MULTISPAN
One-Stop Shop for GPCR Research

MULTISCREEN^{TM} STABLE CELL LINE HUMAN RECOMBINANT BLT1 RECEPTOR

PRODUCT INFORMATION

Catalog Number: H1165a

Lot Number: H1165a-063011

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 LTB4R cDNA (GenBank Accession Number NM_181657) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

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

Stability: Stable for a minimum of two months in culture

Data sheet

Background: Leukotriene B4 (LTB4) is a potent lipid mediator of allergic and inflammatory reactions, as well as a modulator of immune responses. Two types of plasma membrane receptors for LTB4 have been described on human neutrophils. The high-affinity human leukocyte LTB4 receptor, BLT1 (or LTB4R) mediates aggregation, chemotaxis, chemokinesis, and increased adherence to surfaces, whereas the low-affinity receptor mediates degranulation and increased oxidative metabolism. BLT1 mRNA is expressed in leukocytes and to a lesser degree in spleen and thymus. Studies in mice with disrupted BLT1 gene indicate a major role for BLT1 in acute inflammation and immediate hypersensitivity, as well as in leukocyte functions such as chemotaxis and firm adhesion to endothelium in response to LTB4.

Application: Functional assays

Figure 1

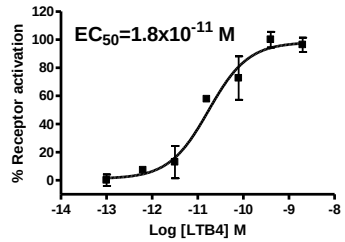

Figure 2

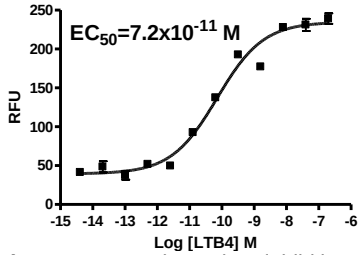

Figure 3

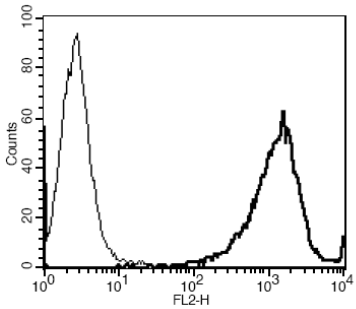

Figure 1. Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with cAMP HiRange kit (Cisbio 62AM6PEC). **Figure 2**. Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **Figure 3**. Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Tager *et al.* (2000) BLTR mediates leukotriene B4-induced chemotaxis and adhesion and plays a dominant role in eosinophil accumulation in a murine model of peritonitis. *J Exp Med* 192:439.

Stankova *et al.* (2002) Modulation of leukotriene B4 receptor-1 expression by dexamethasone: potential mechanism for enhanced neutrophil survival. *J Immunol* 168:3570-3576

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