SANTA CRUZ BIOTECHNOLOGY, INC.

LTB4DH siRNA (h): sc-92772

BACKGROUND

Leukotriene B4 is a dihydroxy fatty acid derived from arachidonic acid that is produced by leukocytes in response to inflammatory mediators. It induces adhesion and activation of leukocytes on the endothelium, thereby allowing them to bind and invade the tissue. LTB4DH (leukotriene B4 12-hydroxydehydrogenase), also known as Prostaglandin reductase 1 and 15-oxoprostaglandin 13-reductase, is a 329 amino acid cytoplasmic protein that catalyzes the conversion of leukotriene B4 into 12-oxo-leukotriene B4, a less active metabolite. This is the initial step of leukotriene B4 inactivation. LTB4DH is highly expressed in kidney, intestine and liver, but is not present in leukocytes. The gene encoding LTB4DH is upregulated in response to high levels of ibuprofen.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: PTGR1 (human) mapping to 9q31.3.

PRODUCT

LTB4DH siRNA (h) is a pool of 3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LTB4DH shRNA Plasmid (h): sc-92772-SH and LTB4DH shRNA (h) Lentiviral Particles: sc-92772-V as alternate gene silencing products.

For independent verification of LTB4DH (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-92772A, sc-92772B and sc-92772C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

LTB4DH siRNA (h) is recommended for the inhibition of LTB4DH expression in human 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 µM in 66 µl. 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 LTB4DH gene expression knockdown using RT-PCR Primer: LTB4DH (h)-PR: sc-92772-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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