



NFXL1 siRNA (h): sc-89312

BACKGROUND

NFXL1 (nuclear transcription factor, X-box binding-like 1), also known as HOZFP or URCC5, is a 911 amino acid single-pass membrane protein belonging to the NFX1 family and contains ten NF-X1-type zinc fingers and one RING-type zinc finger. NFXL1 may have similar characteristics as transcriptional repressor NFX1, a close family member. A ubiquitously expressed nucleic acid binding protein, NFX1 binds to the conserved X1 region within the X-box motif found in the promoter region of MHC class II genes. Acting as a potent repressor of MHC class II gene expression, NFX1 may be involved in regulating the duration of an inflammatory response. This suggests that NFX1 could be a useful target in the treatment of various diseases involving inflammation and autoimmunity. NFX1 is encoded by a gene located on human chromosome 9 while NFXL1 is encoded by a gene located on human chromosome 4. NFXL1 is expressed as two alternatively spliced isoforms.

REFERENCES

1. Hume, C.R. and Lee, J.S. 1989. Congenital immunodeficiencies associated with absence of HLA class II antigens on lymphocytes result from distinct mutations in trans-acting factors. *Hum. Immunol.* 26: 288-309.
2. Song, Z., et al. 1994. A novel cysteine-rich sequence-specific DNA-binding protein interacts with the conserved X-box motif of the human major histocompatibility complex class II genes via a repeated Cys-His domain and functions as a transcriptional repressor. *J. Exp. Med.* 180: 1763-1774.
3. Kunz, J., et al. 2000. FAP1, a homologue of human transcription factor NF-X1, competes with rapamycin for binding to FKBP12 in yeast. *Mol. Microbiol.* 37: 1480-1493.
4. Arlotta, P., et al. 2002. Murine NFX.1: isolation and characterization of its messenger RNA, mapping of its chromosomal location and assessment of its developmental expression. *Immunology* 106: 173-181.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603255. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: NFXL1 (human) mapping to 4p12.

PRODUCT

NFXL1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NFXL1 shRNA Plasmid (h): sc-89312-SH and NFXL1 shRNA (h) Lentiviral Particles: sc-89312-V as alternate gene silencing products.

For independent verification of NFXL1 (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-89312A, sc-89312B and sc-89312C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

NFXL1 siRNA (h) is recommended for the inhibition of NFXL1 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 μ M in 66 μ l. 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 NFXL1 gene expression knockdown using RT-PCR Primer: NFXL1 (h)-PR: sc-89312-PR (20 μ l). 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.