

LTB4R2 siRNA (m): sc-45323

BACKGROUND

The P2Y receptor family consists of G protein-coupled receptors, which mediate the effects of extracellular nucleotides, primarily through the activation of phospholipase C. The P2Y receptors are important in the activation of leukocytes and platelets in response to inflammation or vascular damage. Leukotriene B4 receptor 1 (LTB4R1), also designated P2Y purinoceptor 7, is a receptor for extracellular ATP, UTP and ADP. Through modulation of L-type calcium currents, LTB4R1 is involved in the regulation of cardiac muscle contraction. It is also a receptor for Leukotriene B4 (LTB4), a potent chemoattractant involved in inflammation and immune response. Leukotriene B4 receptor 2 (LTB4R2) is an ubiquitously expressed 358 amino acid receptor for LTB4. It is an integral membrane protein acting as a receptor for leukotrienes, is widely expressed and mediates chemotaxis of macrophages and granulocytes.

REFERENCES

1. Kamohara, M., et al. 2000. Molecular cloning and characterization of another Leukotriene B4 receptor. *J. Biol. Chem.* 275: 27000-27004.
2. Wang, S., et al. 2000. A novel hepatointestinal Leukotriene B4 receptor. Cloning and functional characterization. *J. Biol. Chem.* 275: 40686-40694.
3. Tryselius, Y., et al. 2000. Cloning and characterization of cDNA encoding a novel human Leukotriene B4 receptor. *Biochem. Biophys. Res. Commun.* 274: 377-382.
4. Nilsson, N.E., et al. 2000. Genomic organization of the Leukotriene B4 receptor locus of human chromosome 14. *Biochem. Biophys. Res. Commun.* 274: 383-388.
5. Kato, K., et al. 2000. Cell-specific transcriptional regulation of human Leukotriene B4 receptor gene. *J. Exp. Med.* 192: 413-420.
6. Yokomizo, T., et al. 2000. A second Leukotriene B4 receptor, BLT2. A new therapeutic target in inflammation and immunological disorders. *J. Exp. Med.* 192: 421-432.
7. Yokomizo, T., et al. 2001. Hydroxyeicosanoids bind to and activate the low affinity Leukotriene B4 receptor, BLT2. *J. Biol. Chem.* 276: 12454-12459.

CHROMOSOMAL LOCATION

Genetic locus: Ltb4r2 (mouse) mapping to 14 C3.

PRODUCT

LTB4R2 siRNA (m) is a pool of 2 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LTB4R2 shRNA Plasmid (m): sc-45323-SH and LTB4R2 shRNA (m) Lentiviral Particles: sc-45323-V as alternate gene silencing products.

For independent verification of LTB4R2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45323A and sc-45323B.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

LTB4R2 siRNA (m) is recommended for the inhibition of LTB4R2 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LTB4R2 gene expression knockdown using RT-PCR Primer: LTB4R2 (m)-PR: sc-45323-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zoccal, K.F., et al. 2016. Opposing roles of LTB4 and PGE2 in regulating the inflammasome-dependent scorpion venom-induced mortality. *Nat. Commun.* 7: 10760.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.