abcam

Product datasheet

Anti-Glucocorticoid Receptor antibody [BuGR2] ab2768

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Overview

Product name	Anti-Glucocorticoid Receptor antibody [BuGR2]
Description	Mouse monoclonal [BuGR2] to Glucocorticoid Receptor
Host species	Mouse
Specificity	Immunocytochemical staining of GR in L929 cells with this antibody results in staining of both the cytoplasm and nucleus, even in the presence of hormone. This antibody, using enzymatic digestion analysis, has been shown to react with the undigested 97 kDa GR, a 17 kDa DNA-binding trypsin fragment, and a 45 kDa steroid- and DNA-binding chymotrypsin fragment.
Tested applications	**Suitable for:** ICC/IF, Flow Cyt, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human **Does not react with:** Bird, Non human primates, Amphibian
Immunogen	Full length protein corresponding to Rat Glucocorticoid Receptor. Partially purified rat GR.
Positive control	ICC/IF: A549, HeLa, and U251 cells; Flow Cyt: Jurkat, HeLa, and NIH/3T3 cells; WB: Mouse liver lysate.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituent: PBS
Purity	Protein A purified
Clonality	Monoclonal

Clone number	BuGR2
Isotype	IgG2

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2768 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

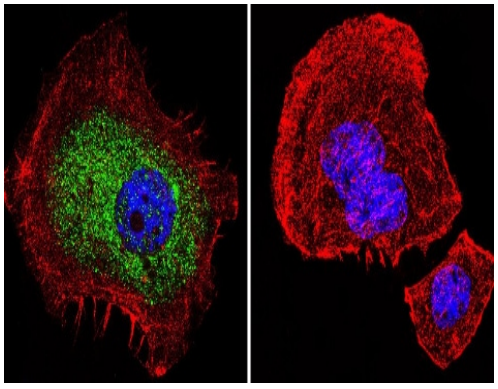
Application	Abreviews	Notes
ICC/IF	★★★★★ (1)	1/50 - 1/500.
Flow Cyt		Use 0.5-1µg for 10^6 cells. **ab18414** - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.
WB	★★★☆☆ (2)	Use a concentration of 5 µg/ml. Detects a band of approximately 97 kDa (predicted molecular weight: 86 kDa). Using enzymatic digestion analysis detects a band of approximately 97 kDa, a 17 kDa DNA-binding trypsin fragment, and a 45 kDa steroid- and DNA-binding chymotrypsin fragment (predicted molecular weight: 86 kDa).

Target

Function	Receptor for glucocorticoids (GC). Has a dual mode of action: as a transcription factor that binds to glucocorticoid response elements (GRE) and as a modulator of other transcription factors. Affects inflammatory responses, cellular proliferation and differentiation in target tissues. Could act as a coactivator for STAT5-dependent transcription upon growth hormone (GH) stimulation and could reveal an essential role of hepatic GR in the control of body growth. Involved in chromatin remodeling. Plays a significant role in transactivation. Involved in nuclear translocation.
Tissue specificity	Widely expressed. In the heart, detected in left and right atria, left and right ventricles, aorta, apex, intraventricular septum, and atrioventricular node as well as whole adult and fetal heart.
Involvement in disease	Defects in NR3C1 are a cause of glucocorticoid resistance (GCRES) [MIM:138040]; also known as cortisol resistance. It is a hypertensive, hyperandrogenic disorder characterized by increased serum cortisol concentrations. Inheritance is autosomal dominant.
Sequence similarities	Belongs to the nuclear hormone receptor family. NR3 subfamily. Contains 1 nuclear receptor DNA-binding domain.
Domain	Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain.
Post-translational modifications	Increased proteasome-mediated degradation in response to glucocorticoids. Phosphorylated in the absence of hormone; becomes hyperphosphorylated in the presence of glucocorticoid. The Ser-203-phosphorylated form is mainly cytoplasmic, and the Ser-211-phosphorylated form is nuclear. Transcriptional activity correlates with the amount of phosphorylation at Ser-211. Sumoylated; this reduces transcription transactivation. Ubiquitinated; restricts glucocorticoid-mediated transcriptional signaling.

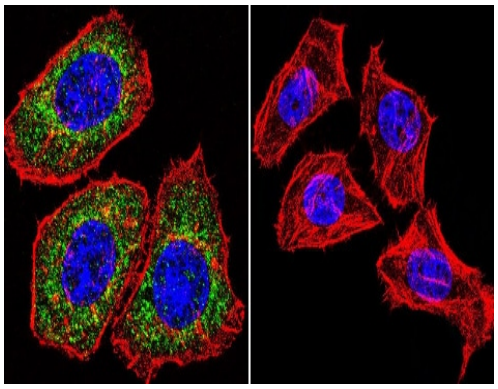
Cellular localization	Cytoplasm. Nucleus. Cytoplasmic in the absence of ligand, nuclear after ligand-binding and Nucleus. Localized largely in the nucleus.

Images



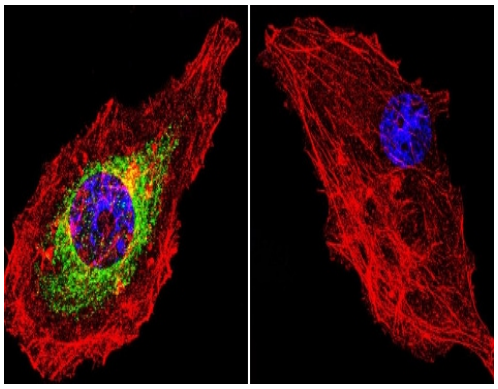
Immunocytochemistry/ Immunofluorescence - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Immunocytochemistry/Immunofluorescence analysis of Glucocorticoid Receptor shows staining in A549 cells. Glucocorticoid Receptor (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with ab2768 (1:100) over night at 4°C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



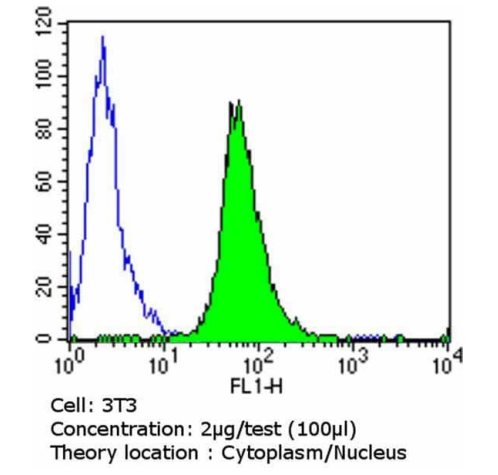
Immunocytochemistry/ Immunofluorescence - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Immunocytochemistry/Immunofluorescence analysis of Glucocorticoid Receptor shows staining in HeLa cells. Glucocorticoid Receptor (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with ab2768 (1:100) over night at 4°C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



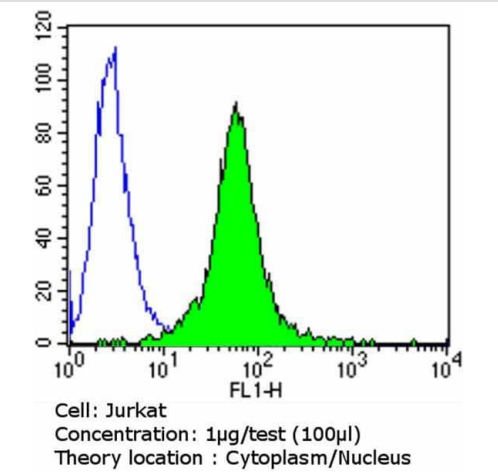
Immunocytochemistry/ Immunofluorescence - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Immunocytochemistry/Immunofluorescence analysis of Glucocorticoid Receptor shows staining in U251 cells. Glucocorticoid Receptor (green), F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue) is shown. Cells were grown on chamber slides and fixed with formaldehyde prior to staining. Cells were probed without (control) or with ab2768 (1:100) over night at 4°C, washed with PBS and incubated with a DyLight-488 conjugated secondary antibody. Images were taken at 60X magnification.



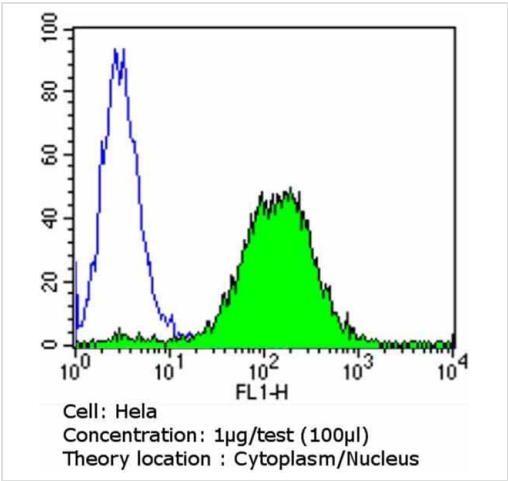
Flow Cytometry - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Flow cytometry analysis of Glucocorticoid Receptor showing positive staining in the nucleus and cytoplasm of NIH/3T3 cells compared to an isotype control (blue). Cells were harvested and adjusted to a concentration of 1-5x10^6 cells/ml. Cells were then fixed with 2% paraformaldehyde and washed with PBS. Cells were penetrated by dropping the supernatant and adding 90% methanol followed by incubation for 10 minutes at room temperature. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with ab2768 at 2 ug/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated goat anti-mouse IgG (H+L) secondary antibody and re-suspended in PBS for FACS analysis.



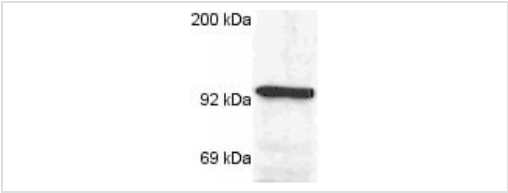
Flow Cytometry - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Flow cytometry analysis of Glucocorticoid Receptor showing positive staining in the nucleus and cytoplasm of Jurkat cells compared to an isotype control (blue). Cells were harvested and adjusted to a concentration of 1-5x10^6 cells/ml. Cells were then fixed with 2% paraformaldehyde and washed with PBS. Cells were penetrated by dropping the supernatant and adding 90% methanol followed by incubation for 10 minutes at room temperature. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and then incubated with ab2768 at 1 ug/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated goat anti-mouse IgG (H+L) secondary antibody and re-suspended in PBS for FACS analysis.



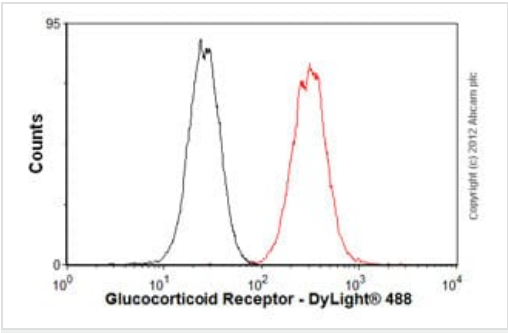
Flow Cytometry - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Flow cytometry analysis of Glucocorticoid Receptor showing positive staining in the nucleus and cytoplasm of Hela cells compared to an isotype control (blue). Cells were harvested and adjusted to a concentration of 1-5x10^6 cells/ml. Cells were then fixed with 2% paraformaldehyde and washed with PBS. Cells were penetrated by dropping the supernatant and adding 90% methanol followed by incubation for 10 minutes at room temperature. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with ab2768 at 1 ug/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated goat anti-mouse IgG (H+L) secondary antibody and re-suspended in PBS for FACS analysis.



Western blot - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Western blot of glucocorticoid receptor on mouse liver extract using ab2768. Western blot of glucocorticoid receptor on mouse liver extract using ab2768.



Flow Cytometry - Anti-Glucocorticoid Receptor antibody [BuGR2] - ChIP Grade (ab2768)

Overlay histogram showing Jurkat cells stained with ab2768 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab2768, 0.5µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG2 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in Jurkat cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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