SANTA CRUZ BIOTECHNOLOGY, INC.

HIVEP3 siRNA (h): sc-88010

BACKGROUND

HIVEP3 (human immunodeficiency virus type I enhancer binding protein 3), alternatively known as KBP1 (κ-binding protein 1), SHN3, KRC, ZNF40C or Schnurri-3, is a 2,406 amino acid cytoplasmic and nuclear transcription factor belonging to the ZAS family. Known to interact with TRAF1, TRAF2 and c-Jun, HIVEP3 positively regulates IL-2 expression in T-cells and inhibits TNFα-induced NFκB activation through several mechanisms. HIVEP3 forms a multimeric complex with AIP5 and RUNX2 and binds DNA via its ZAS2 domain to form dimers, tetramers and complex DNA-protein structures. Containing five C_2H_2-type zinc fingers, HIVEP3 can be induced by TPA and undergoes post-translational phosphorylation on threonine and serine residues. While HIVEP3 exists as two known isoforms, additional forms can be generated by polyadenylation or alternative splicing. The gene encoding HIVEP3 maps to human chromosome 1p34.2.

REFERENCES

1. Baumann, G. 1979. Hyponatremia during adrenocorticotropin (ACTH) infusions. Ann. Intern. Med. 91: 499.
2. Hicar, M.D., et al. 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.
3. Oukka, M., et al. 2002. A mammalian homolog of *Drosophila* schnurri, KRC, regulates TNF receptor-driven responses and interacts with TRAF2. Mol. Cell 9: 121-131.
4. Hong, J.W., et al. 2003. Inhibition of NFκB by ZAS3, a zinc-finger protein that also binds to the κB motif. Proc. Natl. Acad. Sci. USA 100: 12301-12306.
5. Oukka, M., et al. 2004. Schnurri-3 (KRC) interacts with c-Jun to regulate the IL-2 gene in T cells. J. Exp. Med. 199: 15-24.
6. Jones, D.C., et al. 2006. Regulation of adult bone mass by the zinc finger adapter protein Schnurri-3. Science 312: 1223-1227.
7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 606649. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: HIVEP3 (human) mapping to 1p34.2.

PRODUCT

HIVEP3 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 HIVEP3 shRNA Plasmid (h): sc-88010-SH and HIVEP3 shRNA (h) Lentiviral Particles: sc-88010-V as alternate gene silencing products.

For independent verification of HIVEP3 (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-88010A, sc-88010B and sc-88010C.

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

HIVEP3 siRNA (h) is recommended for the inhibition of HIVEP3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HIVEP3 gene expression knockdown using RT-PCR Primer: HIVEP3 (h)-PR: sc-88010-PR (20 µl, 579 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Tang, Y., et al. 2023. HIVEP3 as a potential prognostic factor promotes the development of acute myeloid leukemia. Growth Factors 41: 43-56.

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.