

OSR1 siRNA (m): sc-62722

BACKGROUND

OSR (odd-skipped related) proteins belong to the Odd C₂H₂-type zinc-finger protein family and are involved in embryonic development and bone formation. OSR1 (odd-skipped related 1), also designated ODD, is a 266 amino acid protein that is expressed in the colon, small intestine, prostate, testis and fetal lung. OSR1 is upregulated in several pancreatic and esophageal cancer cell lines and downregulated in some primary gastric cancers. OSR1 contains three C₂H₂-type zinc fingers, a tyrosine phosphorylation site and several putative PXXP SH3 binding motifs. OSR1 may play a critical role in metanephric kidney formation. Absence of OSR1 in mice causes lack of formation of the metanephric mesenchyme and null expression of EYA1, Six2, Pax, Sall1 and GDNF, which are proteins involved in normal kidney development.

REFERENCES

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- Kawai, S., et al. 2007. Zinc-finger transcription factor odd-skipped related 2 is one of the regulators in osteoblast proliferation and bone formation. J. Bone Miner. Res. 22: 1362-1372.

CHROMOSOMAL LOCATION

Genetic locus: *Osr1* (mouse) mapping to 12 A1.1.

PRODUCT

OSR1 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 OSR1 shRNA Plasmid (m): sc-62722-SH and OSR1 shRNA (m) Lentiviral Particles: sc-62722-V as alternate gene silencing products.

For independent verification of OSR1 (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-62722A, sc-62722B and sc-62722C.

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

OSR1 siRNA (m) is recommended for the inhibition of OSR1 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

OSR1 (C-8): sc-376545 is recommended as a control antibody for monitoring of OSR1 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 OSR1 gene expression knockdown using RT-PCR Primer: OSR1 (m)-PR: sc-62722-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.