

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT BLT₂ RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1272b

Lot Number: C1272b-061916

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length human BLT₂ 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 μ g/mL puromycin

Stability: Stable in culture for minimum of two months

Background: Leukotriene B₄ (LTB₄) is a potent lipid mediator of allergic and inflammatory reactions, as well as a modulator of immune responses. Two receptors for LTB₄ have been described on human neutrophils. The high-affinity human leukocyte LTB₄ receptor, BLT₁ mediates aggregation, chemotaxis, chemokinesis, and increased adherence to surfaces, whereas the low-affinity receptor, BLT₂ (or LTB₄R2) mediates degranulation and increased oxidative metabolism. BLT₂ is expressed ubiquitously with the highest expression in spleen and has a broader ligand specificity for various eicosanoids. Cells expressing BLT₂ exhibited LTB₄-induced chemotaxis, calcium mobilization, and inhibition of adenylyl cyclase. BLT₂ provides a novel target for anti-inflammatory therapy and promises to expand our knowledge of LTB₄ function.

Application: Functional assays

Figure 1

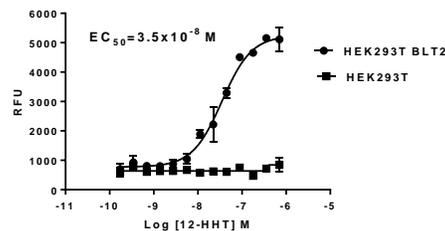


Figure 2

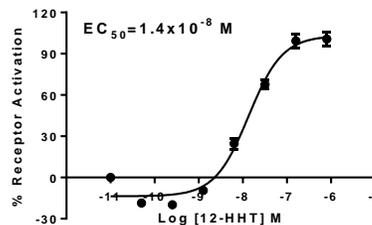


Figure 3

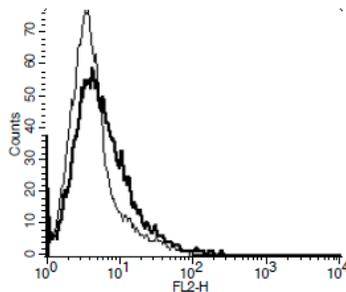


Figure 1. Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 2.** Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **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 B₄ 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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