Revision 1

Store at -20C

#58122

Glucocorticoid Receptor (D6H2L) XP® Rabbit mAb (Biotinylated)

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	94, 91	Rabbit IgG	#P04150	2908

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 140 mM NaCl, 3 mM KCl, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

Glucocorticoid Receptor (D6H2L) XP® Rabbit mAb (Biotinylated) recognizes endogenous levels of total GR protein. This antibody reacts with GR-α and GR-β but does not cross-react with mineralocorticoid receptor.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to the amino terminus of human GR protein.

Description

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The biotinylated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Glucocorticoid Receptor (D6H2L) XP® Rabbit mAb #12041.

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

1. Yamamoto, K.R. (1985) *Annu. Rev. Genet* 19, 209-52.
2. Necela, B.M. and Cidlowski, J.A. (2003) *Trends Pharmacol. Sci.* 24, 58-61.
3. Wang, Z. et al. (2002) *J. Biol. Chem.* 277, 26573-80.
4. Rogatsky, I. et al. (1998) *J. Biol. Chem.* 273, 14315-21.
5. Krstic, M. D. et al. (1997) *Mol. Cell. Biol.* 17, 3947-54.

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

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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Limited Uses

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