

ARG23620 anti-Glucocorticoid Receptor antibody [5E4]

Package: 100 µg
Store at: -20°C

Summary

Product Description	<p>Mouse Monoclonal antibody [5E4] recognizes Glucocorticoid Receptor.</p> <p>This product recognizes the human glucocorticoid receptor, also known as Nuclear receptor subfamily 3 group C member 1 (NR3C1), a 777 amino acid receptor bearing 3 distinct functional domains, an N-terminal modulating domain, a DNA binding domain and a C-terminal steroid binding domain. The human glucocorticoid receptor is located either in the cytoplasm of cells, prior to ligand binding associated with certain heat shock proteins (Kino et al. 2009), or the nucleus following binding to ligand (Werb et al. 1978). Mutations in the glucocorticoid receptor gene can lead to familial glucocorticoid resistance, characterized by elevated plasma cortisol levels (Malchoff et al. 1993). This antibody has been demonstrated to cross-react with the murine glucocorticoid receptor (Bergquist et al. 2014)</p>
Tested Reactivity	Hu, Ms
Tested Application	FACS
Host	Mouse
Clonality	Monoclonal
Clone	5E4
Isotype	IgG1
Target Name	Glucocorticoid Receptor
Species	Human
Immunogen	Synthetic peptide around aa. 150-176 of Human Glucocorticoid Receptor linked to thyroglobulin.
Conjugation	Un-conjugated
Alternate Names	Glucocorticoid receptor; GR; Nuclear receptor subfamily 3 group C member 1; GCR; GCCR; GCRST; GRL

Application Instructions

Application table	<table> <tr> <th>Application</th><th>Dilution</th></tr> <tr> <td>FACS</td><td>Neat - 1:10</td></tr> </table>	Application	Dilution	FACS	Neat - 1:10
Application	Dilution				
FACS	Neat - 1:10				
Application Note	<p>FACS: Membrane permeabilisation is required for this application. Use 10 µl of the suggested working dilution to label 10⁶ cells in 100 µl.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p>				

Properties

Form	Liquid
Purification	Purified by affinity chromatography.
Buffer	PBS, 0.1% Sodium azide and 0.1% BSA.
Preservative	0.1% Sodium azide
Stabilizer	0.1% BSA

Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	NR3C1
Gene Full Name	nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor)
Background	<p>This gene encodes glucocorticoid receptor, which can function both as a transcription factor that binds to glucocorticoid response elements in the promoters of glucocorticoid responsive genes to activate their transcription, and as a regulator of other transcription factors. This receptor is typically found in the cytoplasm, but upon ligand binding, is transported into the nucleus. It is involved in inflammatory responses, cellular proliferation, and differentiation in target tissues. Mutations in this gene are associated with generalized glucocorticoid resistance. Alternative splicing of this gene results in transcript variants encoding either the same or different isoforms. Additional isoforms resulting from the use of alternate in-frame translation initiation sites have also been described, and shown to be functional, displaying diverse cytoplasm-to-nucleus trafficking patterns and distinct transcriptional activities (PMID:15866175). [provided by RefSeq, Feb 2011]</p>
Function	<p>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. 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. Involved in chromatin remodeling. May play a negative role in adipogenesis through the regulation of lipolytic and antilipogenic genes expression. [UniProt]</p>
Calculated Mw	86 kDa
PTM	<p>Acetylation by CLOCK reduces its binding to glucocorticoid response elements and its transcriptional activity.</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>Ubiquitinated; restricts glucocorticoid-mediated transcriptional signaling. [UniProt]</p>