SANTA CRUZ BIOTECHNOLOGY, INC.

MAGP-2 siRNA (m): sc-60983

BACKGROUND

Elastic fibers endow loose connective tissue with a resilience that complements the tensile strength of collagenous fibers. They are composed of the protein elastin and a network of 10-12 nm microfibrils, which contain several glycoproteins, including fibrillin-1, fibrillin-2 and the microfibril-associated glycoproteins MAGP-1 and MAGP-2. MAGP-2 functions in maintaining extracellular matrix homeostasis through the stabilization of Type I Procollagen and through the binding of fibrillins to tropoelastin in the extracellular matrix of several elastic and non-elastic tissues. MAGP-2 may function outside of its role in elastic fibers and play a role in cellular differentiation through the binding of Notch 1, which leads to the release of Notch 1 extracellular domain, the subsequent activation of its signaling pathway and the release of soluble Jagged1.

REFERENCES

1. Gibson M.A. and Cleary E.G. 1987. The immunohistochemical localisation of microfibril-associated glycoprotein (MAGP) in elastic and non-elastic tissues. Immunol. Cell Biol. 65: 345-356.
2. Kumaratilake J.S., et al. 1989. The tissue distribution of microfibrils reacting with a monospecific antibody to MAGP, the major glycoprotein antigen of elastin-associated microfibrils. Eur. J. Cell Biol. 50: 117-127.
3. Gibson M.A., et al. 1991. Complementary DNA cloning establishes microfibril-associated glycoprotein (MAGP) to be a discrete component of the elastin-associated microfibrils. J. Biol. Chem. 266: 7596-7601.
4. Chen, Y., et al. 1993. Structure, chromosomal localization, and expression pattern of the murine MAGP gene. J. Biol. Chem. 268: 27381-27389.
5. Gibson, M.A., et al. 1996. Further characterization of proteins associated with elastic fiber microfibrils including the molecular cloning of MAGP-2 (MP25). J. Biol. Chem. 271: 1096-1103.
6. Lemaire, R., et al. 2005. Increased expression of type I collagen induced by microfibril-associated glycoprotein 2: novel mechanistic insights into the molecular basis of dermal fibrosis in scleroderma. Arthritis Rheum. 52: 1812-1823.

CHROMOSOMAL LOCATION

Genetic locus: Mfap5 (mouse) mapping to 6 F1.

PRODUCT

MAGP-2 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 MAGP-2 shRNA Plasmid (m): sc-60983-SH and MAGP-2 shRNA (m) Lentiviral Particles: sc-60983-V as alternate gene silencing products.

For independent verification of MAGP-2 (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-60983A, sc-60983B and sc-60983C.

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

MAGP-2 siRNA (m) is recommended for the inhibition of MAGP-2 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 MAGP-2 gene expression knockdown using RT-PCR Primer: MAGP-2 (m)-PR: sc-60983-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.