SANTA CRUZ BIOTECHNOLOGY, INC.

IL-17RE siRNA (m): sc-146207

BACKGROUND

The interleukins (ILs) are a broad family of well characterized cytokines, primarily of hematopoietic cell origin, and are secreted by immune cells (mainly macrophages, B cells or T cells) that regulate a wide range of immune system functions. The specific functions of different ILs vary from the regulation of inflammatory and immune responses to the regulation of other ILs. They exert their biological effects through the binding of membrane-bound receptors which, in turn, initiate signal transduction cascades and elicit physiological changes in their target cell. IL-17RE (IL 17 receptor E) is a 667 amino acid protein that is expressed in a variety of tumors and, by alternative splicing, is produced as five isoforms. In mouse, IL-17RE is expressed in tissues, including lung, kidney, stomach, intestine and testis. IL-17RE is localized to the cellular membrane as a single-pass membrane protein and to the cytoplasm. IL-17RE is thought to activate the MARK signaling pathway and may function either at or upstream of Ras in order to induce mitogenic signaling. IL-17RE mRNA is detected in psoriatic skin lesions in lower concentrations than in nonlesional psoriatic skin, suggesting that lack of IL-17RE may cause skin lesions as a result of immune system impairment.

REFERENCES

1. Uyemura, K., et al. 1993. The cytokine network in lesional and lesion-free psoriatic skin is characterized by a T-helper type 1 cell-mediated response. J. Invest. Dermatol. 101: 701-705.
2. Menssen, A., et al. 1995. Evidence for an antigen-specific cellular immune response in skin lesions of patients with psoriasis vulgaris. J. Immunol. 155: 4078-4083.
3. Haudenschild, D., et al. 2002. Soluble and transmembrane isoforms of novel interleukin-17 receptor-like protein by RNA splicing and expression in prostate cancer. J. Biol. Chem. 277: 4309-4316.
4. Moseley, T.A., et al. 2003. Interleukin-17 family and IL-17 receptors. Cytokine Growth Factor Rev. 14: 155-174.
5. Toy, D., et al. 2006. Cutting edge: interleukin 17 signals through a heteromeric receptor complex. J. Immunol. 177: 36-39.

CHROMOSOMAL LOCATION

Genetic locus: Il17re (mouse) mapping to 6 E3.

PRODUCT

IL-17RE 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see IL-17RE shRNA Plasmid (m): sc-146207-SH and IL-17RE shRNA (m) Lentiviral Particles: sc-146207-V as alternate gene silencing products.

For independent verification of IL-17RE (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-146207A and sc-146207B.

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 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

IL-17RE siRNA (m) is recommended for the inhibition of IL-17RE 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 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 IL-17RE gene expression knockdown using RT-PCR Primer: IL-17RE (m)-PR: sc-146207-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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