SANTA CRUZ BIOTECHNOLOGY, INC.

XPLAC siRNA (h): sc-61809

BACKGROUND

Kell and XK are two covalently linked plasma membrane proteins that constitute the Kell blood group system, a group of antigens on the surface of red blood cells that are important determinants of blood type and targets for autoimmune or alloimmune diseases. XK is a 444 amino acid protein that spans the membrane ten times and carries the ubiquitous antigen, KX, which determines blood type. XK also plays a role in the sodium-dependent membrane transport of oligopeptides and neutral amino acids. XPLAC is a 462 amino acid member of the XK family that is expressed mostly in placenta and adrenal gland. The XPLAC gene is located on the X chromosome at position q22.1.

REFERENCES

1. Lee, S., Russo, D.C., Pu, J., Ho, M. and Redman, C.M. 2000. The mouse Kell blood group gene (Kel): cDNA sequence, genomic organization, expression, and enzymatic function. Immunogenetics 52: 53-62.
2. Russo, D., Wu, X., Redman, C.M. and Lee, S. 2000. Expression of Kell blood group protein in nonerythroid tissues. Blood 96: 340-346.
3. Feder, M. and Bujnicki, J.M. 2005. Identification of a new family of putative PD-(D/E)XK nucleases with unusual phylogenomic distribution and a new type of the active site. BMC Genomics 6: 21.
4. He, Y., Tabibi, S.E. and Yalkowsky, S.H. 2005. Solubilization of two structurally related anticancer drugs: XK-469 and PPA. J. Pharm. Sci. 95: 97-107.
5. Renzetti, G., Villani, A., Bizzarri, C., Chessa, L., Vignati, E., Gianotti, A., Cappa, M., Szakacs, J., Townsend, J.J., Miller, M.E., Opitz, J.M., Kennedy, A.M. and Byrne, J.L. 2005. XK-aprosencephaly and related entities. Am. J. Med. Genet. A 138: 401-410.
6. Calenda, G., Peng, J., Redman, C.M., Sha, Q., Wu, X. and Lee, S. 2006. Identification of two new members, XPLAC and XTES, of the XK family. Gene 370: 6-16.

CHROMOSOMAL LOCATION

Genetic locus: XKRX (human) mapping to Xq22.1.

PRODUCT

XPLAC 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 XPLAC shRNA Plasmid (h): sc-61809-SH and XPLAC shRNA (h) Lentiviral Particles: sc-61809-V as alternate gene silencing products.

For independent verification of XPLAC (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-61809A, sc-61809B and sc-61809C.

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

XPLAC siRNA (h) is recommended for the inhibition of XPLAC 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 XPLAC gene expression knockdown using RT-PCR Primer: XPLAC (h)-PR: sc-61809-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.