

Recombinant Mouse GCR Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51232

Size: 10ug, 100ug

Protein Name: Glucocorticoid receptor (GR) (Nuclear receptor subfamily 3 group C member 1)

Synonym: Nr3c1, Grl, Grl1

UniProt ID: P06537

UniProt Link: www.uniprot.org/uniprotkb/P06537/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 792 AA

Molecular Weight: 87 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MDSKESLAPPGRDEVPSLLGRGRGSVMDLYKTLRGGATVKVSASSPSVAAASQADSKQQRILLDF
SKGSASNAQQQQQQQQQQQQQQQQQQPQPDLSKAVSLSMGLYMGETETKVMGNDLGYPQQGQL
GLSSGETDFRLLLEESIANLNRSTSRPENPKSSTPAAGCATPTEKEFPQTHSDPSSEQQNRKSQPGT
NGGSVKLYTTDQSTFDILQDLEFSAGSPGKETNESPWRSDDLIDENLLSPLAGEDDPFLLEGDVNED
CKPLILPDTKPKIQDTGDTILSSPSSVALPQVKTEKDDFIELCTPGVIKQEKLGPVYCQASFSGTNIIGN
KMSAISVHGVSTSGGQMYHYDMNTASLSQQQDQKPVFNVIPPIPVGSENNWRCQGSGEDNLTSLG
AMNFAGRSVFSNGYSSPGMRPDVSSPPSSSSTATGPPPKLCLVCSDEASGCHYGVLTCGSCKVFF
KRAVEGQHNYLCAGRNDKIRKNCPCARYRKCLQAGMNLEARKTKKKIKGIQQATAGVSQDTS
ENANKTIVPAALPQLTPTLVSLLEVIEPEVLYAGYDSSVPDSAWRIMTTNLMLGGRQVIAAVKWAKAIP
GFRNLHLDDQMTLLQYSWMFLMAFALGWRYSYRQASGNLLCFAPDLIINEQRMTLPCMYDQCKHML
FISTELQRLQVSYEEYLCMKTLTLLSSVPKEGLKSQELFDEIRMTYIKELGKAIVKREGNSSQNWQRF
YQLTKLLDSMHDVVENLLSYCFQTFLDKSMSIEFPEMLAEIITNQIPKYSNGNIKKLLFHQK

3. Buffer Composition



Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Glucocorticoid receptor (GR) (Nuclear receptor subfamily 3 group C member 1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein 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 (PubMed:10678832). 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 (By similarity). 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 (PubMed:15037546).; [Isoform 1]: Has transcriptional activation and repression activity (By similarity). Mediates glucocorticoid-induced apoptosis (By similarity). Promotes accurate chromosome segregation during mitosis (PubMed:25847991). May act as a tumor suppressor (PubMed:25847991). May play a negative role in adipogenesis through the regulation of lipolytic and antilipogenic gene expression (PubMed:21994940).; [Isoform 3]: Acts as a dominant negative inhibitor of isoform 1 (PubMed:20660300). Has intrinsic transcriptional activity independent of isoform Alpha when both isoforms are coexpressed (By similarity). Loses this transcription modulator function on its own (By similarity). Has no hormone-binding activity (PubMed:20660300). May play a role in controlling glucose metabolism by maintaining insulin sensitivity (PubMed:20660300). Reduces hepatic gluconeogenesis through down-regulation of PEPCK in an isoform Alpha-dependent manner (By similarity). Directly regulates STAT1 expression in isoform Alpha-independent manner (By similarity).

Subcellular Localization: Cytoplasm . Nucleus . Mitochondrion . Cytoplasm, cytoskeleton, spindle . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Chromosome . Nucleus, nucleoplasm . Note=After ligand activation, translocates from the cytoplasm to the nucleus (PubMed:11278753). The hormone-occupied receptor undergoes rapid exchange between chromatin and the nucleoplasmic compartment (PubMed:10678832). In the presence of NR1D1 shows a time-dependent subcellular localization, localizing to the cytoplasm at ZT8 and to the nucleus at ZT20 (PubMed:27686098). Lacks this diurnal pattern of localization in the absence of NR1D1, localizing to both nucleus and the cytoplasm at ZT8 and ZT20 (PubMed:27686098). Upon dexamethasone binding associates with the glucocorticoid response elements of target genes (PubMed:30698747).; [Isoform 1]: Cytoplasm . Nucleus . Mitochondrion . Cytoplasm, cytoskeleton, spindle . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Note=After ligand activation, translocates from the cytoplasm to the nucleus.; [Isoform 3]: Nucleus . Cytoplasm . Note=Expressed predominantly in the nucleus with some expression also detected in the cytoplasm.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer- composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.