SANTA CRUZ BIOTECHNOLOGY, INC.

GR (G-5): sc-393232

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.

CHROMOSOMAL LOCATION

Genetic locus: NR3C1 (human) mapping to 5q31.3; Nr3c1 (mouse) mapping to 18 B3.

SOURCE

GR (G-5) is a mouse monoclonal antibody raised against amino acids 121-420 of GR of human origin.

PRODUCT

Each vial contains 200 µg 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-393232 X, 200 µg/0.1 ml.

GR (G-5) is available conjugated to agarose (sc-393232 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393232 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393232 PE), fluorescein (sc-393232 FITC), Alexa Fluor® 488 (sc-393232 AF488), Alexa Fluor® 546 (sc-393232 AF546), Alexa Fluor® 594 (sc-393232 AF594) or Alexa Fluor® 647 (sc-393232 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393232 AF680) or Alexa Fluor® 790 (sc-393232 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GR (G-5) is recommended for detection of GR α and GR β of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-35505, GR siRNA (m): sc-35506, GR shRNA Plasmid (h): sc-35505-SH, GR shRNA Plasmid (m): sc-35506-SH, GR shRNA (h) Lentiviral Particles: sc-35505-V and GR shRNA (m) Lentiviral Particles: sc-35506-V.

GR (G-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

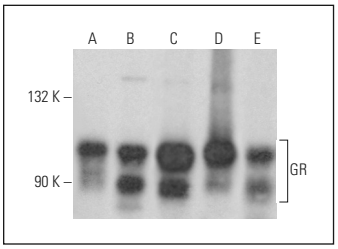
Molecular Weight of GR α/β: 95/90 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Hep G2 whole cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

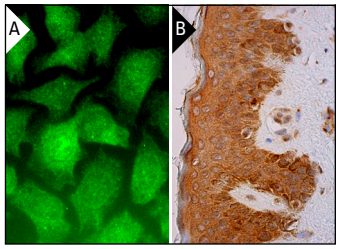
STORAGE

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

DATA



GR (G-5): sc-393232. Western blot analysis of GR expression in Hep G2 (**A**), Jurkat (**B**) and A-431 (**C**) whole cell lysates, A-431 nuclear extract (**D**) and mouse brain tissue extract (**E**).



GR (G-5): sc-393232. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nuclear staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes (**B**).

SELECT PRODUCT CITATIONS

1. Sasse, S.K., et al. 2015. Response element composition governs correlations between binding site affinity and transcription in glucocorticoid receptor feed-forward loops. J. Biol. Chem. 290: 19756-19769.
2. Chu, W., et al. 2016. C2C12 myotubes inhibit the proliferation and differentiation of 3T3-L1 preadipocytes by reducing the expression of glucocorticoid receptor gene. Biochem. Biophys. Res. Commun. 472: 68-74.
3. Trusca, V.G., et al. 2017. Differential action of glucocorticoids on apolipoprotein E gene expression in macrophages and hepatocytes. PLoS ONE 12: e0174078.
4. Bachman, A.B., et al. 2018. Phosphorylation induced cochaperone unfolding promotes kinase recruitment and client class-specific Hsp90 phosphorylation. Nat. Commun. 9: 265.
5. Taves, M.D., et al. 2019. Single-cell resolution and quantitation of targeted glucocorticoid delivery in the thymus. Cell Rep. 26: 3629-3642.e4.
6. Hong, J.Y., et al. 2020. Long-term programming of CD8 T cell immunity by perinatal exposure to glucocorticoids. Cell 180: 847-861.e15.
7. Chen, T.C., et al. 2021. The role of striated muscle Pik3r1 in glucose and protein metabolism following chronic glucocorticoid exposure. J. Biol. Chem. 296: 100395.
8. Liu, B., et al. 2021. Loss of endothelial glucocorticoid receptor promotes angiogenesis via upregulation of Wnt/β-catenin pathway. Angiogenesis 24: 631-645.
9. Cabeza, L., et al. 2021. Chronic exposure to glucocorticoids induces suboptimal decision-making in mice. Eur. Neuropsychopharmacol. 46: 56-67.

RESEARCH USE

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