SANTA CRUZ BIOTECHNOLOGY, INC.

UBN-1 siRNA (h): sc-106663

BACKGROUND

Epstein-Barr virus (EBV)-associated lymphoproliferative disorders frequently develop in patients with AIDS. The major target tissues for EBV infection are B lymphocytes and epithelial cells of the oropharyngeal zone. The protein product of the EBV BZLF1 early gene, EB1, interacts with viral and cellular promoters and transcription factors, thereby modulating the reactivation of EBV infection. The EB1 interacting protein, ubinuclein, is a product of the UBN1 gene and is expressed in the nucleus of human epidermis. The amino terminus of ubinuclein contains the nuclear localization signal whereas the central domain is responsible for the interaction of UBN-1 with the DNA-binding domain of EB1.

REFERENCES

1. Giot, J.F., Mikaelian, I., Buisson, M., Manet, E., Joab, I., Nicolas, J.C. and Sergeant, A. 1991. Transcriptional interference between the EBV transcription factors EB1 and R: both DNA-binding and activation domains of EB1 are required. Nucleic Acids Res. 19: 1251-1258.
2. Baumann, M., Mischak, H., Dammeier, S., Kolch, W., Gires, O., Pich, D., Zeidler, R., Delecluse, H.J. and Hammerschmidt, W. 1998. Activation of the Epstein-Barr virus transcription factor BZLF1 by 12-O-tetradecanoylphorbol-13-acetate-induced phosphorylation. J. Virol. 72: 8105-8114.
3. Adamson, A.L. and Kenney, S. 1999. The Epstein-Barr virus BZLF1 protein interacts physically and functionally with the histone acetylase CREB-binding protein. J. Virol. 73: 6551-6558.
4. Aho, S., Buisson, M., Pajunen, T., Tyoo, Y.W., Giot, J.F., Gruffat, H., Sergeant, A. and Uitto, J. 2000. Ubinuclein, a novel nuclear protein interacting with cellular and viral transcription factors. J. Cell Biol. 148: 1165-1176.
5. Schneider, U., Ruhnke, M., Delecluse, H.J., Stein, H. and Huhn, D. 2000. Regression of Epstein-Barr virus-associated lymphoproliferative disorders in patients with acquired immunodeficiency syndrome during therapy with foscarnet. Ann. Hematol. 79: 214-216.

CHROMOSOMAL LOCATION

Genetic locus: UBN1 (human) mapping to 16p13.3.

PRODUCT

UBN-1 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 UBN-1 shRNA Plasmid (h): sc-106663-SH and UBN-1 shRNA (h) Lentiviral Particles: sc-106663-V as alternate gene silencing products.

For independent verification of UBN-1 (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-106663A, sc-106663B and sc-106663C.

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 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

UBN-1 siRNA (h) is recommended for the inhibition of UBN-1 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

UBN-1 (D-8): sc-515340 is recommended as a control antibody for monitoring of UBN-1 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor UBN-1 gene expression knockdown using RT-PCR Primer: UBN-1 (h)-PR: sc-106663-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.