SANTA CRUZ BIOTECHNOLOGY, INC.

TEM5 siRNA (m): sc-61662

BACKGROUND

Tumor endothelial markers (TEMs) are abundantly expressed in the blood vessels of human solid tumors during angiogenesis and neoangiogensis. These include TEM1 (endosialin), TEM5 (G protein-coupled receptor 124) and TEM7 (plexin domain containing 1). TEMs are associated with the cell surface membrane at low levels in normal human and mouse tissues. TEM5 is a seven-pass transmembrane receptor, whereas TEM1, TEM7 and TEM8 span the membrane once. TEM5 expression is elevated during tumor angiogenesis and neoangiogenesis. TEM7 is highly expressed in tumor endothelium and neurons. Therefore, TEM5 and TEM7 may be suitable targets for the development of antiangiogenic therapies.

REFERENCES

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2. Yamamoto, Y., Irie, K., Asada, M., Mino, A., Mandai, K. and Takai, Y. 2004. Direct binding of the human homologue of the Drosophila disc large tumor suppressor gene to seven-pass transmembrane proteins, tumor endothelial marker 5 (TEM5), and a novel TEM5-like protein. Oncogene 23: 3889-3897.
3. Wang, X.Q., Sheibani, N. and Watson, J.C. 2005. Modulation of tumor endothelial cell marker 7 expression during endothelial cell capillary morphogenesis. Microvasc. Res. 70: 189-197.
4. Lee, H.K., Kang, D.S., Seo, I.A., Choi, E.J., Park, H.T. and Park, J.I. 2006. Expression of tumor endothelial marker 7 mRNA and protein in the dorsal root ganglion neurons of the rat. Neurosci. Lett. 402: 71-75.
5. Lee, H.K., Seo, I.A., Park, H.K. and Park, H.T. 2006. Identification of the basement membrane protein nidogen as a candidate ligand for tumor endothelial marker 7 *in vitro* and *in vivo*. FEBS Lett. 580: 2253-2257.

CHROMOSOMAL LOCATION

Genetic locus: Gpr124 (mouse) mapping to 8 A2.

PRODUCT

TEM5 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 TEM5 shRNA Plasmid (m): sc-61662-SH and TEM5 shRNA (m) Lentiviral Particles: sc-61662-V as alternate gene silencing products.

For independent verification of TEM5 (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-61662A, sc-61662B and sc-61662C.

PROTOCOLS

See our web site at 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 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

TEM5 siRNA (m) is recommended for the inhibition of TEM5 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 TEM5 gene expression knockdown using RT-PCR Primer: TEM5 (m)-PR: sc-61662-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.