SANTA CRUZ BIOTECHNOLOGY, INC.

# PTPN13LY siRNA (h): sc-76289

## BACKGROUND

The protein tyrosine phosphatase (PTP) family of proteins are signaling molecules that regulate processes such as cell growth, cell differentiation, oncogenic transformation and the mitotic cycle. PTPN13LY (PTPN13-like, Y-linked), also known as PRY, PTPN13LY2 or PRY2, is a 147 amino acid protein that localizes to the testis and may function in a similar manner to PTP proteins. The gene encoding PTPN13LY maps to human chromosome Y and is expressed as two alternatively spliced isoforms. Chromosome Y contains approximately 58 million base pairs and houses over 80 genes, many of which are essential for proper sexual development. The Y chromosome is the human sex determining chromosome, necessary for male development and, while deletions or defects in chromosome Y-encoded genes are not lethal, they may greatly impair masculine development and function.

## REFERENCES


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2. Yen, P.H. 1998. A long-range restriction map of deletion interval 6 of the human Y chromosome: a region frequently deleted in azoospermic males. Genomics 54: 5-12.
3. Stouffs, K., et al. 2001. Characterization of the genomic organization, localization and expression of four PRY genes (PRY1, PRY2, PRY3 and PRY4). Mol. Hum. Reprod. 7: 603-610.
4. Skaletsky, H., et al. 2003. The male-specific region of the human Y chromosome is a mosaic of discrete sequence classes. Nature 423: 825-837.
5. Repping, S., et al. 2004. A family of human Y chromosomes has dispersed throughout northern Eurasia despite a 1.8-Mb deletion in the azoospermia factor c region. Genomics 83: 1046-1052.
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7. Krausz, C. and Giachini, C. 2007. Genetic risk factors in male infertility. Arch. Androl. 53: 125-133.
8. Waters, P.D., et al. 2007. Mammalian sex—origin and evolution of the Y chromosome and SRY. Semin. Cell Dev. Biol. 18: 389-400.


## CHROMOSOMAL LOCATION

Genetic locus: PRY (human) mapping to Yq11.223.

## PRODUCT

PTPN13LY siRNA (h) is a target-specific 19-25 nt siRNA 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 PTPN13LY shRNA Plasmid (h): sc-76289-SH and PTPN13LY shRNA (h) Lentiviral Particles: sc-76289-V as alternate gene silencing products.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## 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

PTPN13LY siRNA (h) is recommended for the inhibition of PTPN13LY 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.

## GENE EXPRESSION MONITORING

PTPN13LY (H-9): sc-373748 is recommended as a control antibody for monitoring of PTPN13LY gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PTPN13LY gene expression knockdown using RT-PCR Primer: PTPN13LY (h)-PR: sc-76289-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.