



DBP siRNA (m): sc-41376

BACKGROUND

Vitamin D-binding protein (DBP) is a multi-functional serum protein that binds to the plasma membranes of numerous cell types and mediates a variety of cellular functions. The locus of the DBP protein (also known as group-specific component protein or GC) is located at human chromosome 4q13.3. DBP functions in organ-specific transportation of vitamin D and its metabolites to the various target organs of the vitamin D endocrine system. In addition, DBP has immunomodulatory properties and is able to bind to the surface of leukocytes. DBP binds to the plasma membrane through a chondroitin sulfate proteoglycan. DBP serves as a co-chemotactic factor for C5a to enhance the chemotactic activity of C5a. DBP can also bind to globular Actin with high affinity and is involved in the clearance of Actin from the blood. DBP plays an important role in osteoclast differentiation. The diverse cellular functions of DBP require its cell surface binding ability to mediate different biological processes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Gc (mouse) mapping to 5 E1.

PRODUCT

DBP 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 DBP shRNA Plasmid (m): sc-41376-SH and DBP shRNA (m) Lentiviral Particles: sc-41376-V as alternate gene silencing products.

For independent verification of DBP (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-41376A, sc-41376B and sc-41376C.

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

DBP siRNA (m) is recommended for the inhibition of DBP 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 DBP gene expression knockdown using RT-PCR Primer: DBP (m)-PR: sc-41376-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.

PROTOCOLS

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