SANTA CRUZ BIOTECHNOLOGY, INC.

IL-26 siRNA (h): sc-72398

BACKGROUND

The interleukins (ILs) are a broad family of well characterized cytokines, primarily of hematopoietic cell origin. They 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 interleukins vary from the regulation of inflammatory and immune responses to the regulation of other interleukins. IL-26, also known as AK155, is a member of the IL-10 family of cytokines that is generated by memory cells and expressed on T cells. Similar to IL-10, IL-26 can form stable homodimers. IL-26 signals through IL-26R, the heterodimeric receptor composed of IL-20R1 and IL-10R2. It activates the JAK/Stat pathway and predominantly stimulates Stat3 but it can also signal through Stat1. IL-26 also plays a role in the transformed phenotype of T cells after infection by herpes virus.

REFERENCES

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2. Conti, P., et al. 2003. IL-10 subfamily members: IL-19, IL-20, IL-22, IL-24 and IL-26. Immunol. Lett. 88: 171-174.
3. Hör, S., et al. 2004. The T cell lymphokine Interleukin-26 targets epithelial cells through the Interleukin-20 receptor 1 and Interleukin-10 receptor 2 chains. J. Biol. Chem. 279: 33343-33351.
4. Fickenscher, H. and Pirzer, H. 2004. Interleukin-26. Int. Immunopharmacol. 4: 609-613.
5. Sheikh, F., et al. 2004. Cutting edge: IL-26 signals through a novel receptor complex composed of IL-20 receptor 1 and IL-10 receptor 2. J. Immunol. 172: 2006-2010.
6. Liao, S.C., et al. 2004. IL-19 induced Th2 cytokines and was upregulated in asthma patients. J. Immunol. 173: 6712-6718.
7. Donnelly, R.P., et al. 2004. The expanded family of class II cytokines that share the IL-10 receptor-2 (IL-10R2) chain. J. Leukoc. Biol. 76: 314-321.
8. Zdanov, A. 2006. Structural studies of the Interleukin-19 subfamily of cytokines. Vitam. Horm. 74: 61-76.

CHROMOSOMAL LOCATION

Genetic locus: IL26 (human) mapping to 12q15.

PRODUCT

IL-26 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-26 shRNA Plasmid (h): sc-72398-SH and IL-26 shRNA (h) Lentiviral Particles: sc-72398-V as alternate gene silencing products.

For independent verification of IL-26 (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-72398A, sc-72398B and sc-72398C.

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-26 siRNA (h) is recommended for the inhibition of IL-26 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-26 (LL07): sc-80523 is recommended as a control antibody for monitoring of IL-26 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-26 gene expression knockdown using RT-PCR Primer: IL-26 (h)-PR: sc-72398-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.