MULTISCREEN™ STABLE CELL LINE
RHESUS RECOMBINANT B2 RECEPTOR

Data Sheet

PRODUCT INFORMATION

Catalog Number: Cpr1199

Lot Number: Cpr1199-031516

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length rhesus B2 cDNA (GenBank Accession Number XM_001101523.2) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS, 1 µg/mL puromycin

Stability: Stability in progress

Background: Bradykinin receptor B2 is a G protein-coupled receptor for bradykinin. Recent studies on mice myocardium revealed that the activation of the cardiac sympathetic system through the stimulation of cardiac sensory nerves involved the activation of the B2 receptor. B2 receptor agonists may have important clinical value in the treatment and prevention of various cardiovascular disorders such as hypertension, ischemic heart disease, left ventricular hypertrophy, ventricular remodeling and congestive heart failure, as well as diabetic disorders by mimicking the reported beneficial effects of bradykinin. Blocking bradykinin B2 receptors after experimental cerebral ischemia reduces brain edema, infarct volume and neuronal necrosis, and improves neurological outcome. Thus, B2 antagonists may be a promising new class of compounds for clinical use after the onset of cerebral ischemia.

Application: Functional assays

Figure 1

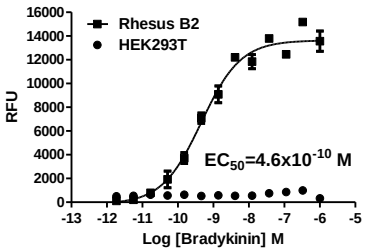

Figure 2

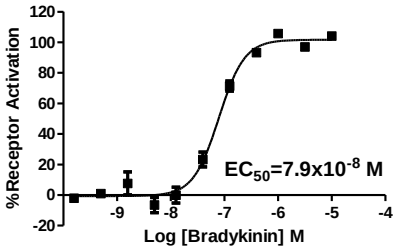

Figure 3

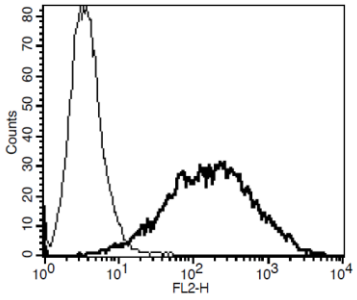

Figure 1. Dose-dependent calcium flux upon treatment with ligand, monitored with FLIPR. **Figure 2.** Dose-dependent increase of intracellular cAMP level upon treatment with ligand. **Figure 3.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Hess et al. (1992) Cloning and pharmacological characterization of a human bradykinin (BK-2) receptor. Biochem Biophys Res Commun 184:260-268.

Heitsch (2003) The therapeutic potential of bradykinin B2 receptor agonists in the treatment of cardiovascular disease. Expert Opin Investig Drugs 12:759-770.

Jones, W. K., Fan, G.-C., Liao, S., Zhang, J.-M., Wang, Y., Weintraub, N. L., … Ren, X. (2009). Peripheral Nociception Associated With Surgical Incision Elicits Remote Nonischemic Cardioprotection Via Neurogenic Activation of Protein Kinase C Signaling. *Circulation*, *120*(11 Suppl), S1–S9.

Sobey (2003) Bradykinin B2 receptor antagonism: a new direction for acute stroke therapy? Br J Pharmacol 139:1369-1371.

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26219 Eden Landing Road, Hayward, California 94545-3718 Phone: (510) 887-0817 Fax: (510) 887-0863