SANTA CRUZ BIOTECHNOLOGY, INC.

DPF2 siRNA (m): sc-143156

BACKGROUND

DPF2 (D4, zinc and double PHD fingers family 2), also known as REQ (Requiem), UBID4 or ubi-d4, is a 391 amino acid protein that is a member of the D4 domain family. DPF2, a ubiquitously expressed protein, localizes to the nucleus and contains one C_2H_2- and two PHD-type zinc finger motifs. DPF2 may function as a transcription factor that is necessary for apoptosis and may also play a role in the development and maturation of lymphoid cells. It is thought that, during apoptosis, DPF2 activity is inhibited by LRF (Leukemia/lymphoma-related factor), which is up-regulated by Integrin. This suggests that DPF2 may be a potential target for future cancer therapies that induce apoptosis in leukemia cells.

REFERENCES

1. Gabig, T.G., et al. 1994. Requiem: a novel zinc finger gene essential for apoptosis in myeloid cells. J. Biol. Chem. 269: 29515-29519.
2. Gabig, T.G., et al. 1998. Expression and chromosomal localization of the Requiem gene. Mamm. Genome 9: 660-665.
3. Nabirochkina, E., et al. 2002. Expression pattern of dd4, a sole member of the d4 family of transcription factors in *Drosophila melanogaster*. Mech. Dev. 114: 119-123.
4. Astier, A.L., et al. 2003. Temporal gene expression profile of human precursor B leukemia cells induced by adhesion receptor: identification of pathways regulating B-cell survival. Blood 101: 1118-1127.
5. Wong, D.C., et al. 2006. Targeting early apoptotic genes in batch and fed-batch CHO cell cultures. Biotechnol. Bioeng. 95: 350-361.

CHROMOSOMAL LOCATION

Genetic locus: Dpf2 (mouse) mapping to 19 A.

PRODUCT

DPF2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DPF2 shRNA Plasmid (m): sc-143156-SH and DPF2 shRNA (m) Lentiviral Particles: sc-143156-V as alternate gene silencing products.

For independent verification of DPF2 (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-143156A, sc-143156B and sc-143156C.

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

DPF2 siRNA (m) is recommended for the inhibition of DPF2 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 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

DPF2 (C-9): sc-514297 is recommended as a control antibody for monitoring of DPF2 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 DPF2 gene expression knockdown using RT-PCR Primer: DPF2 (m)-PR: sc-143156-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.