MULTISCREEN^{TM} STABLE CELL LINE
HUMAN RECOMBINANT BLT_2 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1272c

Lot Number: C1272c-061916

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 human BLT_2 cDNA (GenBank Accession Number NM_019839.1) 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: Leukotriene B4 (LTB_4) is a potent lipid mediator of allergic and inflammatory reactions, as well as a modulator of immune responses. Two receptors for LTB_4 have been described on human neutrophils. The high-affinity human leukocyte LTB_4 receptor, BLT_1 mediates aggregation, chemotaxis, chemokinesis, and increased adherence to surfaces, whereas the low-affinity receptor, BLT_2 (or LTB4R2) mediates degranulation and increased oxidative metabolism. BLT_2 is expressed ubiquitously with the highest expression in spleen and has a broader ligand specificity for various eicosanoids. Cells expressing BLT_2 exhibited LTB_4-induced chemotaxis, calcium mobilization, and inhibition of adenylyl cyclase. BLT_2 provides a novel target for anti-inflammatory therapy and promises to expand our knowledge of LTB_4 function.

Application: Functional assays

Figure 1

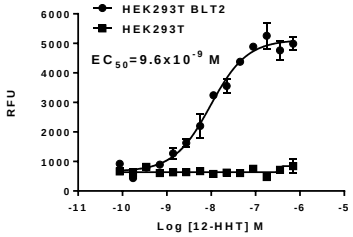

Figure 2

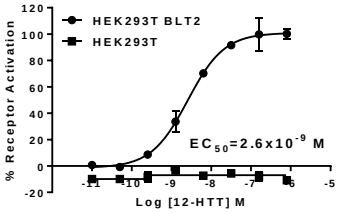

Figure 3

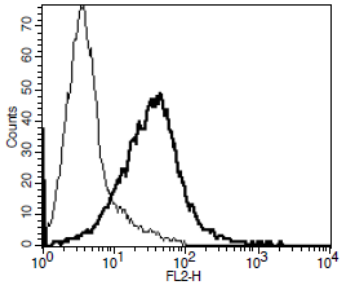

Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **Figure 2**. Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand. **Figure 3.** Receptor expression on cell surface measured by flow cytometry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

References:

Kamohara *et al.* (2000) Molecular cloning and characterization of another leukotriene B4 receptor. *J Biol Chem* 275:27000-27004.

Yokomizo *et al.* (2000) A second leukotriene B(4) receptor, BLT2. A new therapeutic target in inflammation and immunological disorders. *J Exp Med* 192:421-432.

Yoo *et al.* (2004) Role of the BLT2, a leukotriene B4 receptor, in Ras transformation. *Oncogene* 23:9259-9268.

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