

PHF15 siRNA (m): sc-152209

BACKGROUND

PHF15 (PHD finger protein 15), also known as JADE2, is a 790 amino acid protein that contains two mid-molecule tandem plant homology domain (PHD) zinc fingers and belongs to the JADE family. Encoded by a gene that maps to human chromosome 5q31.1, PHF15 exists as three alternatively spliced isoforms. Endogenous JADE proteins, including Jade-1, PHF15 and PHF16, co-purify with the HBO1 complex, along with either of the individual PHD zinc finger proteins ING4 or ING5. The complex exhibits Histone H4-specific acetyltransferase activity, reduced activity toward Histone H3 and is responsible for the bulk of Histone H4 acetylation *in vivo*. PHF15 shares homology with the developmental patterning regulator of Jade-1, suggesting that PHF15 plays a role in developmental modulation of midline neural structures. Downregulation of PHF15 is also linked to melatonin function in human peripheral blood mononuclear cells.

REFERENCES

1. Tzouanacou, E., Tweedie, S. and Wilson, V. 2003. Identification of Jade1, a gene encoding a PHD zinc finger protein, in a gene trap mutagenesis screen for genes involved in anteroposterior axis development. *Mol. Cell. Biol.* 23: 8553-8552.
2. Ha, E., Han, E., Park, H.J., Kim, H.J., Hong, M.S., Hong, S.J., Yoon, K.S., Kang, I., Cho, Y.H., Chung, J.H., Yim, S.V. and Baik, H.H. 2006. Microarray analysis of transcription factor gene expression in melatonin-treated human peripheral blood mononuclear cells. *J. Pineal Res.* 40: 305-311.
3. Doyon, Y., Cayrou, C., Ullah, M., Landry, A.J., Côte, V., Selleck, W., Lane, W.S., Tan, S., Yang, X.J. and Côte, J. 2006. ING tumor suppressor proteins are critical regulators of chromatin acetylation required for genome expression and perpetuation. *Mol. Cell* 21: 51-64.
4. Foy, R.L., Song, I.Y., Chitalia, V.C., Cohen, H.T., Saksouk, N., Cayrou, C., Vaziri, C., Côte, J. and Panchenko, M.V. 2008. Role of Jade-1 in the histone acetyltransferase (HAT) HBO1 complex. *J. Biol. Chem.* 283: 28817-28826.
5. Paziienza, V., Clement, S., Pugnale, P., Conzelmann, S., Pascarella, S., Mangia, A. and Negro, F. 2009. Gene expression profile of Huh-7 cells expressing hepatitis C virus genotype 1b or 3a core proteins. *Liver Int.* 29: 661-669.
6. Terrier, B., Tamby, M.C., Camoin, L., Guilpain, P., Berezne, A., Tamas, N., Broussard, C., Hotellier, F., Humbert, M., Simonneau, G., Guillevin, L. and Mouthon, L. 2010. Antifibroblast antibodies from systemic sclerosis patients bind to α -enolase and are associated with interstitial lung disease. *Ann. Rheum. Dis.* 69: 428-433.
7. Bossers, K., Wirz, K.T., Meerhoff, G.F., Essing, A.H., van Dongen, J.W., Houba, P., Kruse, C.G., Verhaagen, J. and Swaab, D.F. 2010. Concerted changes in transcripts in the prefrontal cortex precede neuropathology in Alzheimer's disease. *Brain* 133: 3699-3723.

CHROMOSOMAL LOCATION

Genetic locus: Jade2 (mouse) mapping to 11 B1.3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

PHF15 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 PHF15 shRNA Plasmid (m): sc-152209-SH and PHF15 shRNA (m) Lentiviral Particles: sc-152209-V as alternate gene silencing products.

For independent verification of PHF15 (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-152209A, sc-152209B and sc-152209C.

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

PHF15 siRNA (m) is recommended for the inhibition of PHF15 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 PHF15 gene expression knockdown using RT-PCR Primer: PHF15 (m)-PR: sc-152209-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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