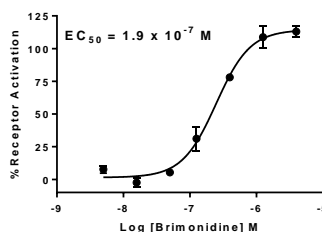


Figure 4

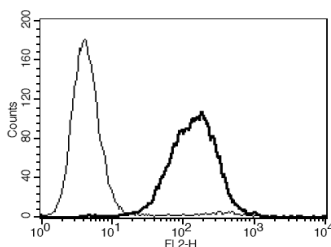


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with MULTISCREEN™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent increase of intracellular cAMP level upon treatment with ligand, measured with MULTISCREEN™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). Cells were pre-treated with pertussis toxin. **Figure 3.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with MULTISCREEN™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). Cells were not pre-treated. **Figure 4.** 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:

Knaus *et al* (2007) Alpha2-adrenoceptor subtypes--unexpected functions for receptors and ligands derived from gene-targeted mouse models. *Neurochem Int* 51:277-281.

Philipp *et al.* (2002) Physiological significance of alpha(2)-adrenergic receptor subtype diversity: one receptor is not enough. *Am J Physiol Regul Integr Comp Physiol.* 283:R287-R295.

FOR RESEARCH USE ONLY.

All rights reserved. No part of this document may be reproduced in any form without prior permission in writing.