SANTA CRUZ BIOTECHNOLOGY, INC.

GR (F-10): sc-376426

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The glucocorticoid receptor (GR) is a ubiquitously expressed transcription factor that mediates the effects of glucocorticoids. The most abundant isoform is GR α. 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.

REFERENCES

1. Hollenberg, S.M., et al. 1985. Primary structure and expression of a functional human glucocorticoid receptor cDNA. Nature 318: 635-641.
2. Strähle, U., et al. 1992. At least three promoters direct expression of the mouse glucocorticoid receptor gene. Proc Natl. Acad. Sci. USA 89: 6731-6735.

CHROMOSOMAL LOCATION

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

SOURCE

GR (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 5-33 at the N-terminus of GR α of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-376426 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-376426 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GR (F-10) is recommended for detection of GR α and GR β of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GR siRNA (m): sc-35506, GR shRNA Plasmid (m): sc-35506-SH and GR shRNA (m) Lentiviral Particles: sc-35506-V.

GR (F-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GR α: 95 kDa.

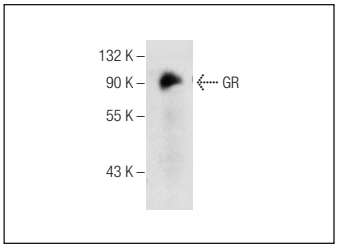
Molecular Weight of GR β: 90 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, KNRK nuclear extract: sc-2141 or c4 whole cell lysate: sc-364186.

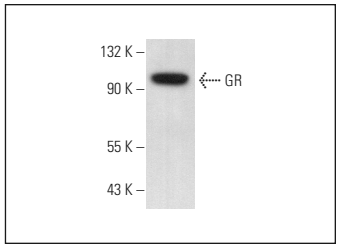
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



GR (F-10): sc-376426. Western blot analysis of GR expression in NIH/3T3 nuclear extract.



GR (F-10): sc-376426. Western blot analysis of GR expression in c4 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhao, L., et al. 2015. Inhibition of 11β-HSD1 by LG13 improves glucose metabolism in type 2 diabetic mice. J. Mol. Endocrinol. 55: 119-131.
2. Xiao, H., et al. 2018. Increased H3K27ac level of ACE mediates the intergenerational effect of low peak bone mass induced by prenatal dexamethasone exposure in male offspring rats. Cell Death Dis. 9: 638.
3. Xiao, H., et al. 2020. The low-expression programming of 11β-HSD2 mediates osteoporosis susceptibility induced by prenatal caffeine exposure in male offspring rats. Br. J. Pharmacol. 177: 4683-4700.
4. Chen, Y., et al. 2021. Sex difference in adrenal developmental toxicity induced by dexamethasone and its intrauterine programming mechanism. Pharmacol. Res. 174: 105942.
5. Timmermans, S., et al. 2022. Point mutation I634A in the glucocorticoid receptor causes embryonic lethality by reduced ligand binding. J. Biol. Chem. 298: 101574.
6. Shi, H., et al. 2022. Intrauterine programming of cartilaginous 11β-HSD2 induced by corticosterone and caffeine mediated susceptibility to adult osteoarthritis. Ecotoxicol. Environ. Saf. 239: 113624.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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