CELL APPLICATIONS, INC.

Phospho GR (Ser211) Polyclonal Antibody
Cat. No. CC1038

Applications:	WB, IP, IHC
Detected MW:	95 kDa
Species & Reactivity:	Human, Mouse, Rat
Isotype:	Rabbit IgG

BACKGROUND

The glucocorticoid receptor (GR) is a member of the steroid/thyroid/retinoic acid receptor superfamily. It has demonstrated that multiple isoforms of human GR are generated from one single gene and one mRNA species by the mechanisms of alternative RNA splicing and alternative translation initiation. These isoforms display diverse cytoplasm-to-nucleus trafficking patterns and distinct transcription activities. In addition, each hGR protein can be subjected to a variety of post-translational modifications, such as phosphorylation, sumoylation and ubiquitination. The hGR consists of a centrally located DNA-binding domain, a steroid-binding domain located in the carboxy terminal and an immunogenic domain in the amino terminal half.[1] Binding of glucocorticoids to the GCR is noncovalent, and triggers a process through which the GR converts from its non-DNA-binding to its DNA-binding form. Upon activation the glucocorticoid-GR-complex translocates to the nucleus, traversing the nuclear membrane probably by a facilitated transport mechanism. The hGR regulates the rate of transcription initiation from promoter-sites by binding to specific sequences in the genome, known as hormone-responsive elements (HRE) or glucocorticoid-responsive elements (GRE). Through regulation of various target gene expressions, RA participates in wide ranges of essential biological processes including growth, development, metabolism, behavior and apoptosis.[2] There is compelling evidence that phosphorylation regulates the activity of the steroid receptor superfamily. The glucocorticoid receptor (GR) is phosphorylated at multiple sites within its N terminus (S203, S211, S226). It was demonstrated that cyclin E/cyclin-dependent kinase 2 (Cdk2) phosphorylates GR at S203, whereas cyclin A/Cdk2 phosphorylates both S203 and S211. In addition, GR S211 also appears to be a substrate for p38 MAPK. And S226 is phosphorylated by JNK.[3] GR phosphorylation at S211 and S226 determines GR transcriptional response by modifying cofactor interaction.

References:
1. Gustafsson, JA et al: Endocrine Rev 8:185-234, 1987.
2. Zhou, J & Cidlowski JA:Steroids 70:407-417, 2005.
3. Chen, W. et al: Mol Endocrinol. 22: 1754–1766, 2008.

TECHNICAL INFORMATION

Source:
Phospho-Glucocorticoid Receptor (Ser211) antibody is a rabbit polyclonal antibody raised against the epitope surrounding and including Ser211 of human glucocorticoid receptor sequence.

Specificity and Sensitivity:
This affinity purified antibody detects endogenous phospho-human glucocorticoid receptor proteins in various cell lysate.

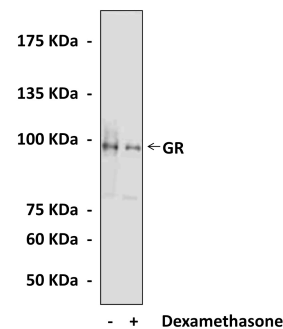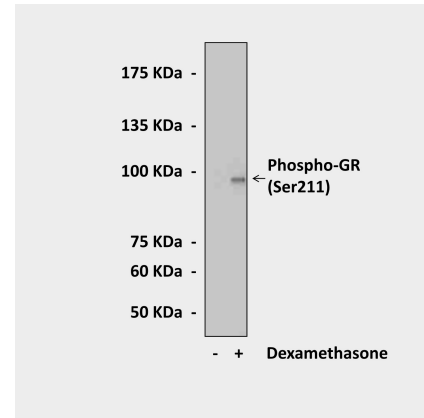**Storage Buffer**: PBS and 30% glycerol

Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC (Paraffin)	n/d
ICC	n/d
FACS	n/d
Optimal dilutions must be determined by end user.	

QUALITY CONTROL DATA

A549 cells were stimulated with dexamethasone and subjected to Western Blot analysis using Phospho-Glucocorticoid Receptor (Ser211) antibody. **(Top)**, or Glucocorticoid antibody **(Bottom)**.