Recombinant PPARG protein (His tag)

Catalog Number	544587
Synonyms	PPAR-gamma; Nuclear receptor subfamily 1 group C member 3
Species	Human
Expression System	E. coli
Accession	P37231
Molecular Weight	Predictes a molecular mass of 43.93 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	137-505
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 137-505 aa (P37231) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human PPAR-gamma Fragment (137-505) is a high-purity protein designed for advanced research on nuclear receptor signaling. This fragment fully encompasses the ligand-binding domain (NR LBD), making it an ideal tool for studying PPAR-gamma's role in adipocyte differentiation, glucose homeostasis, and lipid metabolism pathways. Peroxisome proliferator-activated receptor gamma (PPAR-gamma), encoded by the PPARG gene, is a nuclear receptor that binds peroxisome proliferators including hypolipidemic drugs and fatty acids. Upon ligand activation, PPAR-gamma binds to specific PPAR response elements (PPRE) to regulate transcription of target genes involved in fatty acid beta-oxidation. It serves as a key regulator of adipocyte differentiation and glucose homeostasis, while also suppressing NF-kappa-B-mediated pro-inflammatory responses to maintain gut homeostasis. The protein localizes primarily to the nucleus but can redistribute to the cytoplasm through MAP2K1/MEK1-dependent mechanisms. This recombinant fragment (137-505) contains the critical ligand-binding domain (238-503) essential for studying PPAR-gamma's molecular interactions and regulatory functions.