SANTA CRUZ BIOTECHNOLOGY, INC.

MISR II siRNA (m): sc-62622

BACKGROUND

MISR II (anti-Muellerian hormone type-2 receptor, MIS type II receptor) is a 573 amino acid protein encoded by the human gene AMHR2. MISR II belongs to the protein kinase superfamily, TKL Ser/Thr protein kinase family, TGFB receptor subfamily and contains one protein kinase domain. Upon ligand binding, MISR II forms a receptor complex consisting of two type II and two type I transmembrane serine/threonine kinases. These type II receptors phosphorylate and activate type I receptors which autophosphorylate, then bind and activate Smad transcriptional regulators. MISR II also acts as a receptor for anti-Muellerian hormone. Defects in AMHR2 are the cause of persistent Muellerian duct syndrome type 2 (PMDS-2). PMDS-2 is a form of male pseudohermaphroditism characterized by a failure of Muellerian duct regression in otherwise normal males.

REFERENCES

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2. Imbeaud, S., et al. 1996. Insensitivity to anti-Mullerian hormone due to a mutation in the human anti-Mullerian hormone receptor. Nat. Genet. 11: 382-388.
3. Imbeaud, S., et al. 1997. A 27 base-pair deletion of the anti-Mullerian type II receptor gene is the most common cause of the persistent Mullerian duct syndrome. Hum. Mol. Genet. 5: 1269-1277.
4. Mishina, Y., et al. 1997. Genetic analysis of the Mullerian-inhibiting substance signal transduction pathway in mammalian sexual differentiation. Genes Dev. 10: 2577-2587.
5. Kunieda, T., et al. 1998. The gene encoding anti-Mullerian hormone type 2 receptor maps to mouse chromosome 15. Mamm. Genome 9: 259.
6. Messika-Zeitoun, L., et al. 2001. Autosomal recessive segregation of a truncating mutation of anti-Mullerian type II receptor in a family affected by the persistent Mullerian duct syndrome contrasts with its dominant negative activity *in vitro*. J. Clin. Endocrinol. Metab. 86: 4390-4397.

CHROMOSOMAL LOCATION

Genetic locus: Amhr2 (mouse) mapping to 15 F3.

PRODUCT

MISR II 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 MISR II shRNA Plasmid (m): sc-62622-SH and MISR II shRNA (m) Lentiviral Particles: sc-62622-V as alternate gene silencing products.

For independent verification of MISR II (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-62622A, sc-62622B and sc-62622C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

MISR II siRNA (m) is recommended for the inhibition of MISR II 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MISR II gene expression knockdown using RT-PCR Primer: MISR II (m)-PR: sc-62622-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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