

HCF2 siRNA (h): sc-37998

BACKGROUND

The herpes simplex virus (HSV) infection is initiated by VP16, a viral transcription factor that activates the viral immediate-early (IE) genes. VP16 recognizes the IE gene promoters by forming a multiprotein complex with Oct-1 and HCF1 (host cell factor 1), a nuclear protein required for progression through the G₁ phase of the cell cycle. This multiprotein complex, called C1, is responsible for transcription of the HSV immediate-early genes and may be critical for the regulation of the HSV lytic-latent cycle. A second HCF-like protein, designated HCF2 is smaller than HCF1 and is homologous with HCF1 in the β -propeller domain, which is required for association with VP16. HCF2 associates with VP16 and supports complex assembly with Oct-1 and DNA, although binds VP16 less efficiently than HCF1. This VP16 binding selectivity is dictated by differences in the kelch repeats of the β -propeller domains of HCF1 and HCF2.

REFERENCES

1. Johnson, K.M., Mahajan, S.S. and Wilson, A.C. 1999. Herpes simplex virus transactivator VP16 discriminates between HCF1 and a novel family member, HCF2. *J. Virol.* 73: 3930-3940.
2. Lu, R. and Misra, V., 2000. Zhangfei: a second cellular protein interacts with herpes simplex virus accessory factor HCF in a manner similar to Luman and VP16. *Nucleic Acids Res.* 28: 2446-2454.
3. Mahajan, S.S. and Wilson, A.C. 2000. Mutations in host cell factor 1 separate its role in cell proliferation from recruitment of VP16 and LZIP. *Mol. Cell. Biol.* 20: 919-928.
4. Scarr, R.B., Smith, M.R., Beddall, M. and Sharp, P.A. 2000. A novel 50-kilodalton fragment of host cell factor 1 (C1) in G₀ cells. *Mol. Cell. Biol.* 20: 3568-3575.
5. Vogel, J.L. and Kristie, T.M. 2000. The novel coactivator C1 (HCF) coordinates multiprotein enhancer formation and mediates transcription activation by GABP. *EMBO J.* 19: 683-690.

CHROMOSOMAL LOCATION

Genetic locus: HCFC2 (human) mapping to 12q23.3.

PRODUCT

HCF2 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 HCF2 shRNA Plasmid (h): sc-37998-SH and HCF2 shRNA (h) Lentiviral Particles: sc-37998-V as alternate gene silencing products.

For independent verification of HCF2 (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-37998A, sc-37998B and sc-37998C.

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

HCF2 siRNA (h) is recommended for the inhibition of HCF2 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.

GENE EXPRESSION MONITORING

HCF2 (C-6): sc-393250 is recommended as a control antibody for monitoring of HCF2 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 HCF2 gene expression knockdown using RT-PCR Primer: HCF2 (h)-PR: sc-37998-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.