

HIVEP1 siRNA (m): sc-146039

BACKGROUND

HIVEP1 (human immunodeficiency virus type I enhancer binding protein 1), also known as CIRIP (cirhin interaction protein), MBP-1 (major histocompatibility complex binding protein 1), ZNF40, CRYBP1 (α A-crystallin binding protein 1) or PRDII-BF1 (positive regulatory domain II binding factor 1), is a large DNA-binding protein that belongs to the ZAS family. HIVEP1 contains a pair of C₂H₂ zinc fingers with a serine/threonine-rich sequence and an acidic-rich region, as well as a ZAS domain. It is ubiquitously expressed and is directly involved in the transcriptional regulation of a variety of genes. There are homologs of this gene in *D. melanogaster* and *C. elegans*. In humans, HIVEP1 interacts with the IFN- β promoter and enhancer in the HIV-1 long terminal repeat. It specifically binds to the DNA sequence 5'-GGGACTTCC-3'. Various isoforms of HIVEP1 exist due to alternative splicing events. HIVEP1 may also participate in T-cell activation.

REFERENCES

- Otsuka, M., Fujita, M., Aoki, T., Ishii, S., Sugiura, Y., Yamamoto, T. and Inoue, J. 1995. Novel zinc chelators with dual activity in the inhibition of the κ B site-binding proteins HIV-EP1 and NF κ B. *J. Med. Chem.* 38: 3264-3270.
- Fujita, M., Otsuka, M. and Sugiura, Y. 1996. Metal-chelating inhibitors of a zinc finger protein HIV-EP. Remarkable potentiation of inhibitory activity by introduction of SH groups. *J. Med. Chem.* 39: 503-507.
- Xu, G., Sze, S.H., Liu, C.P., Pevzner, P.A. and Arnheim, N. 1998. Gene hunting without sequencing genomic clones: finding exon boundaries in cDNAs. *Genomics* 47: 171-179.
- Tanaka, K., Matsumoto, Y., Nakatani, F., Iwamoto, Y. and Yamada, Y. 2000. A zinc finger transcription factor, α A-crystallin binding protein 1, is a negative regulator of the chondrocyte-specific enhancer of the α 1(III) collagen gene. *Mol. Cell. Biol.* 20: 4428-4435.
- Hicar, M.D., Liu, Y., Allen, C.E. and Wu, L.C. 2001. Structure of the human zinc finger protein HIVEP3: molecular cloning, expression, exon-intron structure, and comparison with paralogous genes HIVEP1 and HIVEP2. *Genomics* 71: 89-100.
- Dürr, U., Henningfeld, K.A., Hollemann, T., Knöchel, W. and Pieler, T. 2004. Isolation and characterization of the *Xenopus* HIVEP gene family. *Eur. J. Biochem.* 271: 1135-1144.
- Yamagiwa, H., Yamada, Y., Bolander, M.E. and Sarkar, G. 2004. Oligonucleotide decoy mimicking α A-crystallin-binding protein 1 binding site on mouse Col2a1 enhancer stimulates transcription from the adjacent Col2a1 promoter in chondrogenic ATDC5 cell. *Mol. Biotechnol.* 28: 1-8.
- Yang, X., Li, J., Qin, H., Yang, H., Li, J., Zhou, P., Liang, Y. and Han, H. 2005. Mint represses transactivation of the type II collagen gene enhancer through interaction with α A-crystallin-binding protein 1. *J. Biol. Chem.* 280: 18710-18716.
- Richter, A., Mitchell, G.A. and Rasquin, A. 2007. North American Indian childhood cirrhosis (NAIC). *Med. Sci.* 23: 1002-1007.

CHROMOSOMAL LOCATION

Genetic locus: Hivp1 (mouse) mapping to 13 A4.

PRODUCT

HIVEP1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HIVEP1 shRNA Plasmid (m): sc-146039-SH and HIVEP1 shRNA (m) Lentiviral Particles: sc-146039-V as alternate gene silencing products.

For independent verification of HIVEP1 (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-146039A, sc-146039B and sc-146039C.

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

HIVEP1 siRNA (m) is recommended for the inhibition of HIVEP1 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 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 HIVEP1 gene expression knockdown using RT-PCR Primer: HIVEP1 (m)-PR: sc-146039-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.