MULTISCREEN™ STABLE CELL LINE
RAT RECOMBINANT B2 RECEPTOR

Data Sheet

PRODUCT INFORMATION

Catalog Number: Cr1199

Lot Number: Cr1199-031516

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 rat B2 cDNA (GenBank Accession Number NM_173100.2) 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 constitutively expressed G protein-coupled receptor. In rats, the B2 receptors is present on non-peptidergic C-neurons, peptidergic C-neurons, dendrites and axons in A-neurons, NGF-responsive nociceptors. Recent research on rat TG neurons revealed that the B2 receptor is essential in the early stages of general pain generation and that endogenous bradykinin preferentially activates the B2 receptor over the B1 receptor. The activation of the B2 receptor by bradykinin stimulates neurogenic chloride secretion in the rat colon through COX increasing PGE2 production.

Application: Functional assays

Figure 1

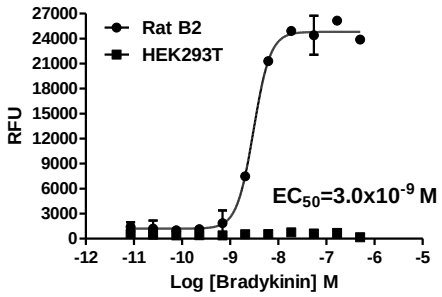

Figure 2

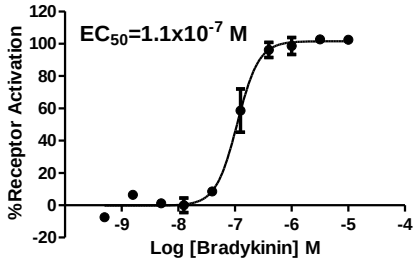

Figure 3

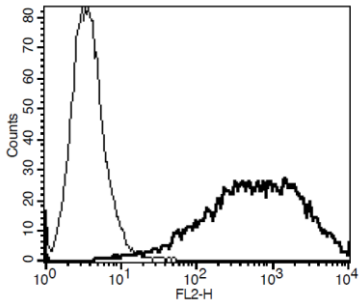

Figure 1. Dose-dependent calcium flux upon treatment with ligand, monitored with FLIPR.
Figure 2. Dose-dependent increase of intracellular cAMP level upon treatment with ligand.
Figure 3. Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental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

References:

Kawaguchi, A., Sato, M., Kimura, M., Yamazaki, T., Yamamoto, H., Tazaki, M., … Shibukawa, Y. (2015). Functional expression of bradykinin B_1 and B_2receptors in neonatal rat trigeminal ganglion neurons. *Frontiers in Cellular Neuroscience*, *9*, 229. http://doi.org/10.3389/fncel.2015.00229

Radka Zubakova, Andreas Gille, Alexander Faussner, Ulrich Hilgenfeldt. (2008). Ca2+ signalling of kinins in cells expressing rat, mouse and human B1/B2-receptor, *International Immunopharmacology*, 8(2), 276-281.

Qu, M.-H., Ji, W.-S., Zhao, T.-K., Fang, C.-Y., Mao, S.-M., & Gao, Z.-Q. (2016). Neurophysiological mechanisms of bradykinin-evoked mucosal chloride secretion in guinea pig small intestine. *World Journal of Gastrointestinal Pathophysiology*, *7*(1), 150–159.

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