**Product name**
Anti-Glucocorticoid Receptor antibody

**Description**
Rabbit polyclonal to Glucocorticoid Receptor

**Host species**
Rabbit

**Tested applications**
Suitable for: ICC/IF, IHC-P, Inhibition Assay, ChIP, IP, ICC, WB, IHC-FoFr

**Species reactivity**
Reacts with: Mouse, Rat, Sheep, Rabbit, Hamster, Cow, Human, Saccharomyces cerevisiae, Non human primates

Predicted to work with: Guinea pig, Pig

**Immunogen**
Synthetic peptide corresponding to Human Glucocorticoid Receptor aa 346-367.

Sequence:
DQKPIFNVIPPIPVGSENWNRC

(Peptide available as ab5019)

**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**
Constituent: 100% PBS

**Purity**
Immunogen affinity purified

**Clonality**
Polyclonal

**Isotype**
IgG

**Overview**

**Properties**

**Applications**

Our Abpromise guarantee covers the use of ab3578 in the following tested applications.

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

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<td>Inhibition Assay</td>
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<td>ChIP</td>
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<tr>
<td>IP</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ICC</td>
<td>Use a concentration of 1 µg/ml. Immunocytochemical staining of GR in HeLa cells results in cytoplasmatic staining in the absence of ligand, and nuclear staining after hormone administration.</td>
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<td>WB</td>
<td>Use a concentration of 5 µg/ml. Detects a band of approximately 95 kDa (predicted molecular weight: 86 kDa). Can be blocked with Glucocorticoid Receptor peptide (ab5019).</td>
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<td>EMSA</td>
<td>Use at an assay dependent concentration.</td>
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<td>Use at an assay dependent concentration. PubMed: 18279320</td>
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Target
Nucleus. Localized largely in the nucleus.

Images

Immunocytochemistry/Immunofluorescence analysis of U251 cells labeling Glucocorticoid (green) with ab3578 at 1/20. F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue). Cells were fixed with formaldehyde and incubated with the primary antibody overnight at 4°C. A DyLight 488-conjugated secondary antibody was used. 60X magnification. Right - negative control.

Immunocytochemistry/Immunofluorescence analysis of NIH-3T3 cells labeling Glucocorticoid (green) with ab3578 at 1/20. F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue). Cells were fixed with formaldehyde and incubated with the primary antibody overnight at 4°C. A DyLight 488-conjugated secondary antibody was used. 60X magnification. Right - negative control.

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labeling Glucocorticoid (green) with ab3578 at 1/20. F-Actin staining with Phalloidin (red) and nuclei with DAPI (blue). Cells were fixed with formaldehyde and incubated with the primary antibody overnight at 4°C. A DyLight 488-conjugated secondary antibody was used. 60X magnification. Right - negative control.
ab3578 staining Glucocorticoids Receptors in Mouse brain tissue section by Immunohistochemistry (PFA perfusion fixed frozen sections). Tissue underwent fixation in 4% paraformaldehyde and 15µm sections were cut using cryostat. The primary antibody was diluted, 1/100 in TNB buffer and incubated with sample for 18 hours at 4°C. A HRP conjugated goat polyclonal to rabbit IgG, diluted 1/500 was used as secondary. Red staining represents staining with ab3578 in perilesional cells.

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized Human cervical carcinoma tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH 6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1/200 with a rabbit polyclonal antibody recognizing Glucocorticoid Receptor (ab3578) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized Human tonsil tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH 6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1/200 with a rabbit polyclonal antibody recognizing Glucocorticoid Receptor (ab3578) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.
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