SANTA CRUZ BIOTECHNOLOGY, INC.

IL-1F6 siRNA (h): sc-72168

BACKGROUND

IL-1 (Interleukin-1) is a cytokine responsible for initiating a variety of activities through the activation of transcription factors, NFκB and AP-1, thereby promoting host response to injury or infection. The IL-1 superfamily is comprised of several ligands and receptors. IL-1F6, also known as interleukin-1 family member 6 (IL-1εF6) or interleukin-1 ε (IL-1ε), is a secreted ligand belonging to this superfamily. IL-1F6 is expressed in a variety of tissues, including lymph node, spleen, thymus, leukocytes, tonsil, fetal brain and bone marrow. It exists as a nitroprotein, post-translationally modified with a nitro group on tyrosine residue 96. IL-1F6 activates the IL-1Rrp2 and IL-1RAcP-dependent pathway leading to NFκB activation. Similar to other family members, IL-1F6 can be regulated by bacterial lipopolysaccharide (LPS).

REFERENCES

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3. Towne, J.E., et al. 2004. Interleukin (IL)-1F6, IL-1F8, and IL-1F9 signal through IL-1Rrp2 and IL-1RAcP to activate the pathway leading to NFκB and MAPKs. J. Biol. Chem. 279: 13677-13688.
4. Zhan, X. and Desiderio, D.M. 2006. Nitroproteins from a human pituitary adenoma tissue discovered with a nitrotyrosine affinity column and tandem mass spectrometry. Anal. Biochem. 354: 279-289.
5. Hasegawa, Y., et al. 2006. A RecA-mediated exon profiling method. Nucleic Acids Res. 34: e97.
6. Chelvarajan, R.L., et al. 2006. Molecular basis of age-associated cytokine dysregulation in LPS-stimulated macrophages. J. Leukoc. Biol. 79: 1314-1327.
7. Burger, D., et al. 2006. Is IL-1 a good therapeutic target in the treatment of arthritis? Best. Pract. Res. Clin. Rheumatol. 20: 879-896.
8. Barksby, H.E., et al. 2007. The expanding family of interleukin-1 cytokines and their role in destructive inflammatory disorders. Clin. Exp. Immunol. 149: 217-225.

CHROMOSOMAL LOCATION

Genetic locus: IL36A (human) mapping to 2q13.

PRODUCT

IL-1F6 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-1F6 shRNA Plasmid (h): sc-72168-SH and IL-1F6 shRNA (h) Lentiviral Particles: sc-72168-V as alternate gene silencing products.

For independent verification of IL-1F6 (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-72168A, sc-72168B and sc-72168C.

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-1F6 siRNA (h) is recommended for the inhibition of IL-1F6 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.

SELECT PRODUCT CITATIONS

1. Xiaoxiao, X., et al. 2021. Interleukin-36α suppresses growth of non-small cell lung cancer *in vitro* by reducing angiogenesis. FEBS Open Bio. E-published.

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.