SANTA CRUZ BIOTECHNOLOGY, INC.

EEPD1 siRNA (h): sc-89330

BACKGROUND

EEPD1 (endonuclease/exonuclease/phosphatase family domain containing 1), also known as HSPC107, is a 569 amino acid protein that contains one HhH domain. A significant decrease in the relative transcriptional level of EEPD1 is induced by long-term heat stress exposure. Conversely, EEPD1 is up-regulated in bovine adipogenic processes related to intramuscular preadipocyte differentiation. Encoded by a gene that maps to human chromosome 7p14.2, EEPD1 plays a role in DNA binding and repair. Chromosome 7 makes up about 5% of the human genome and contains 158 million bases encoding more than 1,000 genes. Osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome are associated with Chromosome 7.

REFERENCES

1. Tsipouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. J. Clin. Invest. 72: 1262-1267.
2. Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. Nature 424: 157-164.
3. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. Neuromolecular Med. 8: 547-565.
4. Brezinová, J., et al. 2007. Structural aberrations of chromosome 7 revealed by a combination of molecular cytogenetic techniques in myeloid malignancies. Cancer Genet. Cytogenet. 173: 10-16.
5. Leone, G., et al. 2007. Therapy-related leukemia and myelodysplasia: susceptibility and incidence. Haematologica 92: 1389-1398.
6. Trevisan, M., et al. 2009. Human cytomegalovirus productively infects adrenocortical cells and induces an early cortisol response. J. Cell. Physiol. 221: 629-641.
7. Mizoguchi, Y., et al. 2010. Differentially expressed genes during bovine intramuscular adipocyte differentiation profiled by serial analysis of gene expression. Anim. Genet. 41: 436-441.

CHROMOSOMAL LOCATION

Genetic locus: EEPD1 (human) mapping to 7p14.2.

PRODUCT

EEPD1 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 EEPD1 shRNA Plasmid (h): sc-89330-SH and EEPD1 shRNA (h) Lentiviral Particles: sc-89330-V as alternate gene silencing products.

For independent verification of EEPD1 (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-89330A, sc-89330B and sc-89330C.

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

EEPD1 siRNA (h) is recommended for the inhibition of EEPD1 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

EEPD1 (B-5): sc-398019 is recommended as a control antibody for monitoring of EEPD1 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 EEPD1 gene expression knockdown using RT-PCR Primer: EEPD1 (h)-PR: sc-89330-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.

PROTOCOLS

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