# Anti-Glucocorticoid Receptor antibody [3D5] ab9568

## Overview

### Product name
Anti-Glucocorticoid Receptor antibody [3D5]

### Description
Mouse monoclonal [3D5] to Glucocorticoid Receptor

### Host species
Mouse

### Specificity
This antibody recognizes Glucocorticoid Receptor. It does not react with TGB, BSA and KLH.

### Tested applications
**Suitable for:** ELISA, Flow Cyt, ICC, IHC-Fr, IHC-P, WB, ICC/IF

### Species reactivity
**Reacts with:** Human

**Predicted to work with:** Mouse, Rat 🚸

### Immunogen
Synthetic peptide fragment of a well conserved region of the human corticosteroid receptor (amino acid sequence 150-175, Mw: 2719, APTEKEFPKTHSDVSEQQHLKGQTG).

### Epitope
GCR fragment 150-175, as well as, GCR isolated from HEP/G2 cells cultured in vitro using both simple binding and competition ELISA.

### Positive control
FC: Jurkat cells. IHC-P: Human breast carcinoma tissue. ICC/IF: Human primary neuron cells.

## Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Storage instructions</td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
</tr>
</tbody>
</table>
| Storage buffer            | Preservative: 0.097% Sodium azide  
Constituent: 0.2% BSA |
| Purity                    | Protein A purified                                |
| Clonality                 | Monoclonal                                        |
| Clone number              | 3D5                                              |
| Isotype                   | IgG1                                              |
| Light chain type          | kappa                                             |
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

Applications
Our Abpromise guarantee covers the use of ab9568 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration. A permeabilization step is recommended to detect GCR receptors in peripheral blood and bone marrow cells.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>1/100 - 1/1000.</td>
<td><strong>ab170190</strong> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.</td>
</tr>
<tr>
<td>ICC</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>1/100.</td>
<td></td>
</tr>
<tr>
<td>WB</td>
<td></td>
<td>Use at an assay dependent concentration. Predicted molecular weight: 86 kDa.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>
Nucleus. Localized largely in the nucleus.

Immunohistochemical detection of GCR producing cells in formalin-fixed, paraffin embedded human breast carcinoma tissue sections with ab9568.

Overlay histogram showing Jurkat cells stained with ab9568 (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 (ab9568, 1/1000) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H+L) (ab150113) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. 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.

ab9568 staining human primary neuron cells by ICC/IF. Cells were PFA fixed and permeabilized in 0.2% Triton X 100 in PBST (0.1%Tween) for 30 mins at RT prior to blocking with 10% normal donkey serum for 2 hrs at 21°C. The primary antibody was used at a concentration of 5 µg/ml and incubated with the sample for 18 hrs at 4°C. An Alexa Fluor® 546 conjugated donkey anti-mouse antibody was used as the secondary.

Cells were counterstained with MAP2 and Neurofilament -- Green, and Hoechst's - Blue. Image is 40X, 3D deconvolved 10 planes at 5um steps.
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