

# GR siRNA (m): sc-35506

## BACKGROUND

The glucocorticoid receptor (GR) is a ubiquitously expressed transcription factor that mediates the effects of glucocorticoids. The most abundant isoform is GR  $\alpha$ . GR induces or represses the expression of genes in response to glucocorticoids, mediating such processes as apoptosis, cell growth and differentiation. A significant class of genes suppressed by GR is controlled by the transcription factor AP-1. GR has also been shown to be the limiting factor in the induction of gene expression by glucocorticoids. It has been revealed that GR forms a complex with HSP 90, rendering the non-ligand bound receptor transcriptionally inactive. More importantly, mutant GRs lacking the signaling domain remain constitutively active.

## CHROMOSOMAL LOCATION

Genetic locus: Nr3c1 (mouse) mapping to 18 B3.

## PRODUCT

GR 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 GR shRNA Plasmid (m): sc-35506-SH and GR shRNA (m) Lentiviral Particles: sc-35506-V as alternate gene silencing products.

For independent verification of GR (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-35506A, sc-35506B and sc-35506C.

## 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

GR siRNA (m) is recommended for the inhibition of GR 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

GR (G-5): sc-393232 is recommended as a control antibody for monitoring of GR 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-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GR gene expression knockdown using RT-PCR Primer: GR (m)-PR: sc-35506-PR (20  $\mu$ l, 470 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

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3. Chen, S., et al. 2014. Control of hepatic gluconeogenesis by the promyelocytic leukemia zinc finger protein. *Mol. Endocrinol.* 28: 1987-1998.
4. Whyte-Allman, S.K., et al. 2017. Xenobiotic nuclear receptors pregnane X receptor and constitutive androstane receptor regulate antiretroviral drug efflux transporters at the blood-testis barrier. *J. Pharmacol. Exp. Ther.* 363: 324-335.
5. Kageyama, S., et al. 2018. Recombinant relaxin protects liver transplants from ischemia damage by hepatocyte glucocorticoid receptor: from bench-to bedside. *Hepatology* 68: 258-273.
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7. Sasaki, T., et al. 2020. Effect of proton pump inhibitors on colorectal cancer. *Int. J. Mol. Sci.* 21: 3877.
8. Zhang, C., et al. 2021. Hypoxia- and dexamethasone-dependent HIF1 $\alpha$ -glucocorticoid receptor interaction leads to degradation of glucocorticoid receptor in pituitary adenomas. *Am. J. Transl. Res.* 13: 684-695.
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## RESEARCH USE

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