SANTA CRUZ BIOTECHNOLOGY, INC.

IL-18BP siRNA (m): sc-77389

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. IL-18, which was 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

1. Nakamura, K., et al. 1993. Purification of a factor which provides a costimulatory signal for γ interferon production. Infect. Immun. 61: 64-70.
2. Dinarello, C.A. 1994. The interleukin-1 family: 10 years of discovery. FASEB J. 8: 1314-1325.
3. Okamura, H., et al. 1995. Cloning of a new cytokine that induces IFN-γ production by T cells. Nature 378: 88-91.
4. Bazan, J.F., et al. 1996. A newly defined interleukin-1? Nature 379: 591.
5. Dinarello, C.A., et al. 1998. Overview of interleukin-18: more than an interferon-γ inducing factor. J. Leukoc. Biol. 63: 658-664.
6. Novick, D., et al. 1999. Interleukin-18 binding protein: a novel modulator of the Th1 cytokine response. Immunity 10: 127-136.

CHROMOSOMAL LOCATION

Genetic locus: Il18bp (mouse) mapping to 7 E3.

PRODUCT

IL-18BP siRNA (m) 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-18BP shRNA Plasmid (m): sc-77389-SH and IL-18BP shRNA (m) Lentiviral Particles: sc-77389-V as alternate gene silencing products.

For independent verification of IL-18BP (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-77389A, sc-77389B and sc-77389C.

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 (m) is recommended for the inhibition of IL-18BP 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-18BP gene expression knockdown using RT-PCR Primer: IL-18BP (m)-PR: sc-77389-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.