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tNOX siRNA (m): sc-154543

BACKGROUND

tNOX (tumor-associated hydroquinone oxidase), also known as ENOX2 (ecto-NOX disulfide-thiol exchanger 2), COVA1 or APK1, is a 610 amino acid protein that localizes to the cell membrane, as well as to the extracellular space, and contains one RRM domain. Expressed on cell borders and in the sera of breast, lung, prostate, kidney and ovarian cancers, tNOX is involved in cell growth and is thought to act as a terminal oxidase that uses copper as a cofactor to catalyze the transfer of electrons from cytosolic NAD(P)H via hydroquinones to acceptors at the cell surface. tNOX is subject to post-translational glycosylation and is functionally inhibited by the antitumor sulfonyleurea LY181984, the vabillloid capsaicin and retinoids. Multiple isoforms of tNOX exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: *Enox2* (mouse) mapping to X A4.

PRODUCT

tNOX 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 tNOX shRNA Plasmid (m): sc-154543-SH and tNOX shRNA (m) Lentiviral Particles: sc-154543-V as alternate gene silencing products.

For independent verification of tNOX (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-154543A, sc-154543B and sc-154543C.

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

tNOX siRNA (m) is recommended for the inhibition of tNOX 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 tNOX gene expression knockdown using RT-PCR Primer: tNOX (m)-PR: sc-154543-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.