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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# PNKD siRNA (m): sc-152353

## BACKGROUND

PNKD (paroxysmal nonkinesigenic dyskinesia protein), also known as Myofibrillogenesis regulator 1 and Trans-activated by hepatitis C virus core protein 2, is a 385 amino acid protein that interacts with sarcomeric proteins such as myosin regulatory light chain,  $\beta$ -enolase and myomesin 1. Due to overexpression studies in mice, it is likely that PNKD plays a significant role in cardiac hypertrophy through activation of the NF $\kappa$ B signaling pathway. There are at least three isoforms of PNKD that are produced as a result of alternative splicing events. Isoform 1 is a peripheral membrane protein, isoform 2 resides in the cytoplasm and nucleus and isoform 3 is associated with the mitochondrion. Defects in the gene encoding PNKD are the cause of dystonia type 8, a paroxysmal non-kinesigenic dystonia/dyskinesia. This disorder is characterized by attacks of involuntary movements brought on by fatigue, alcohol, stress or caffeine.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Pnkd (mouse) mapping to 1 C3.

## PRODUCT

PNKD siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PNKD shRNA Plasmid (m): sc-152353-SH and PNKD shRNA (m) Lentiviral Particles: sc-152353-V as alternate gene silencing products.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20 $^{\circ}$  C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20 $^{\circ}$  C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

PNKD siRNA (m) is recommended for the inhibition of PNKD 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  $\mu$ M in 66  $\mu$ l. 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 PNKD gene expression knockdown using RT-PCR Primer: PNKD (m)-PR: sc-152353-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60 $^{\circ}$  C and the extension temperature should be 68-72 $^{\circ}$  C.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.