

Rabbit anti-Human, Mouse GR Polyclonal Antibody | anti-GR antibody

Phospho-GR(Ser203) Antibody

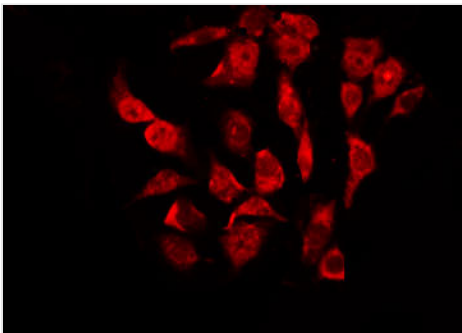
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA320736	Rabbit	Human, Mouse	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

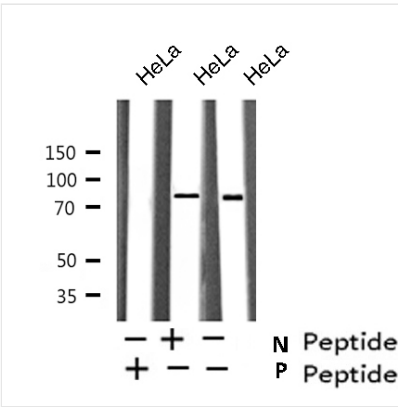
GR; Polyclonal Antibody; Phospho-GR(Ser203) Antibody; GCCR; GCR; GCR_HUMAN; glucocorticoid nuclear receptor variant 1; Glucocorticoid receptor; Glucocorticoid receptor beta isoform; GRL; nr3c1; Nuclear receptor subfamily 3 group C member 1; anti-GR antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-GR(Ser203) antibody detects endogenous levels of GR only when phosphorylated at Sersine 203
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	777
Applicable Applications for anti-GR antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human GR around the phosphorylation site of Sersine 203
Subcellular Location	Cytoplasm. Nucleus. Cytoplasmic in the absence of ligand; nuclear after ligand-binding.
Tissue Specificity	Widely expressed including bone, stomach, lung, liver, colon, breast, ovary, pancreas and kidney (PubMed:25847991). 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 (PubMed:10902803). Isoform Beta: Widely expressed including brain, bone marrow, thymus, spleen, liver, kidney, pancreas, lung, fat, skeletal muscle, heart, placenta and blood leukocytes (PubMed:7769088, PubMed:8621628). Isoform Alpha-2: Expressed at low level.
Conjugation	Unconjugated
Epitope	Phospho Ser203
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)
AAA320736 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)
Western blot analysis on HeLa cell lysate using Phospho-GR(Ser203) Antibody. The lane on the left is treated with the antigen-specific peptide.

Related Product Information for anti-GR antibody	Description: The protein encoded by this gene is a receptor for glucocorticoids and can act as both a transcription factor and a regulator of other transcription factors. The encoded protein can bind DNA as a homodimer or as a heterodimer with another protein such as the retinoid X receptor. This protein can also be found in heteromeric cytoplasmic complexes along with heat shock factors and immunophilins. The protein is typically found in the cytoplasm until it binds a ligand, which induces transport into the nucleus. Mutations in this gene are a cause of glucocorticoid resistance, or cortisol resistance. Alternate splicing, the use of at least three different promoters, and alternate translation initiation sites result in several transcript variants encoding the same protein or different isoforms, but the full-length nature of some variants has not been determined. Function: Receptor for glucocorticoids (GC) (PubMed:27120390). Has a dual mode of action: as a transcription factor that binds to glucocorticoid response elements (GRE), both for nuclear and mitochondrial DNA, and as a modulator of other transcription factors. Affects inflammatory responses, cellular proliferation and differentiation in target tissues. Involved in chromatin remodeling (PubMed:9590696). Plays a role in rapid mRNA degradation by binding to the 5' UTR of target mRNAs and interacting with PNRC2 in a ligand-dependent manner which recruits the RNA helicase UPF1 and the mRNA-decapping enzyme DCP1A, leading to RNA decay (PubMed:25775514). 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 (By similarity). Subunit Structure: Heteromultimeric cytoplasmic complex with HSP90AA1, HSPA1A/HSPA1B, and FKBP5 or another immunophilin such as PPID, STIP1, or the immunophilin homolog PPP5C (PubMed:21730050). Upon ligand binding FKBP5 dissociates from the complex and FKBP4 takes its place, thereby linking the complex to dynein and mediating transport to the nucleus, where the complex dissociates (By similarity). Probably forms a complex composed of chaperones HSP90 and HSP70, co-chaperones CDC37, PPP5C, TSC1 and client protein TSC2, CDK4, AKT, RAF1 and NR3C1; this complex does not contain co-chaperones STIP1/HOP and PTGES3/p23 (PubMed:29127155). Directly interacts with UNC45A (PubMed:16478993). Binds to DNA as a homodimer, and as heterodimer with NR3C2 or the retinoid X receptor. Binds STAT5A and STAT5B homodimers and heterodimers (By similarity). Interacts with NRIP1, POU2F1, POU2F2 and TRIM28 (By similarity). Interacts with several coactivator complexes, including the SMARCA4 complex, CREBBP/EP300, TADA2L (Ada complex) and p160 coactivators such as NCOA2 and NCOA6 (PubMed:10866662, PubMed:12151000, PubMed:12686538, PubMed:9154805, PubMed:9590696). Interaction with BAG1 inhibits transactivation (PubMed:10477749). Interacts with HEXIM1, PELP1 and TGFB1I1 (PubMed:12415108, PubMed:15211577, PubMed:15941832). Interacts with NCOA1 (PubMed:9590696). Interacts with NCOA3, SMARCA4, SMARCC1, SMARCD1, and SMARCE1 (By similarity). Interacts with CLOCK, CRY1 and CRY2 in a ligand-dependent fashion (PubMed:19141540, PubMed:21980503, PubMed:22170608). Interacts with CIART (By similarity). Interacts with RWDD3 (By similarity). Interacts with UBE2I/UBC9 and this interaction is enhanced in the presence of RWDD3 (By similarity). Interacts with GRIP1 (PubMed:15769988, PubMed:17635946). Interacts with NR4A3 (via nuclear receptor DNA-binding domain), represses transcription activity of NR4A3 on the POMC promoter Nur response element (NurRE) (PubMed:15591535). Directly interacts with PNRC2 to attract and form a complex with UPF1 and DCP1A; the interaction leads to rapid mRNA degradation (PubMed:25775514). Interacts with GSK3B (PubMed:18838540). Interacts with FNIP1 and FNIP2 (PubMed:27353360). Interacts (via C-terminus) with HNRNPU (via C-terminus) (PubMed:9353307). Post-translational Modifications: Acetylation by CLOCK reduces its binding to glucocorticoid response elements and its transcriptional activity.Increased proteasome-mediated degradation in response to glucocorticoids (PubMed:11555652). Isoform Alpha-B appears to be more susceptible to proteolytic degradation than isoform Alpha (PubMed:11435610). Phosphorylated in the absence of hormone; becomes hyperphosphorylated in the presence of glucocorticoid. The Ser-203, Ser-226 and Ser-404-phosphorylated forms are mainly cytoplasmic, and the Ser-211-phosphorylated form is nuclear (PubMed:12000743, PubMed:18838540). Phosphorylation at Ser-211 increases transcriptional activity (PubMed:12000743, PubMed:18483179). Phosphorylation at Ser-203, Ser-226 and Ser-404 decreases signaling capacity (PubMed:12000743, PubMed:18483179, PubMed:18838540). Phosphorylation at Ser-404 may protect from glucocorticoid-induced apoptosis (PubMed:18838540). Phosphorylation at Ser-203 and Ser-211 is not required in regulation of chromosome segregation (PubMed:25847991). May be dephosphorylated by PPP5C, attenuates NR3C1 action (By similarity). Sumoylation at Lys-277 and Lys-293 negatively regulates its transcriptional activity (PubMed:12144530). Sumoylation at Lys-703 positively regulates its transcriptional activity in the presence of RWDD3 (By similarity). Sumoylation at Lys-277 and Lys-293 is dispensable whereas sumoylation at Lys-703 is critical for the stimulatory effect of RWDD3 on its transcriptional activity (By similarity). Heat shock increases sumoylation in a RWDD3-dependent manner (By similarity). Ubiquitinated; restricts glucocorticoid-mediated transcriptional signaling. Similarity: Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain (PubMed:3841189). The ligand-binding domain is required for correct chromosome segregation during mitosis although ligand binding is not required (PubMed:25847991). Belongs to the nuclear hormone receptor family. NR3 subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4504133
NCBI GeneID	2908
NCBI Accession #	NP_000167.1
NCBI GenBank Nucleotide #	NM_000176.2
UniProt Accession #	P04150; P04151; Q53EP5; Q6N0A4; A0ZXF9; B0LPG8; D3DQF4; F5ATB7
Molecular Weight	Observed: 86 kDa Predicted: 86 kDa
NCBI Official Full Name	glucocorticoid receptor isoform alpha
NCBI Official Synonym Full Names	nuclear receptor subfamily 3 group C member 1
NCBI Official Symbol	NR3C1
NCBI Official Synonym Symbols	GR; GCR; GRL; GCCR; GCRST
NCBI Protein Information	glucocorticoid receptor
UniProt Protein Name	Glucocorticoid receptor
UniProt Gene Name	NR3C1
UniProt Synonym Gene Names	GRL; GR

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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