SANTA CRUZ BIOTECHNOLOGY, INC.

IL-20Rβ siRNA (h): sc-60833

BACKGROUND

The class II cytokine receptor family includes 12 members, 11 of which combine as various heterodimers to transduce signals across the cellular membrane for 27 cytokines. These cytokines are divided into four structurally related groups: six cytokines of the IL-10 family, 17 type I IFNs, one type II IFN and three IFN-λ. IL-20 is a member of the IL-10 family of cytokines that has been shown to be upregulated in psoriatic skin. The receptor for IL-20 (IL-20R) exists as a dimer consisting of IL-20Rα and IL-20Rβ. IL-20R also functions as a receptor for IL-19, IL-24 and IL-26. It is highly expressed in skin, brain and testis. IL-20, IL20Rα and IL-20Rβ all have higher expression levels in psoriatic lesional (LS) skin than in nonlesional (NL) skin, suggesting a role for these proteins as potential therapeutic targets. IL-20 can induce signal transducer and activator of transcription (Stat) activation through IL-20R.

REFERENCES

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3. Ho, A.S., et al. 1995. Functional regions of the mouse interleukin-10 receptor cytoplasmic domain. Mol. Cell. Biol. 15: 5043-5053.
4. Tan, J.C., et al. 1995. Characterization of recombinant extracellular domain of human interleukin-10 receptor. J. Biol. Chem. 270: 12906-12911.
5. Carson, W.E., et al. 1995. The functional characterization of interleukin-10 receptor expression on human natural killer cells. Blood 85: 3577-3585.
6. Corinti, S., et al. 2001. Regulatory activity of autocrine IL-10 on dendritic cell functions. J. Immunol. 166: 4312-4318
7. Vilcek, J. 2002. Novel interferons. Nat. Immunol. 4: 8-9.
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CHROMOSOMAL LOCATION

Genetic locus: IL20RB (human) mapping to 3q22.3.

PRODUCT

IL-20Rβ 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 IL-20Rβ shRNA Plasmid (h): sc-60833-SH and IL-20Rβ shRNA (h) Lentiviral Particles: sc-60833-V as alternate gene silencing products.

For independent verification of IL-20Rβ (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-60833A, sc-60833B and sc-60833C.

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-20Rβ siRNA (h) is recommended for the inhibition of IL-20Rβ 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 IL-20Rβ gene expression knockdown using RT-PCR Primer: IL-20Rβ (h)-PR: sc-60833-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.

PROTOCOLS

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