SANTA CRUZ BIOTECHNOLOGY, INC.

IL-18BP siRNA (h): sc-105566

BACKGROUND

IL-18 (also referred to as IL-1γ) has been shown to augment the secretion of IFN-γ from T lymphocytes and to increase NK cell activity in spleen cells. IL-18 exhibits 19% and 12% identity with IL-1α and IL-1β, respectively, over the twelve β-strands of the β-trefoil fold domain, which is a signature feature of the IL-1 family. The unusual leader sequence of IL-18 may be analogous to the IL-1β pro-domain, which must be cleaved by the serine protease ICE for optimal secretion and biological activity. Originally described as IGIF (IFN-γ-inducing factor), IL-18 is induced in mouse liver subsequent to challenge with lipopolysaccharide (LPS). IL-18 binding protein (IL-18BP) functions as an inhibitor of the early Th1 response by binding to IL-18 and inhibiting IFN-γ production. IL-18BP is a member of the immunoglobulin superfamily and shares some homology to IL-1RII.

REFERENCES

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4. Bazan, J.F., Timans, J.C. and Kastelein, R.A. 1996. A newly defined interleukin-1? Nature 379: 591.
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6. Novick, D., Kim, S.H., Fantuzzi, G., Reznikov, L.L., Dinarello, C.A. and Rubinstein, M. 1999. Interleukin-18 binding protein: a novel modulator of the Th1 cytokine response. Immunity 10: 127-136.

CHROMOSOMAL LOCATION

Genetic locus: IL18BP (human) mapping to 11q13.4.

PRODUCT

IL-18BP siRNA (h) 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. Suit-able for 50-100 transfections. Also see IL-18BP shRNA Plasmid (h): sc-105566-SH and IL-18BP shRNA (h) Lentiviral Particles: sc-105566-V as alternate gene silencing products.

For independent verification of IL-18BP (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-105566A and sc-105566B.

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-18BP siRNA (h) is recommended for the inhibition of IL-18BP 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.

GENE EXPRESSION MONITORING

IL-18BP (MM0379-10G36): sc-517545 is recommended as a control antibody for monitoring of IL-18BP gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor IL-18BP gene expression knockdown using RT-PCR Primer: IL-18BP (h)-PR: sc-105566-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.