SANTA CRUZ BIOTECHNOLOGY, INC.

Xg siRNA (h): sc-91317

BACKGROUND

Xg (Xg blood group), also known as PBDX, is a 180 amino acid single-pass type I membrane protein belonging to the CD99 family. The gene encoding Xg is found on the pseudoautosomal boundary on the short (p) arm of chromosome X, and is responsible for the Xg blood group system. Comprised of two antigens: Xg(a) and CD99, the Xg blood group system is the only blood group associated with the X chromosome, and is significant for it's contribution to the study of genetics and chromosome mapping. Xg(a) is a cell-surface antigen present on red blood cells, and is 48% homologous to CD99. The clinical significance of CD99 is unknown, while Xg(a) is naturally occurring and is not considered clinically significant.

REFERENCES

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4. Ellis, N.A., Ye, T.Z., Patton, S., German, J., Goodfellow, P.N. and Weller, P. 1994. Cloning of PBDX, an MIC2-related gene that spans the pseudoautosomal boundary on chromosome Xp. Nat. Genet. 6: 394-400.
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7. Fouchet, C., Gane, P., Cartron, J.P. and Lopez, C. 2000. Quantitative analysis of Xg blood group and CD99 antigens on human red cells. Immunogenetics 51: 688-694.
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CHROMOSOMAL LOCATION

Genetic locus: XG (human) mapping to Xp22.33.

PRODUCT

Xg 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 Xg shRNA Plasmid (h): sc-91317-SH and Xg shRNA (h) Lentiviral Particles: sc-91317-V as alternate gene silencing products.

For independent verification of Xg (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-91317A, sc-91317B and sc-91317C.

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

Xg siRNA (h) is recommended for the inhibition of Xg 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 Xg gene expression knockdown using RT-PCR Primer: Xg (h)-PR: sc-91317-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.