SANTA CRUZ BIOTECHNOLOGY, INC.

PLP-J siRNA (m): sc-152334

BACKGROUND

Members of the prolactin (PRL) protein family are expressed primarily in the uterus, placenta and anterior pituitary, and play a role in maternal-fetal adaptations to pregnancy. Prolactin plays a role in multiple processes, including cell growth, reproduction and immune function. In addition to its role in mammary development and lactation, Prolactin is known to play a role in the development of mammary cancer, acting as both a mitogen and a differentiating agent. PLP-J (placental prolactin-like protein J), also known as Prl3c1 (prolactin family 3, subfamily c, member 1) or Decidualin, is a 212 amino acid secreted protein that belongs to the somatotropin/prolactin family. Acting as a regulator of postimplantation intrauterine events, PLP-J also plays a role in the proliferation of uterine stromal cells and inhibited endothelial cell proliferation. PLP-J is expressed in maternal decidua, as opposed to other members of the PRL family, which are expressed primarily in placental trophoblasts.

REFERENCES

1. Ishibashi, K. and Imai, M. 1999. Identification of four new members of the rat prolactin/growth hormone gene family. Biochem. Biophys. Res. Commun. 262: 575-578.
2. Toft, D.J. and Linzer, D.I. 1999. Prolactin (PRL)-like protein J, a novel member of the PRL/growth hormone family, is exclusively expressed in maternal decidua. Endocrinology 140: 5095-5101.
3. Dai, G., Wang, D., Liu, B., Kasik, J.W., Müller, H., White, R.A., Hummel, G.S. and Soares, M.J. 2000. Three novel paralogs of the rodent prolactin gene family. J. Endocrinol. 166: 63-75.
4. Alam, S.M., Konno, T., Sahgal, N., Lu, L. and Soares, M.J. 2008. Decidual cells produce a heparin-binding prolactin family cytokine with putative intrauterine regulatory actions. J. Biol. Chem. 283: 18957-18968.
5. Hayakawa, K., Nakanishi, M.O., Ohgane, J., Tanaka, S., Hirosawa, M., Soares, M.J., Yagi, S. and Shiota, K. 2012. Bridging sequence diversity and tissue-specific expression by DNA methylation in genes of the mouse prolactin superfamily. Mamm. Genome 23: 336-345.

CHROMOSOMAL LOCATION

Genetic locus: Prl3c1 (mouse) mapping to 13 A3.1.

PRODUCT

PLP-J 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 PLP-J shRNA Plasmid (m): sc-152334-SH and PLP-J shRNA (m) Lentiviral Particles: sc-152334-V as alternate gene silencing products.

For independent verification of PLP-J (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-152334A, sc-152334B and sc-152334C.

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

PLP-J siRNA (m) is recommended for the inhibition of PLP-J 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 PLP-J gene expression knockdown using RT-PCR Primer: PLP-J (m)-PR: sc-152334-PR (20 µl, 460 bp). 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.