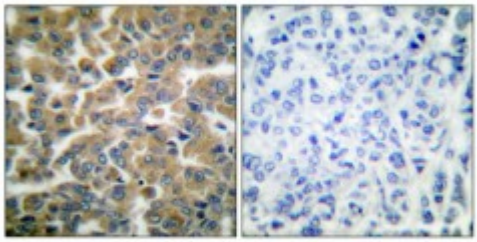
Anti-GR antibody



Description	Rabbit polyclonal to GR.

Model	STJ93410
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human GR around the non-phosphorylation site of S211.
Immunogen Region	150-230 aa
Gene ID	2908
Gene Symbol	NR3C1
Dilution range	WB 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:40000
Specificity	GR Polyclonal Antibody detects endogenous levels of GR protein.
Tissue Specificity	Widely expressed including bone, stomach, lung, liver, colon, breast, ovary, pancreas and kidney . 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 . Isoform Beta: Widely expressed including brain, bone marrow, thymus, spleen, liver, kidney, pancreas, lung, fat, skeletal muscle, heart, placenta and blood leukocytes . Isoform Alpha-2: Expressed at low level.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Note	For Research Use Only (RUO).
Protein Name	Glucocorticoid receptor GR Nuclear receptor subfamily 3 group C member 1
Molecular Weight	95 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:7978OMIM:138040
Alternative Names	Glucocorticoid receptor GR Nuclear receptor subfamily 3 group C member 1
Function	Receptor for glucocorticoids (GC) . 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 . 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 . 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 . Isoform Alpha: Has transcriptional activation and repression activity . Mediates glucocorticoid-induced apoptosis . Promotes accurate chromosome segregation during mitosis . May act as a tumor suppressor . May play a negative role in adipogenesis through the regulation of lipolytic and antilipogenic gene expression . Isoform Beta: Acts as a dominant negative inhibitor of isoform Alpha . Has intrinsic transcriptional activity independent of isoform Alpha when both isoforms are coexpressed . Loses this transcription modulator function on its own . Has no hormone-binding activity . May play a role in controlling glucose metabolism by maintaining insulin sensitivity . Reduces hepatic gluconeogenesis through down-regulation of PEPCK in an isoform Alpha-dependent manner . Directly regulates STAT1 expression in isoform Alpha-independent manner . Isoform Alpha-2: Has lower transcriptional activation activity than isoform Alpha. Exerts a dominant negative effect on isoform Alpha trans-repression mechanism .; Isoform GR-P: Increases activity of isoform Alpha. Isoform Alpha-B: More effective than isoform Alpha in transcriptional activation, but not repression activity. Isoform 10: Has transcriptional activation activity. Isoform Alpha-C1: Has transcriptional activation activity. Isoform Alpha-C2: Has transcriptional activation activity. Isoform Alpha-C3: Has highest transcriptional activation activity of all isoforms created by alternative initiation . Has transcriptional repression activity . Mediates glucocorticoid-induced apoptosis . Isoform Alpha-D1: Has transcriptional activation activity. Isoform Alpha-D2: Has transcriptional activation activity. Isoform Alpha-D3: Has lowest transcriptional activation activity of all isoforms created by alternative initiation . Has transcriptional repression activity .

Sequence and Domain Family	Composed of three domains: a modulating N-terminal domain, a DNA-binding domain and a C-terminal ligand-binding domain . The ligand-binding domain is required for correct chromosome segregation during mitosis although ligand binding is not required .
Cellular Localization	Isoform Alpha: Cytoplasm Nucleus Mitochondrion Cytoplasm, cytoskeleton, spindle Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. After ligand activation, translocates from the cytoplasm to the nucleus. Isoform Beta: Nucleus Cytoplasm. Expressed predominantly in the nucleus with some expression also detected in the cytoplasm. Isoform Alpha-B: Nucleus Cytoplasm. After ligand activation, translocates from the cytoplasm to the nucleus.
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 . Isoform Alpha-B appears to be more susceptible to proteolytic degradation than isoform Alpha . 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 . Phosphorylation at Ser-211 increases transcriptional activity . Phosphorylation at Ser-203, Ser-226 and Ser-404 decreases signaling capacity . Phosphorylation at Ser-404 may protect from glucocorticoid-induced apoptosis . Phosphorylation at Ser-203 and Ser-211 is not required in regulation of chromosome segregation . May be dephosphorylated by PPP5C, attenuates NR3C1 action . Sumoylation at Lys-277 and Lys-293 negatively regulates its transcriptional activity . Sumoylation at Lys-703 positively regulates its transcriptional activity in the presence of RWDD3 . 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 . Heat shock increases sumoylation in a RWDD3-dependent manner . Ubiquitinated; restricts glucocorticoid-mediated transcriptional signaling.