

# EPDR1 siRNA (m): sc-144906

## BACKGROUND

EPDR1 (ependymin related protein 1), also known as EPDR, UCC1 (up-regulated in colorectal cancer gene 1 protein), MERP1 or MERP-1 (mammalian ependymin-related protein 1 precursor), is a 244 amino acid type II transmembrane protein that is a member of the ependymin family. EPDR1 is expressed in various normal tissues with highest expression in adult bone marrow and umbilical cord. EPDR1 has a notable sequence similarity to ependymins (piscine glycoproteins that are synthesized in fibroblasts and secreted into cerebrospinal fluid), suggesting a conserved role between species. EPDR1 contains two glycosylation sites and a signal peptide and is thought to play a role in calcium-dependent cell adhesion. Two isoforms of EPDR1 exist due to alternative splicing events.

## REFERENCES

1. Nimmrich, I., Erdmann, S., Melchers, U., Chtarbova, S., Finke, U., Hentsch, S., Hoffmann, I., Oertel, M., Hoffmann, W. and Müller, O. 2001. The novel ependymin related gene UCC1 is highly expressed in colorectal tumor cells. *Cancer Lett.* 165: 71-79.
2. Gregorio-King, C.C., McLeod, J.L., Collier, F.M., Collier, G.R., Bolton, K.A., Van Der Meer, G.J., Apostolopoulos, J. and Kirkland, M.A. 2002. MERP1: a mammalian ependymin-related protein gene differentially expressed in hematopoietic cells. *Gene* 286: 249-257.
3. Della Valle, M.C., Sleat, D.E., Sohar, I., Wen, T., Pintar, J.E., Jadot, M. and Lobel, P. 2006. Demonstration of lysosomal localization for the mammalian ependymin-related protein using classical approaches combined with a novel density shift method. *J. Biol. Chem.* 281: 35436-35445.
4. Bradley, S.P., Pahari, M., Uknis, M.E., Rastellini, C. and Cicalese, L. 2006. Gene expression profiles characterize early graft response in living donor small bowel transplantation: a case report. *Transplant. Proc.* 38: 1742-1743.
5. SWISS-PROT/TrEMBL (Q9UM22). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: *Epdr1* (mouse) mapping to 13 A2.

## PRODUCT

EPDR1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see EPDR1 shRNA Plasmid (m): sc-144906-SH and EPDR1 shRNA (m) Lentiviral Particles: sc-144906-V as alternate gene silencing products.

For independent verification of EPDR1 (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-144906A, sc-144906B and sc-144906C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

EPDR1 siRNA (m) is recommended for the inhibition of EPDR1 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  $\mu$ M in 66  $\mu$ 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

EPDR1 (D-10): sc-393820 is recommended as a control antibody for monitoring of EPDR1 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 EPDR1 gene expression knockdown using RT-PCR Primer: EPDR1 (m)-PR: sc-144906-PR (20  $\mu$ 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.