SANTA CRUZ BIOTECHNOLOGY, INC.

PXDNL siRNA (h): sc-77868

BACKGROUND

PXDNL (peroxidasin-like protein), also known as VPO2 (vascular peroxidase 2), is a 1,463 amino acid secreted protein that exists as two alternatively spliced isoforms, and belongs to the peroxidase family and the XPO subfamily. PXDNL contains five LRR (leucine-rich repeats), four Ig-like C2-type (immunoglobulin-like) domains, one LRRCT domain, one LRRNT domain and one VWFC domain. While it binds one calcium ion per subunit, PXDNL also convalently binds one heme B (iron-protoporphyrin IX) group per subunit. The gene that encodes PXDNL consists of approximately 489,869 bases and maps to human chromosome 8q11.22. Chromosome 8, which consists of nearly 146 million base pairs and encodes over 800 genes, is associated with a variety of diseases and malignancies, including schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas.

REFERENCES

1. Kashino, G., et al. 2001. Preferential expression of an intact WRN gene in Werner syndrome cell lines in which a normal chromosome 8 has been introduced. Biochem. Biophys. Res. Commun. 289: 111-115.
2. Selicorni, A., et al. 2002. Cytogenetic mapping of a novel locus for type II Waardenburg syndrome. Hum. Genet. 110: 64-67.
3. McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. Am. J. Hum. Genet. 77: 582-595.
4. Mossafa, H., et al. 2006. Non-Hodgkin's lymphomas with Burkitt-like cells are associated with c-Myc amplification and poor prognosis. Leuk. Lymphoma 47: 1885-1893.
5. Agrelo, R., et al. 2006. Epigenetic inactivation of the premature aging Werner syndrome gene in human cancer. Proc. Natl. Acad. Sci. USA 103: 8822-8827.
6. Cheng, G., et al. 2008. Identification and characterization of VPO1, a new animal heme-containing peroxidase. Free Radic. Biol. Med. 45: 1682-1694.

CHROMOSOMAL LOCATION

Genetic locus: PXDNL (human) mapping to 8q11.22.

PRODUCT

PXDNL siRNA (h) 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 PXDNL shRNA Plasmid (h): sc-77868-SH and PXDNL shRNA (h) Lentiviral Particles: sc-77868-V as alternate gene silencing products.

For independent verification of PXDNL (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-77868A, sc-77868B and sc-77868C.

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

PXDNL siRNA (h) is recommended for the inhibition of PXDNL expression in human 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 PXDNL gene expression knockdown using RT-PCR Primer: PXDNL (h)-PR: sc-77868-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.