

GR (A-4): sc-376425



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.

CHROMOSOMAL LOCATION

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

SOURCE

GR (A-4) 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 μ g IgG_{2b} 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-376425 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-376425 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

GR (A-4) 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 μ g per 100-500 μ g 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 (A-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GR α : 95 kDa.

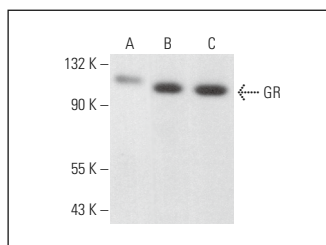
Molecular Weight of GR β : 90 kDa.

Positive Controls: BYDP whole cell lysate: sc-364368, c4 whole cell lysate: sc-364186 or MM-142 cell lysate: sc-2246.

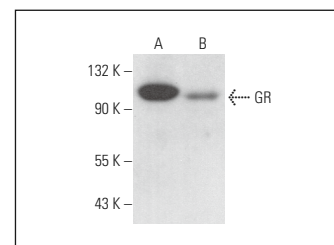
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 (A-4): sc-376425. Western blot analysis of GR expression in BYDP (A), C2C12 (B) and Neuro-2A (C) whole cell lysates.



GR (A-4): sc-376425. Western blot analysis of GR expression in c4 (A) and MM-142 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Allan, A.M., et al. 2014. Prenatal alcohol exposure modifies glucocorticoid receptor subcellular distribution in the medial prefrontal cortex and impairs frontal cortex-dependent learning. *PLoS ONE* 9: e96200.
- Caldwell, K.K., et al. 2018. Sex-specific deficits in biochemical but not behavioral responses to delay fear conditioning in prenatal alcohol exposure mice. *Neurobiol. Learn. Mem.* 156: 1-16.
- Cheng, W., et al. 2019. Neonatal isolation modulates glucocorticoid-receptor function and synaptic plasticity of hippocampal and amygdala neurons in a rat model of single prolonged stress. *J. Affect. Disord.* 246: 682-694.

RESEARCH USE

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

PROTOCOLS

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



See **GR (G-5): sc-393232** for GR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.