

# Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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## Zuschläge

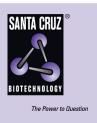
- Mindermengenzuschlag
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#### SANTA CRUZ BIOTECHNOLOGY, INC.

## PDE6β siRNA (m): sc-152131



BACKGROUND

Cyclic guanosine monophosphate (cGMP)-specific phosphodiesterase (PDE6) plays a crucial role in the phototransduction cascade in the vertebrate retina. The enzyme consists of an  $\alpha$  and a  $\beta$  subunit, with catalytic and cGMP binding activity, respectively, as well as two inhibitory  $\gamma$  subunits and a  $\delta$  subunit. PDE6 reduces intracellular cytoplasmic cGMP levels, specifically in photoreceptor cells. Mutations in the human PDE6A gene, which encodes the  $\alpha$  subunit, account for roughly 3-4% of the cases of recessive retinitis pigmentosa (RP) in North America.

#### REFERENCES

- 1. Mohamed, M.K., Taylor, R.E., Feinstein, D.S., Huang, X. and Pittler, S.J. 1998. Structure and upstream region characterization of the human gene encoding rod photoreceptor cGMP phosphodiesterase  $\alpha$ -subunit. J. Mol. Neurosci. 10: 235-250.
- 2. Dryja, T.P., Rucinski, D.E., Chen, S.H. and Berson, E.L. 1999. Frequency of mutations in the gene encoding the  $\alpha$  subunit of rod cGMP-phosphodiesterase in autosomal recessive retinitis pigmentosa. Invest. Ophthalmol. Vis. Sci. 40: 1859-1865.
- 3. Dekomien, G. and Epplen, J.T. 2000. Exclusion of the PDE6A gene for generalised progressive retinal atrophy in 11 breeds of dog. Anim. Genet. 31: 135-139.
- 4. Pittler, S.J., Zhang, Y., Chen, S., Mears, A.J., Zack, D.J., Ren, Z., Swain, P.K., Yao, S., Swaroop, A. and White, J.B. 2004. Functional analysis of the rod photoreceptor cGMP phosphodiesterase  $\alpha$ -subunit gene promoter: NrI and Crx are required for full transcriptional activity. J. Biol. Chem. 279: 19800-19807.

#### CHROMOSOMAL LOCATION

Genetic locus: Pde6b (mouse) mapping to 5 F.

#### PRODUCT

PDE6 $\beta$  siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PDE6 $\beta$  shRNA Plasmid (m): sc-152131-SH and PDE6 $\beta$  shRNA (m) Lentiviral Particles: sc-152131-V as alternate gene silencing products.

For independent verification of PDE6 $\beta$  (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152131A, sc-152131B and sc-152131C.

#### 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  $\mu$ 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

PDE6 $\beta$  siRNA (m) is recommended for the inhibition of PDE6 $\beta$  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.

#### **GENE EXPRESSION MONITORING**

PDE6 $\beta$  (B-8): sc-377486 is recommended as a control antibody for monitoring of PDE6 $\beta$  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 (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

#### **RT-PCR REAGENTS**

Semi-quantitative RT-PCR may be performed to monitor PDE6 $\beta$  gene expression knockdown using RT-PCR Primer: PDE6 $\beta$  (m)-PR: sc-152131-PR (20  $\mu$ l). 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 or our catalog for detailed protocols and support products.