Glucocorticoid Receptor (D8H2) XP® Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:
- WB, IP, IF-IC, FC-FP, ChIP, ChIP-seq

Reactivity:
- H M R Mk

Sensitivity:
- Endogenous

MW (kDa):
- 80, 91, 94

Source/Isotype:
- Rabbit IgG

UniProt ID:
- #P04150

Entrez-Gene Id:
- 2908

Product Usage

Information

For optimal ChIP and ChIP-Seq results, use 5 μl of antibody and 10 μg of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application

Dilution

Western Blotting
- 1:1000

Immunoprecipitation
- 1:100

Immunofluorescence (Immunocytochemistry)
- 1:1600 - 1:6400

Flow Cytometry (Fixed/Permeabilized)
- 1:3200 - 1:6400

Chromatin IP
- 1:100

Chromatin IP-seq
- 1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Glucocorticoid Receptor (D8H2) XP® Rabbit mAb recognizes endogenous levels of total glucocorticoid receptor protein. Based upon sequence alignment, this antibody is predicted to cross-react with all known alternative translation start site generated isoforms of glucocorticoid receptor-α and glucocorticoid receptor-β. This antibody does not cross-react with mineralocorticoid receptor.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu378 of human glucocorticoid receptor protein.

Background

Glucocorticoid hormones control cellular proliferation, inflammation, and metabolism through their association with the glucocorticoid receptor (GR)/NR3C1, a member of the nuclear hormone receptor superfamily of transcription factors (1). GR is composed of several conserved structural elements, including a carboxy-terminal ligand-binding domain (which also contains residues critical for receptor dimerization and hormone-dependent gene transactivation), a neighboring hinge region containing nuclear localization signals, a central zinc-finger-containing DNA-binding domain, and an amino-terminal variable region that participates in ligand-independent gene transcription. In the absence of hormone, a significant population of GR is localized to the cytoplasm in an inactive form via its association with regulatory chaperone proteins, such as HSP90, HSP70, and FKBP52. On hormone binding, GR is released from the chaperone complex and translocates to the nucleus as a dimer to associate with specific DNA sequences termed glucocorticoid response elements (GREs), thereby enhancing or repressing transcription of specific target genes (2). It was demonstrated that GR-mediated transcriptional activation is modulated by phosphorylation (3-5). Although GR can be basally phosphorylated in the absence of hormone, it becomes hyperphosphorylated upon binding receptor agonists. It has been suggested that hormone-dependent phosphorylation of GR may determine target promoter specificity, cofactor interaction, strength and duration of receptor signaling, receptor stability, and receptor subcellular localization (3).

Background References


Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
**Applications Key**
- **WB**: Western Blotting
- **IP**: Immunoprecipitation
- **IF-IC**: Immunofluorescence (Immunocytochemistry)
- **FC-FP**: Flow Cytometry (Fixed/Permeabilized)
- **ChIP**: Chromatin IP
- **ChIP-seq**: Chromatin IP-seq

**Cross-Reactivity Key**
- **H**: human
- **M**: mouse
- **R**: rat
- **Hm**: hamster
- **Mk**: monkey
- **Vir**: virus
- **Mi**: mink
- **Dm**: D. melanogaster
- **X**: Xenopus
- **Z**: zebrafish
- **B**: bovine
- **Dg**: dog
- **Pg**: pig
- **Sc**: S. cerevisiae
- **Ce**: C. elegans
- **Hr**: horse
- **GP**: Guinea Pig
- **Rab**: rabbit
- **All**: all species expected

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