SANTA CRUZ BIOTECHNOLOGY, INC.

GR (E-20): sc-1003

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The glucocorticoid receptor (GR) is an 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 and 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.

SOURCE

GR (E-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of GR α of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-1003 X, 100 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1003 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GR (E-20) is recommended for detection of GR α and GR β of human origin by Western Blotting (starting dilution 1:200, 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 shRNA Plasmid (h): sc-35505-SH and GR shRNA (h) Lentiviral Particles: sc-35505-V.

GR (E-20) 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: A-431 nuclear extract: sc-2122, HeLa nuclear extract: sc-2120 or HeLa whole cell lysate: sc-2200.

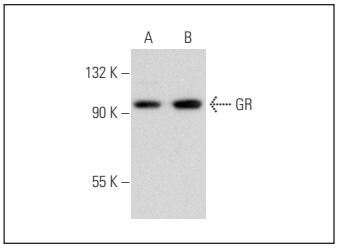
STORAGE

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

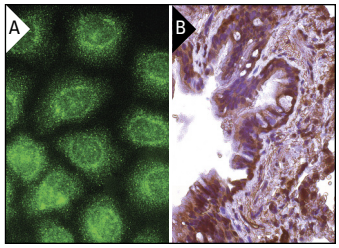
RESEARCH USE

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

DATA



GR (E-20): sc-1003. Western blot analysis of GR expression in A-431 (**A**) and HeLa (**B**) nuclear extracts.



GR (E-20): sc-1003. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing nuclear and cytoplasmic staining of respiratory epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Sengupta, S., et al. 2000. Negative cross-talk between p53 and the glucocorticoid receptor and its role in neuroblastoma cells. EMBO J. 19: 6051-6064.
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3. Scheller, K., et al. 2000. Localization of glucocorticoid hormone receptors in mitochondria of human cells. Eur. J. Cell Biol. 79: 299-307.
4. González, M.V., et al. 2000. Glucocorticoids antagonize AP-1 by inhibiting the activation/phosphorylation of JNK without affecting its subcellular distribution. J. Cell Biol. 150: 1199-1208.
5. Paakinaho, V., et al. 2010. Glucocorticoid receptor activates poised FKBP51 locus through long-distance interactions. Mol. Endocrinol. 24: 511-525.
6. Guo, C., et al. 2010. Induction of progesterone receptor A form attenuates the induction of cytosolic phospholipase A_2 α expression by cortisol in human amnion fibroblasts. Reproduction 139: 915-922.
7. Presman, D.M., et al. 2010. Insights on glucocorticoid receptor activity modulation through the binding of rigid steroids. PLoS ONE 5: e13279.
8. Li, Y.D., et al. 2011. Induction of small G protein RhoB by non-genotoxic stress inhibits apoptosis and activates NFκB. J. Cell. Physiol. 226: 729-738.