SANTA CRUZ BIOTECHNOLOGY, INC.

IL-22Rα2 siRNA (h): sc-62495

BACKGROUND

IL-22Rα2 (interleukin-22 receptor α-2 chain), also known as IL-22 binding protein (IL-22BP), cytokine receptor family class II member 10 (CRF2-10) or CRF2 soluble 1 (CRF2-S1), is a soluble, nonsignaling single chain receptor for IL-22. It is highly expressed in intestine and lymph nodes and is also found in spleen, kidney and liver. IL-22Rα2 has a cytokine-binding domain that contains two FnIII domains. Its affinity for IL-22 is four- to ten-fold higher than that of the membrane bound IL-22 receptor, however it has a dissociation rate up to 20 times lower. By binding to IL-22, IL-22Rα2 prevents the binding to the IL-22 membrane bound receptor and therefore inhibits IL-22 signaling. This suggests that IL-22Rα2 may be important in regulating inflammatory responses. In addition, IL-22Rα2 can be induced by lipopolysaccharide (LPS).

REFERENCES

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3. Kotenko, S.V., et al. 2001. Identification, cloning, and characterization of a novel soluble receptor that binds IL-22 and neutralizes its activity. J. Immunol. 166: 7096-7103.
4. Wei, C.C., et al. 2003. Cloning and characterization of mouse IL-22 binding protein. Genes Immun. 4: 204-211.
5. Weiss, B., et al. 2004. Cloning of murine IL-22 receptor α 2 and comparison with its human counterpart. Genes Immun. 5: 330-336.
6. Wolk, K., et al. 2005. Is there an interaction between interleukin-10 and interleukin-22? Genes Immun. 6: 8-18.
7. Otkjaer, K., et al. 2005. The dynamics of gene expression of interleukin-19 and interleukin-20 and their receptors in psoriasis. Br. J. Dermatol. 153: 911-918.
8. Wolk, K., et al. 2007. IL-22 induces lipopolysaccharide-binding protein in hepatocytes: a potential systemic role of IL-22 in Crohn's disease. J. Immunol. 178: 5973-5981.

CHROMOSOMAL LOCATION

Genetic locus: IL22RA2 (human) mapping to 6q23.3.

PRODUCT

IL-22Rα2 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-22Rα2 shRNA Plasmid (h): sc-62495-SH and IL-22Rα2 shRNA (h) Lentiviral Particles: sc-62495-V as alternate gene silencing products.

For independent verification of IL-22Rα2 (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-62495A, sc-62495B and sc-62495C.

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-22Rα2 siRNA (h) is recommended for the inhibition of IL-22Rα2 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-22Rα2 gene expression knockdown using RT-PCR Primer: IL-22Rα2 (h)-PR: sc-62495-PR (20 µl, 429 bp). 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.